

Montana Department of Natural Resources and Conservation Structure Assessment Form

Date: _____

Property Owner: _____

Address: _____

Email: _____ Phone: _____

Type of Structure: Primary Seasonal Outbuilding Care Facility Hotel/Lodge/Camp Public Facility Other

Number of Occupants: _____ # of Additional Structures & type: _____

Responding Fire Department: _____ Phone: _____

Assessor: _____ Phone: _____

Email: _____

Wildfire mitigation is intended to reduce wildfire risk, not eliminate the risk of wildfire. It is important to note that wildfire is a natural and inevitable phenomenon in Montana. It is a dynamic event influenced by several factors including weather (winds, temperature, relative humidity), topography (steepness of a slope, the direction that slope faces, and terrain features such as canyons and saddles), and fuels (light or heavy loading, height, continuity, and volatility) as well as human activity, response times, and seasonal trends. ***There will always be some risk of wildfire regardless of mitigation efforts and structural characteristics.***

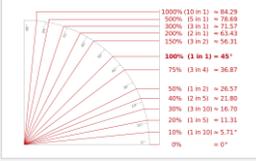
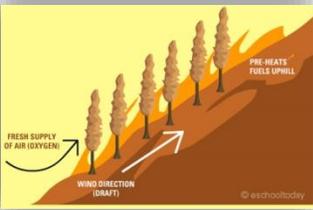
Numerous recent post-fire investigations have resulted in suggestions for preventing home-ignition. This detailed assessment is designed to identify vulnerabilities around the home and offer recommendations for improvement.

In a wildfire situation, home ignitions can occur in multiple ways including:

- 1) **Firebrands or ember-wash** – This is the most common way that homes ignite during a wildfire. Wildfires may produce high winds that loft firebrands up to a mile ahead of a fire. This often explains how fires grow so quickly. Closer to the fire, small embers swirl around like a blizzard and accumulate in corners and crevices. These may ignite combustible materials such as needles, leaves, wooden decks, siding, or enter through gaps, cracks, or vents in an attic, soffit, or crawlspace to ignite combustible materials within.
- 2) **Radiant & convective heat** – When intense enough, heat produced by a fire will ignite the home or preheat siding and other materials which then ignite more readily when in direct contact with flame or embers.
- 3) **Direct flame** – Vegetation or fuels near the home ignite, subsequently igniting the home.

A fire-resistant home needs **defensible space** to withstand a wildfire. Defensible space is created by selectively removing forest fuels around a home. It provides firefighters and equipment a safer environment with more room to work and a better chance at being successful. Defensible space and Home Ignition Zones will be addressed in the vegetation section.

Provide a sketch or photo of the home and property. Include distinguishing features, topography, predominant wind direction, and distance of vegetation from the home:

