Community Wildfire Hazard Risk Assessment

Glenrose Community, Spokane, WA

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FIREWISE COMMUNITIES/USA

Contents

WASHINGTON STATE DEPARTMENT OF
Natural Resources

Introduction

The Firewise Communities/USA program is designed to provide an effective management approach for preserving wildland living aesthetics. The intent is to give communities like Glenrose a way to balance sustainable ecological lifestyles with an effective means of wildland fire protection. The Firewise Communities/USA program can be tailored for adoption by any community and/or neighborhood association that is committed to ensuring its citizens maximum wildfire protection. This community assessment and recommendations are intended as a resource that can be used by the Glenrose residents for creating a wildfire protection plan. The plan should be implemented in a collaborative manner and updated and modified as needed.

The assessment was prepared by a team representing Firewise Communities/USA that included Garth Davis (SCD), Ben Peterson (SCD), Guy Gifford (DNR NE Region), and Bob Hyslop (community leader) in November 2013

The Glenrose Community is located in a wildfire environment. Fire can occur anywhere, but there are certain characteristics that make a community more or less vulnerable to wildfire. The key variables in a fire scenario are when and where the fire will occur. This assessment addresses the wildfire-related characteristics of the Glenrose Community. It examines the areas' 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 the community recently. This 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 the Glenrose Community. Glenrose 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 wild land 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.

Fire Characteristics

Fire intensity and the rate a fire spreads depend on the type of fuel and the amount ready to burn at any given time of the year. Different fuel types burn at different rates. Live fuels such as deciduous trees, brush, and grasses burn slower than if they are dead. The weather conditions affect the moisture of live and dead vegetation. Lower relative humidity and higher temperatures will reduce the fuel moisture content, and produce higher fire spread rates and intensities. Wind speed significantly increases the rate of fire spread and fire intensity. The higher the wind speed the more rapidly fire will spread.

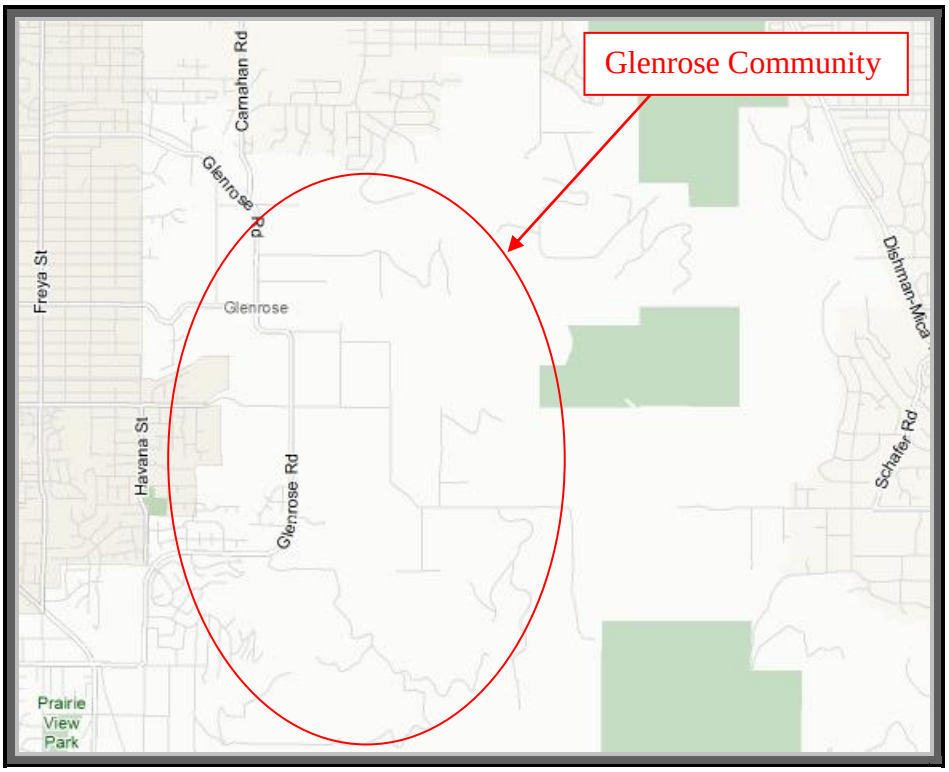
Fuels such as grasses and dry noxious weeds ignite more readily and spread faster than other types of fuels. They also burn out faster. There are no high intensity ember showers associated with grass fires. Shrubs and brush also burn fast and depending on the amount of dead fuel present can create some embers and result in spotting into the community.