General overview of surrounding area																																									
Topography and Terrain	Why does this matter?	What can be done?																																							
<p>Slope within 15 feet of structure:</p> <p><input type="checkbox"/> 0-10%</p> <p><input type="checkbox"/> 10-25%</p> <p><input type="checkbox"/> > 25%</p>  <table border="1" data-bbox="402 254 496 415"> <tr><td>100%</td><td>(10 in 1)</td><td>= 84.29°</td></tr> <tr><td>100%</td><td>(10 in 1)</td><td>= 84.29°</td></tr> <tr><td>300%</td><td>(3 in 1)</td><td>= 71.57°</td></tr> <tr><td>200%</td><td>(2 in 1)</td><td>= 63.43°</td></tr> <tr><td>150%</td><td>(1.5 in 1)</td><td>= 56.31°</td></tr> <tr><td>100%</td><td>(1 in 1)</td><td>= 45°</td></tr> <tr><td>75%</td><td>(3 in 4)</td><td>= 36.87°</td></tr> <tr><td>50%</td><td>(1 in 2)</td><td>= 26.57°</td></tr> <tr><td>40%</td><td>(2 in 3)</td><td>= 23.80°</td></tr> <tr><td>30%</td><td>(1 in 1.5)</td><td>= 18.46°</td></tr> <tr><td>20%</td><td>(1 in 5)</td><td>= 11.31°</td></tr> <tr><td>10%</td><td>(1 in 10)</td><td>= 5.71°</td></tr> <tr><td>0%</td><td></td><td>= 0°</td></tr> </table> <p>Is the structure setback from the edge of the slope:</p> <p><input type="checkbox"/> Adequate > 150 feet</p> <p><input type="checkbox"/> Inadequate < 150 feet</p>	100%	(10 in 1)	= 84.29°	100%	(10 in 1)	= 84.29°	300%	(3 in 1)	= 71.57°	200%	(2 in 1)	= 63.43°	150%	(1.5 in 1)	= 56.31°	100%	(1 in 1)	= 45°	75%	(3 in 4)	= 36.87°	50%	(1 in 2)	= 26.57°	40%	(2 in 3)	= 23.80°	30%	(1 in 1.5)	= 18.46°	20%	(1 in 5)	= 11.31°	10%	(1 in 10)	= 5.71°	0%		= 0°	<p><i>Fire moves faster upslope than across flat ground, especially when slope and wind are in alignment.</i></p> 	<p>Take aggressive measures with fuel mitigation by increasing the spacing between trees and shrubs, especially those downslope from the structure.</p> <p>(See additional recommendations in the vegetation section)</p>
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<p>Aspect:</p> <p>N NE E SE</p> <p>S SW W NW</p>	<p><i>South-facing slopes generally receive more direct sunlight resulting in drier vegetation and a more combustible environment.</i></p>	<p>Same as above</p>																																							
<p>Position of structure on the slope:</p> <p><input type="checkbox"/> Valley bottom or lower slope</p> <p><input type="checkbox"/> Mid-slope</p> <p><input type="checkbox"/> Upper-slope</p> <p><input type="checkbox"/> Ridge top/chimney</p>	<p><i>Position on slope can influence fire behavior, equipment access, response times, or safe evacuation.</i></p>	<p>Same as above</p>																																							
<p>Features present:</p> <p><input type="checkbox"/> Steep slopes</p> <p><input type="checkbox"/> Canyons</p> <p><input type="checkbox"/> Chutes or chimneys</p> <p><input type="checkbox"/> Saddles</p>	<p><i>Topographic features such as steep slopes, canyons, chutes, chimneys, and saddles can funnel winds, affect fuel conditions, and dramatically increase fire behavior around your home.</i></p>	<p>Same as above</p>																																							
Weather	Why does this matter?	What can be done?																																							
<p>Local weather and prevailing winds:</p> <p>N NE E SE</p> <p>S SW W NW</p> <p>Periods of severe dry weather:</p> <p>Y or N</p> <p># of days/month with strong dry winds:</p>	<p><i>The common occurrence of dry weather and strong winds increases probability of wildfire starts and aggressive fire spread in your area.</i></p> <p><i>High winds will cause a fire to move faster and the increase in oxygen will cause a fire to burn more intensely. Flame lengths will be longer and a shower of embers will blow ahead of the fire.</i></p> <div style="border: 1px solid red; padding: 5px; margin-top: 10px;"> <p>A Red Flag Warning- Is issued when humidity, high temperatures, high or erratic winds, and low fuel moistures indicate high fire danger and potential for large fire growth.</p> </div>	<p>Take action to prevent wildfires.</p> <p>Be more aggressive with fuels mitigation around your home, especially those from the prevailing wind and weather side.</p> <p>Keep your roof, decks, and perimeter of your home clean of any needle and leaf debris.</p> <p>Stay updated on fire weather and conditions during the fire season. Including:</p> <ul style="list-style-type: none"> ▪ Weather Internet Sites ▪ Fire Danger and Fire Wx 																																							

Roof Assembly	Why does this matter?	What can be done?
<p>Material:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Metal or tile <input type="checkbox"/> Asphalt/composition shingle <input type="checkbox"/> Other noncombustible material <input type="checkbox"/> Untreated wood shakes <p>Cleanliness:</p> <ul style="list-style-type: none"> <input type="checkbox"/> No combustible material <input type="checkbox"/> Scattered combustible material < .5 in. depth <input type="checkbox"/> Clogged gutter, combustible material > .5 in. depth <p>Dormers or gullies:</p> <p>Y or N</p> <p>Condition:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Good <input type="checkbox"/> Poor <p>Gaps in roof covering:</p> <p>Y or N</p> <p>Is the roof edge covered with metal flashing:</p> <p>Y or N</p>	<p><i>The roof is often the starting point for home ignition. It is most vulnerable because it has the largest surface area for both leaf and needle debris to accumulate, and for embers to land on.</i></p> <p><i>Dormers and gullies are primary areas where leaf and needle debris accumulate. Once on fire, adjacent siding may ignite as well.</i></p> <div data-bbox="607 638 967 890" data-label="Image"> </div> <p><i>Embers enter small gaps and cracks in roof assembly and roof edge.</i></p> <p><i>If gutters are present and embers land in the debris, metal flashing may help keep the roof edge from igniting.</i></p>	<p>Replace combustible or wood shake roof with noncombustible roofing material.</p> <p>Remove tree branches overhanging or within ten feet of the roof to reduce annual accumulation of needles or leaves.</p> <p>Keep roof and gullies clean, especially during fire season.</p> <p>Near dormers, install metal step flashing from under the roof covering and up the exposed wall, a minimum of 2 inches.</p> <p>Repair any damage, replace missing shingles, and seal all gaps or cracks larger than 1/8 inch.</p> <p>Protect openings at the roof edge by installing metal angle flashing.</p> <p>Plug gaps between the roof covering and roof deck with “bird stop,” mortar mix, or foam inserts specially designed for metal roofs.</p>
<p>Is there evidence of nesting rodents or birds:</p> <p>Y or N</p>	<p><i>If nesting material is present, embers can also easily enter. Nesting material will provide light fuel for fast ignition.</i></p>	
<p>Skylights:</p> <ul style="list-style-type: none"> <input type="checkbox"/> None <input type="checkbox"/> Plastic <input type="checkbox"/> Glass <p>Notes:</p>	<p><i>Plastic skylights are more vulnerable to burning embers and may melt in a fire situation, thereby allowing an opening for additional embers or burning material to enter the home.</i></p>	<p>Replace plastic or dome skylights with flat tempered-glass skylights. Keep roof clean and remove any overhanging branches.</p>

Chimney	Why does this matter?	What can be done?
<p>Present: Y or N</p> <p>Screened: Y or N</p> <p>Vegetation nearby: Y or N</p> <p>Notes:</p>	<p><i>If you stand outside your home on a winter's night and look up at your chimney, you would likely see embers from your fire in the night sky.</i></p> <p><i>Nights are often cool in the mountains so fireplaces and woodstoves are used throughout the year, even during the summer months when fire danger may be high.</i></p> <p><i>Spark arrestors are required to prevent large embers from escaping through your chimney.</i></p>	<p>Install a spark arrestor with ½-in mesh. These are available at lumber yards, hardware stores, or fire place specialty stores.</p> <p>Remove overhanging branches and trees that are within 10 feet of your chimney.</p>
Gutters	Why does this matter?	What can be done?
<p>Type:</p> <p><input type="checkbox"/>None <input type="checkbox"/>Metal <input type="checkbox"/>Plastic or vinyl</p> <p>Clean of litter: Y or N</p> <p>Cleaned Annually: Y or N</p> <p>Notes:</p>	<p><i>Needles and leaves accumulate in gutters, bake in the sun, and provide a fuel bed for windblown embers. A small fire in a gutter may grow to ignite wood fascia or the roof assembly.</i></p>  <p><i>During a wildfire, plastic or vinyl gutters melt, detach, and fall to the ground igniting combustible materials below, including vegetation and combustible siding.</i></p>	<p>Remove trees or branches overhanging your home to minimize debris in gutters.</p> <p>Clean gutters of all debris before and during each fire season.</p> <p>Replace plastic or vinyl gutters with metal. Keep clean, especially during fire season.</p> <p>Install a solid cover or mesh screen to keep gutters from collecting debris. These will also require maintenance to keep clean.</p> <p>Remove gutters entirely and install rock mulch under the drip line to create a noncombustible perimeter around the home.</p>