When large trees, especially conifers, are present with grass and shrubs, there is a possibility for fire to travel from the fuels on the ground and into the treetops, especially on steep slopes with high wind speeds. Crown fires are a big concern since this type of fire produces vast quantities of fire embers. During a large fire, embers trapped in the roof and under the deck are a major cause of home loss. 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 the fuel moisture content will be. 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.

Site Description

The Glenrose community encompasses a moderately large area, approximately 6 square miles located in the Northwest corner of the Southeast corner of Spokane County. Approximately 16 minutes, or 6.5 miles, separate the heart of the prairie from downtown Spokane. The Glenrose landscape is a patch work of rural forested land to the south and east and developed agricultural lands peppered with single family and multifamily homes. Many homes have multiple outbuildings and reside on parcels of 5-20 acres or more. Approximately 3,000 + people live in the mostly middle class area. Fire District 8 has three stations, 81, 82, and 84, located in or near the community. The topography and soils of Glenrose prairie indicates that it was once an alpine lake, now the bowl shaped prairie is skirted on two sides with rolling remnant and reproduction ponderosa pine forested hills. Browns Mountain gently rises to 3000' at the south-eastern end of the prairie and is heavily forested with pine, fir, and various native deciduous species. The average annual precipitation is about 18 inches.


Glenrose Community
Carnahan Rd
Glenrose Rd
Freya St
Glenrose
Havana St
Glenrose Rd
Dishman-Mica
Schafer Rd
Prairie View Park