Eaves	Why does this matter?	What can be done?
<p>Type:</p> <p><input type="checkbox"/> Boxed-in or fire-treated</p> <p><input type="checkbox"/> Open and/or not treated</p> <p>Notes:</p>	<p><i>During a wildfire, high winds cause embers to swirl around like snowflakes in a blizzard. They can gather in crevices of open eaves or enter small spaces through gaps and cracks.</i></p>  <p><i>Without boxed-in eaves your attic is very susceptible to ignition from windblown embers.</i></p> 	<p>Box in eaves to eliminate the possibility of embers blowing in.</p> <p>Place soffit vents near the roof edge, not near the exterior wall.</p> <p>Inject sealant (caulking) in any gaps.</p> <p>Remove all vegetation within 5-feet of home to minimize intense heat close to the home.</p>

Exterior walls & siding	Why does this matter?	What can be done?
<p>Siding material:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Noncombustible or metal <input type="checkbox"/> Log or heavy timber <input type="checkbox"/> Smooth wood or vinyl siding <input type="checkbox"/> Wood shake or ember <input type="checkbox"/> Receptive siding <p>Condition:</p> <p>Good Moderate Poor</p> <p>Structures distance from slope if slope is >25%:</p> <p>Skirting material:</p> <p>Notes:</p>	<p><i>Some siding materials are more resistant to radiant heat and direct flame impingement than others.</i></p> <p><i>Log structures resist ignition better than wood siding of thinner material, but it is vulnerable to ember intrusion between log joints.</i></p> <p><i>Radiant heat can pre-heat wood siding that may ignite more readily with direct flame contact.</i></p> <p><i>Upon exposure to low levels of radiant heat, vinyl siding may be damaged and fall off leaving openings for embers to enter the interior of the home.</i></p>  <p><i>If siding is too close to ground, < 2-inches, even ground fuels may ignite the siding.</i></p>	<p>Replace wood siding with noncombustible material like cement board, masonry, or stucco, or treat wood with fire-resistant treatment.</p> <p>Inspect and replace any broken or missing chinking between logs.</p> <p>Caulk/seal any gaps in siding and where the siding meets the trim.</p> <p>Consider noncombustible skirting around the building:</p>  <p>Maintain a noncombustible zone around the perimeter of your home and remove any highly combustible vegetation (junipers, pine shrubs) that may ignite and be in direct contact with siding.</p>
Windows	Why does this matter?	What can be done?
<p>Type of windows:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Single-paned <input type="checkbox"/> Double-paned <input type="checkbox"/> Tempered glass <p>Window Frame Material:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Metal <input type="checkbox"/> Fiberglass <input type="checkbox"/> Aluminum-clad wood <input type="checkbox"/> Plastic 	<p><i>Windows may break after 1 to 3 minutes of exposure to intense heat or flame, subsequently exposing window coverings and home interior to embers and firebrands.</i></p> <p><i>Single-pane windows are more vulnerable than dual-paned, multi-paned, or tempered glass windows.</i></p> <p><i>Because of the temperature difference between the glass and the frame, larger windows are more vulnerable to breaking than smaller windows.</i></p>	<p>Build shutters of ½-inch plywood or thin metal and make installation a step in your evacuation plan. Be sure all hardware is present and that they are easy to install in a short amount of time.</p> <p>Even the best windows will not protect if they are left open. Close all windows upon evacuation.</p>