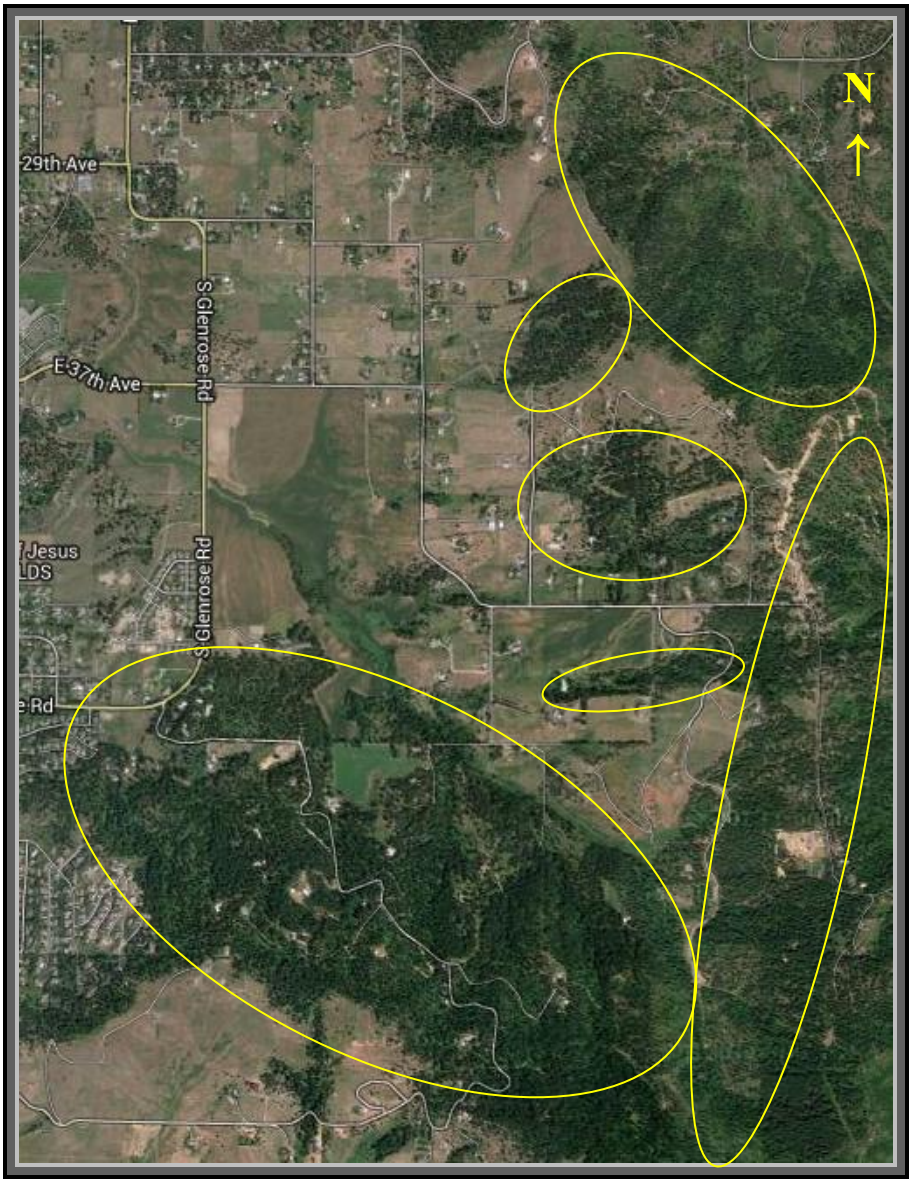

Glenrose Community
Dartford
Fairwood
Mead
Country Homes
Orchard Prairie
Town and Country
Hillyard
Highland
Minnehaha Park
Felts Field
Millwood
Trentwood
290
27
Spokane
Palisades Park
Riverfront Park
Yardley
Greenacres
Opportunity
Spokane Valley
Veradale
Dishman Hills
Manito Park
Lincoln Park
Glenrose
Chester
Spokane International Airport
90
Geiger Heights
Scribner
Mica
Valleyford
27

Fuels:

No slash fuels or piles were observed within the community but like most of Spokane County, dwarf mistletoe and western gall rust were found to be present within many of community's trees; infested trees increase the trees torching fire potential from a higher occurrence of dead branches and foliage and witches brooms. Bark beetle activity was observed in a few individual trees off Corkery road but currently exists in low levels within the community. Highly combustible coniferous shrub and small tree species like dwarf spruce, pine, and juniper are commonly seen planted for landscaping, hedge rows and privacy screening within the defensible space of many homes. Ladder fuels and over stocked reproduction ponderosa pine stands commonly referred to as "doghair" are present in several large and small areas throughout the communities privately owned properties. Heavy regeneration pine sapling concentrations in these areas are the primary ladder fuel mechanism and the greatest fuel load problems for the community. Forest heath is also negatively affected in these dog hair stands from stress and decline brought on by high competition for sun light, nutrients and water.

"Dog hair" stands of ponderosa pine.

This aerial photo shows many of the areas within the community with higher stem density and greater canopy cover where crown fire is more likely to occur. The prevailing winds often blow from the Southwest and numerous homes are downwind or amongst the majority of these potential crown fire locations. Fuels reduction of ladder fuels and dog hair stands is crucial in preventing catastrophic crown fires, particularly on southern aspects and the southwestern forest stand borders.



Fuels Reduction:

In November of 2013 approximately 40 acres of fuels reduction thinning and pruning was successfully accomplished on the Morning Star Boys Ranch properties within the Glenrose community. This project helped to reduce the fuel load and ladder fuels by thinning and pruning small diameter pine and fir saplings. The projects also created a minimum 30' firebreak around structures and created easier forest access for firefighting apparatus.

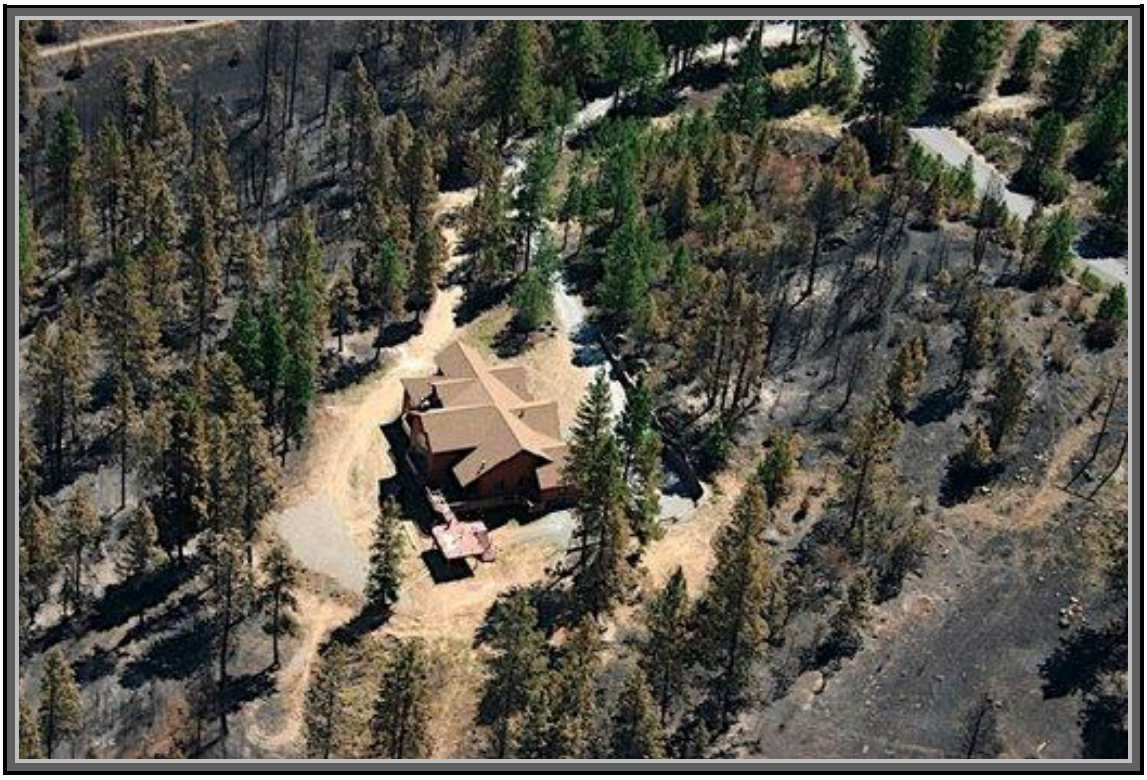
Fire Response:

Glenrose is located within the protection boundary of Fire District 8. Fire Stations 81 and 82 are potential first responders. Station 81 is located within the Glenrose community located at 6117 S Palouse Highway Spokane, WA 99223. Station 82 is located at 12100 E Palouse Highway Valleyford, WA 99036 and provides secondary response to station 81. Both these stations are staffed fulltime by some of Spokane County's finest firefighters, which can significantly decrease response times. In rural areas without hydrants water tender operations are employed.

Assessment process:

Individual home risk assessments are completed using the National Fire Protection Association (NFPA) Form 299: Standard for Protection of Life and Property from Wildfire, 1997 Edition. The risk assessment form is attached at the end of this report. Residences within the community were offered home site inspections on a volunteer basis and assessments of 7 homes were completed late in 2013 with several more slated for 2014. Homes are rated on a numbered scale; higher score outcomes are less desirable.

Example: Low Hazard: <39 Points; Moderate Hazard: 40–69 Points; High Hazard: 70–112 Points; Extreme Hazard >113 Points. Of the community's residences that were assessed to date the average score was **72-Moderate Hazard.**



Fire History:

The Spokane area experiences an average of about 50+ wildfire starts per year, most of which are human caused. In July of 2008 the Valley View Fire burned 1000+ acres, destroyed 10 homes and damaged several more. In August 2002, the Paradise Fire occurred to the southwest of the Ridge at Hangman. The fire burned about 50 acres and was contained just before burning into the community. Hangman Valley residents have also experienced several catastrophic fires over the last few decades. These fires include the well-documented Hangman Hills Fire of 1987 that burned approximately 900 acres and 23 homes and the Fire Storm fires of 1991. Dry cold fronts fan the majority of the catastrophic fires. Cold fronts are common in Eastern Washington. Unfortunately, major catastrophic fires quickly overwhelm local fire resources. By increasing home survivability, property owners within the Glenrose community won't have to depend upon these resources.