<p>Screen Material:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Metal <input type="checkbox"/> Fiberglass <input type="checkbox"/> Plastic <hr/> <p>Vegetation near windows: Y or N</p> <p>Notes:</p>	<p><i>If windows do break, metal or fiberglass screens may still keep firebrands and embers from entering the home, while plastic screen can melt.</i></p> <p><i>Planting combustible vegetation near windows increases the chances of intense heat coming into direct contact with the windows.</i></p>	<p>Replace plastic screens with metal or fiberglass screens.</p> <p>Remove highly combustible vegetation in front of windows and replace with something high-moisture or low growing.</p>										
Vents	Why does this matter?	What can be done?										
<p>All structure vents have:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Non-combustible 1/8- inch protective screen <input type="checkbox"/> Non-combustible screen = ¼ inch <input type="checkbox"/> No screens <p>Check vents if they are NOT screened with noncombustible 1/8-1/4 inch material:</p> <table border="0" style="width: 100%;"> <tr> <td style="width: 50%;">Attic</td> <td style="width: 50%;">Gable</td> </tr> <tr> <td>Dryer</td> <td>Flat</td> </tr> <tr> <td>Eave</td> <td>Soffit</td> </tr> <tr> <td>Turbine</td> <td>Ridge</td> </tr> <tr> <td>Crawl space</td> <td>Foundation</td> </tr> </table>	Attic	Gable	Dryer	Flat	Eave	Soffit	Turbine	Ridge	Crawl space	Foundation	<p><i>In the event of a wildfire, embers can enter small spaces to ignite combustible materials within.</i></p> <p><i>Post-fire surveys have found that embers large enough to cause ignitions can pass through ¼ inch and even 1/8 inch mesh screening.</i></p> <p><i>**Screening will help reduce the risk of ember entry, but it is not a perfect solution (IBHS).</i></p> <div style="text-align: center;">  </div>	<p>Install 1/8 inch metal mesh screens on all vents. Until recently, minimum screen size allowed was ¼ inch. If 1/8-inch screening is installed, it will take maintenance to keep it clean of debris, allowing air to circulate so moisture does not build-up in enclosed space.</p> <p>Consider preparing vent covers of plywood or thin metal to install as part of a pre-evacuation preparedness plan.</p> <p>Install a louver-type vent that stays closed unless the dryer is operating.</p>
Attic	Gable											
Dryer	Flat											
Eave	Soffit											
Turbine	Ridge											
Crawl space	Foundation											

Attached Structures	Why does this matter?	What can be done?
<p>Overall, are combustible attachments:</p> <p><input type="checkbox"/> None, clear of receptive fuel</p> <p><input type="checkbox"/> Receptive fuel adjacent</p> <p><input type="checkbox"/> Receptive fuel below</p> <p>Decks and Balcony:</p> <p><input type="checkbox"/> Not applicable</p> <p>Clear of receptive fuel? Y or N</p> <p>Patio covers:</p> <p><input type="checkbox"/> Not applicable</p> <p>Clear of receptive fuel? Y or N</p> <p>Carport:</p> <p><input type="checkbox"/> Not applicable</p> <p>Clear of receptive fuel? Y or N</p> <p>Fences:</p> <p><input type="checkbox"/> Not applicable</p> <p>Clear of receptive fuel? Y or N</p> <p>Garage:</p> <p><input type="checkbox"/> Not applicable</p> <p>Have receptive fuel adjacent? Y or N</p> <p>Storage Building/Shed:</p> <p><input type="checkbox"/> Not applicable</p> <p>Clear of receptive fuel? Y or N</p>	<p><i>The area between the home and the surrounding wildland is often where combustible yard items (brooms, lawn furniture & cushions, children's toys, swing sets, door mats, etc.) are stored or accumulate.</i></p> <p><i>Decks are often constructed of combustible materials. Items are left on decks and often stored underneath, along with a seasonal accumulation of grass, leaves, needles and yard debris. These are all receptive fuel beds for windblown embers.</i></p>  <p><i>Carports may be storage for fuel, oil, or other flammable automotive liquids.</i></p> <p><i>Fences tend to collect debris and may act like a wick to bring fire to a building.</i></p> <p><i>If any attachment is weathered, flaking, peeling, or in poor condition, it will be more susceptible to ignition.</i></p>	<p>Keep all areas clean of debris.</p> <p>During fire season, do not store combustible materials under or on top of decks or porches attached to your home.</p> <p>If interested in using the area for storage, considering enclosing or screening. Maintain vegetation out to 30 feet.</p> <p>Keep areas under low patios clear of wood mulch and yard debris.</p> <p>Install a metal flashing strip to separate attachment from the home.</p> <p>Replace wood fence-ends with noncombustible material (masonry or metal) like a gate or heavy timber to keep fire from spreading to the home.</p> <p>Replace any rotten wood.</p>