Homes:

United States Forest Service fire scientists are doing extensive research on home survivability during a wildfire. Some of the preliminary evidence is surprising. First, almost all home construction offers some degree of fire resistance. It's interesting to note that during a wildfire, a home with conventional T-111 siding and composition roof can withstand up to four times the heat capable of generating second degree burns on the firefighters protecting it.

Current data suggests that home survivability is based less on factors of the home itself and more taking place with adjacent fuel conditions out to 100 feet. Based on actual experiments, homes are not lost by the wall of flame when a large fire moves past, but by the shower of embers that are trapped by various areas of the home.

The embers, fanned by fire-generated winds, ignite fine dead fuel such as dried grass near the home or under stairs and decks. This material provides the "kindling" to ignite vulnerable areas of the home before firefighters can provide protection. Reducing the amount of fuel that is available to burn can reduce the fire intensity and duration. Removing dead grasses, limbing and pruning vegetation up to 100 feet from the home is the second home survivability factor.

Evacuation and Response:

Roads leading into and out of a community play an important role in safety and survivability. Roads are the primary escape routes for residents during a fire, and the primary routes for fire trucks to fight the fire. Depending on the direction a fire approaches a community; roads may have to be large enough for both evacuation and fire fighting to occur simultaneously.
Fire trucks may be unable to negotiate access roads (private driveways) if the roads are too narrow to drive safely or to turn around if needed. Street addresses and house numbers that are hard to see in dark or smoky conditions can result in delays for firefighters to take action. Combustible signs are not reliable, as they may not survive even a low intensity fire.

Recommendations

Recommendations- Many home addresses observed within the Glenrose community don't appear to be reflective, and may be difficult to read at night or in smoky conditions, and could be a problem for emergency responders to locate. Many were less than four inches and some were obscured by vegetation or set to far back from the road. Most homes have address numbers located out at the roadside or on mail boxes adjacent to driveways entrances. Homes without reflective address numbers should install new four-inch reflective numbers for better identification. Homes with obscured numbers should trim back vegetation to increase visibility or move them to a more visible location. Blue reflective address signs can be purchased from Spokane County Fire District 5 at a cost of $15.00 each and are fairly easy to install.

VS

Recommendations- The potential for running crown fire in the forest surrounding and within the community is very high given crown closure and ladder fuel concentrations. The community should take steps to advise surrounding parcel owners to implement thinning and pruning fuels reductions in these areas. Thinning activities should incorporate the removal of stressed and diseased trees. Spacing should vary based on the size, age, and health of the trees. These actions will greatly reduce the intensity of wildfires and significantly reduce the risk to the community as well as improving forest health and productivity.

Recommendations- Increasing defensible space will lead to the most significant reduction in wildfire risk to the home. Homes that increase their defensible space from less than 30 feet to more than 100 feet will significantly reduce their risk of home loss. To increase defensible space, residents need to reduce the overall amount of fuel around homes including: wood piles, pine needles piles, non-fire resistant trees, shrubs and landscape materials. Block and rock landscape materials are preferred over wood and bark mulch, especially near structures. Any plant material growing under decking should be removed. Residents need to keep vegetation lean, clean and green with regular maintenance and irrigation.

Recommendations- Future plant material used in landscaping should be fire resistant. *A guide for fire resistant plants for home landscapes will be attached at the end of this assessment.* Juniper, spruce, pine, fir and other conifer shrubs were observed in the landscaping of many homes in the community and are often planted in very close proximity to the house. These species are highly flammable due to the high levels of resins and turpentine's as well as their tendency to accumulate dead, highly flammable debris within their branches. Any sick and/or dying coniferous shrubs and trees should be removed from the homes defensible space and future landscaping with coniferous plant species should consider using fire resistant planting species inside the homes defensible space.

Recommendations- Underground electrical lines reduce wildfire ignition potential immediately within the community. Consider placing electrical lines underground with any future development and home construction. Although none were observed, any large liquid petroleum gas (LPG) tanks should be located at least 30 feet from structures and have fuel breaks around the tanks to prevent direct flame contact during a wildfire.

Recommendations- Most homes observed within the Glenrose Community have composition shingles or metal roofs but there were a few cedar shake roofs observed. Residents need to continue to keep roofs and gutters clean. Pruning and limbing of overstocked pine trees can reduce the amount of pine needles that are cast onto roofs, gutters and into yards. The building materials utilized within the community are generally fire resistant.

Continued use of fire resistant materials is recommended. Avoid use of cedar siding or roofing materials. Enclosing openings under homes and decks will reduce the potential for firebrand ignitions. Screening off vents and other openings will prevent embers from entering the home. Any future decking or siding construction projects should consider use of fire resistant materials like fiber cement board siding and composite decking.

Recommendations- Pre plan potential escape routes in the event of a wildfire evacuation. Continue to keep driveways and private roads well maintained. Having more than one road for access allows for better evacuation of residents and better ingress and egress of emergency vehicles. Wide private roads and driveways with turnarounds allow emergency vehicles to pass easily and exit quickly if required. Most private roads and driveways within the community are greater than 24 feet wide and are well maintained. The interior road signs will greatly assist emergency responders in locating homes in a wild fire or any emergency situation. All interior road signs should remain clear of obstructions, vegetation and standardized with the City of Spokane.

Recommendations-Glenrose community residents and leaders should continue to encourage neighbors to have a wildfire hazard assessment done on their property. This will help to continue getting the message out and educate about a home and associated landscapes vulnerability to wildfire. Learning more about their properties wildfire risk and the many resources available to help them manage their valuable asset will make the community safer as a whole.

Community Action Plan:

Based on the risk factors present, it is recommended that the community board collaboratively develop a plan to reduce the wildfire risk based on the observations contained in this report.

NEXT STEPS

After reviewing the contents of this assessment and its recommendations, the Glenrose Community, in cooperation with Fire District 8, may consider whether it wishes to participate in the Firewise Communities/USA program. Assuming Glenrose seeks to achieve national Firewise Communities/USA recognition status; it must meet the following standards in its approach to the wildfire issue:

- Sponsor a local Firewise task force, committee, commission or department that maintains the Firewise Community program and status.
- Create a plan from which it identifies agreed-upon, achievable local solutions.
- Invest a minimum of $2.00 annually per capita in its Firewise communities/USA program. (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 spring that is dedicated to a local Firewise project.
- Submit an annual report to Firewise Communities/USA. This report documents continuing participation in the program.

Glenrose 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 contact with embers. The assessment team recommends the establishment of a ‘fire free zone’, allowing no fire to burn within 10 feet of a house by removing fuels located there. Remember, wildfire cannot be eliminated from a property, but 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 and address the risk factors that will ignite their homes.

Of course, weather is a great concern during wildfire season. 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, or other flammables. For more information about the Firewise Communities/USA program, visit www.firewise.org/usa.

SUCCESSFUL FIREWISE MODIFICATIONS

When adequately prepared, a house can likely withstand a wildfire without the intervention of the fire service. Furthermore, 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 wildland/urban interface fire loss even as a sustainable ecosystem balance is maintained.

Homeowners and communities 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 diagram is an example of good Firewise practices.

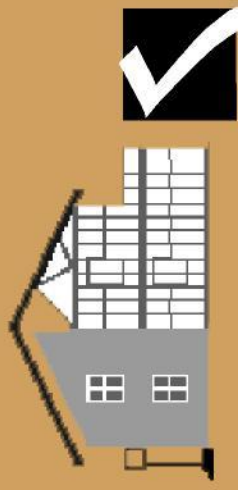
Wildfire Hazard Severity Form - NFPA 299

Landowner / Community Name:	S / T / R	Prevention Officer
Address	Lat. / Long.	**Date**
	RAMS Comp.	

A. Means of Access			2. Defensible space			2. Setback from slopes >30%		
1. Ingress and egress			More than 100 ft.	1		More than 30 ft. to slope	1	
Two or more roads in/out	0		More than 71 – 100 ft.	3		Less than 30 ft. to slope	5	
One road in/out	7		30 – 70 ft.	10		Not applicable	0	
2. Road width			Less than 30 ft.	25		**G. Available Fire Protection**		
Greater than 24 feet	0		**C. Topography**			1. Water source availability (on site)		
Between 20 and 24 feet	2		1. Slope			500 gpm pressurized hydrants < 1000 ft. apart	0	
Less than 20 feet	4		Less than 9%	1		250 gpm pressurized hydrants < 1000 ft. apart	1	
3. All-season road condition			Between 10 – 20%	4		More than 250 gpm non-pressurized, 2 hours	3	
Surfaced, grade <5%	0		Between 21 – 30%	7		Less than 250 gpm non-pressurized, 2 hours	5	
Surfaced, grade >5%	2		Between 31 – 40%	8		No hydrants available	10	
Non-surfaced, grade < 5%	2		Greater than 41%	10		2. Organized response resources		
Non-surfaced, grade > 5%	5		**D. Misc. Factors**			Station within 5 miles of structure	1	
Other than all-season	7		1. Topography that adversely affects wildland fire behavior	0-5		Station greater than 5 miles	3	
4. Fire service access			2. Area with history of higher fire occurrence	0-5		3. Fixed fire protection		
< = 300 ft, with turnaround	0		3. Areas of unusually severe fire weather and wind	0-5		Sprinkler system (NFPA 13, 13R,13D)	0	
> = 300 ft, with turnaround	2		4. Separation of adjacent structures	0-5		None	5	
< = 300 ft, no turnaround	4		**E. Roofing Material**			**H. Utilities Gas/Electric**		
> = 300 ft, no turnaround	5		1. Construction material			All underground utilities	0	
5. Street signs			Class A roof	0		One underground, one aboveground	3	
Present (4 in. in size and reflective)	0		Class B roof	3		All aboveground	5	
Not present	5		Class C roof	15				
B. Vegetation Fuel Models			Non-rated	25		Total		
1. Predominant vegetation			**F. Existing Construction**					
Light	5		1. Materials					
Medium	10		Noncombustible siding/deck	0		Census Block		
Heavy	20		Noncombustible siding/wood deck	5				
Slash	25		Combustible siding and deck	10				

Low Hazard: <39 Points; Moderate Hazard: 40 – 69 Points; High Hazard: 70 – 112 Points; Extreme Hazard >113 Points

NOTES:



Firewise Construction Checklist

When constructing, renovating, or adding to a Firewise home, consider the following:

- ❑ Choose a Firewise location.
- ❑ Design and build a Firewise structure.
- ❑ Employ Firewise landscaping and maintenance.

To select a Firewise location, observe the following:

- ❑ Slope of terrain; be sure to build on the most level portion of the land, since fire spreads more rapidly on even minor slopes.
- ❑ Set your single-story structure at least 30 feet back from any ridge or cliff; increase distance if your home will be higher than one story.

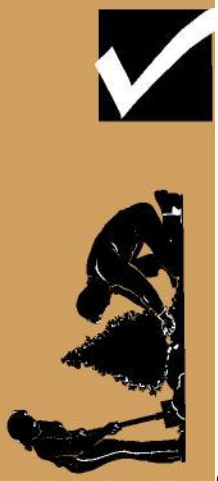
In designing and building your Firewise structure, remember that the primary goals are fuel and exposure reduction. To this end:

- ❑ Use construction materials that are fire-resistant or non-combustible whenever possible.
- ❑ For roof construction, consider using materials such as Class-A asphalt shingles, slate or clay tile, metal, cement and concrete products, or terra-cotta tiles.
- ❑ Constructing a fire-resistant sub-roof can add protection as well.
- ❑ On exterior wall facing, fire resistive materials such as stucco or masonry are much better choices than vinyl which can soften and melt.
- ❑ Window materials and size are important. Smaller panes hold up better in their frames than larger ones. Double pane glass and tempered glass are more reliable and effective heat barriers than single pane glass. Plastic skylights can melt.
- ❑ Install non-flammable shutters on windows and skylights.
- ❑ To prevent sparks from entering your home through vents, cover exterior attic and under floor vents with wire screening no larger than 1/8 of an inch mesh. Make sure under eave and soffit vents are as close as possible to the roof line. Box in eaves, but be sure to provide adequate ventilation to prevent condensation.
- ❑ Include a driveway that is wide enough to provide easy access for fire engines (12 feet wide with a vertical clearance of 15 feet and a slope that is less than 5 percent) . The driveway and access roads should be well-maintained, clearly marked, and include ample turnaround space near the house. Also provide easy access to fire service water supplies, whenever possible.
- ❑ Provide at least two ground level doors for easy and safe exit and at least two means of escape (i.e., doors or windows) in each room so that everyone has a way out.
- ❑ Keep gutters, eaves, and roofs clear of leaves and other debris.
- ❑ Make periodic inspections of your home, looking for deterioration such as breaks and spaces between roof tiles, warping wood, or cracks and crevices in the structure.
- ❑ Periodically inspect your property, clearing dead wood and dense vegetation at distance of at least 30 feet from your house. Move firewood away from the house or attachments like fences or decks.

Any structures attached to the house, such as decks, porches, fences, and outbuildings should be considered part of the house. These structures can act as fuel bridges, particularly if constructed from flammable materials. Therefore, consider the following:

- ❑ If you wish to attach an all-wood fence to your house, use masonry or metal as protective barriers between the fence and house.
- ❑ Use metal when constructing a trellis and cover it with high-moisture, low flammability vegetation.
- ❑ Prevent combustible materials and debris from accumulating beneath patio decks or elevated porches. Screen or box-in areas below patios and decks with wire screen no larger than 1/8 inch mesh.
- ❑ Make sure an elevated wooden deck is not located at the top of a hill where it will be in direct line of a fire moving up slope. Consider a terrace instead.

Access additional information on the Firewise home page: ***www.firewise.org***



Firewise Landscaping Checklist

When designing and installing a Firewise landscape, consider the following:

- ❑ Local area fire history.
- ❑ Site location and overall terrain.
- ❑ Prevailing winds and seasonal weather.
- ❑ Property contours and boundaries.
- ❑ Native vegetation.
- ❑ Plant characteristics and placement (duffage, water and salt retention ability, aromatic soils, fuel load per area, and size).
- ❑ Irrigation requirements.

To create a Firewise landscape, remember that the primary goal is fuel reduction. To this end, initiate the zone concept. Zone 1 is closest to the structure; Zones 2-4 move progressively further away.

- ❑ **Zone 1.** This well-irrigated area encircles the structure for at least 30' on all sides, providing space for fire suppression equipment in the event of an emergency. Plantings should be limited to carefully spaced low flammability species.

- ❑ **Zone 2.** Low flammability plant materials should be used here. Plants should be low-growing, and the irrigation system should extend into this section.

- ❑ **Zone 3.** Place low-growing plants and well-spaced trees in this area, remembering to keep the volume of vegetation (fuel) low.

- ❑ **Zone 4.** This furthest zone from the structure is a natural area. Selectively prune and thin all plants and remove highly flammable vegetation.

Also remember to:

- ❑ Be sure to leave a minimum of 30' around the house to accommodate fire equipment, if necessary.
- ❑ Widely space and carefully situate the trees you plant.
- ❑ Take out the “ladder fuels” — vegetation that serves as a link between grass and tree tops. This arrangement can carry fire to a structure or from a structure to vegetation.
- ❑ Give yourself added protection with “fuel breaks” like driveways, gravel walkways, and lawns.

When maintaining a landscape:

- ❑ Keep trees and shrubs properly pruned. Prune all trees so the lowest limbs are 6' to 10' from the ground.
- ❑ Remove leaf clutter and dead and overhanging branches.
- ❑ Mow the lawn regularly.
- ❑ Dispose of cuttings and debris promptly, according to local regulations.
- ❑ Store firewood away from the house.
- ❑ Be sure the irrigation system is well maintained.
- ❑ Use care when refueling garden equipment and maintain it regularly.
- ❑ Store and use flammable liquids properly.
- ❑ Dispose of smoking materials carefully.
- ❑ Become familiar with local regulations regarding vegetation clearances, disposal of debris, and fire safety requirements for equipment.
- ❑ Follow manufacturers’ instructions when using fertilizers and pesticides.

Access additional information on the Firewise home page: ***www.firewise.org***