Vegetation

Zone 1a: 0-5 feet	Why does this matter?	What can be done?
<p>Ember resistant zone 3-5 feet around the structure? Y or N</p> <p>Ground cover around structure: Wood Rock Gravel Grass Other _____</p> <p>Grass: <input type="checkbox"/> None <input type="checkbox"/> Short and maintained <input type="checkbox"/> Native and tall</p> <p>Shrubs: <input type="checkbox"/> None <input type="checkbox"/> Light and no dead <input type="checkbox"/> Heavy with dead material</p> <p>Trees: Y or N</p> <p>Ladder fuels: Y or N</p>	<p><i>Trees and shrubs planted within the 0-5 foot home ignition zone can produce a significant amount of radiant and convective heat on your home causing it to ignite.</i></p> <div style="text-align: center;">  </div> <p><i>Juniper bushes in particular are extremely flammable.</i></p> <div style="border: 1px solid black; background-color: #fff9c4; padding: 10px; margin: 10px 0;"> <p style="text-align: center;">Home Ignition Zone – Is the home and its surroundings out to 200 feet.</p> <p style="text-align: center;">Zone 1a: 0-5 ft Zone 1b: 5-30 ft Zone 2: 30-100 ft Zone 3: 100-200 ft</p> </div>	<p>Use nonflammable mulches, rock and noncombustible hard surfaces.</p> <p>Remove trees located 0-5 feet from the structure. If removing the tree is not an option, prune lower limbs of trees to reduce the chance of a fire spreading to the tree top than moving to the roof. (10-15 feet or 1/3 the trees height, whichever is less is a standard rule of thumb for pruning)</p> <p>Shrubs adjacent to trees need to be removed to eliminate them from spreading fire into the trees tops.</p> <p>Consider low growing herbaceous (non-woody) or succulent plants near structure.</p> <p>Pick up dead and downed vegetation sticks and logs where they have heavy accumulation.</p>
Zone 1b: 5-30 feet	Why does this matter?	What can be done?
<p>Overall, are combustibles 5-30 feet from structure: <input type="checkbox"/> Not present <input type="checkbox"/> Light <input type="checkbox"/> Moderate <input type="checkbox"/> Heavy</p> <p>Grass: <input type="checkbox"/> None <input type="checkbox"/> Short and maintained <input type="checkbox"/> Native and tall</p> <p>Shrubs: <input type="checkbox"/> None <input type="checkbox"/> Light and no dead <input type="checkbox"/> Heavy with dead material</p>	<p><i>Deciduous plants tend to be more fire resistant, because leaves have higher moisture content.</i></p> <p><i>Trees and shrubs within the 5-30 foot home ignition zone can cause a significant amount of radiant and convective heat on your home.</i></p> <p><i>Cured grass will support fire spread rapidly toward your home. The greater the amount (height and volume) the greater the flame length and heat intensity, and the harder it is to control.</i></p>	<p>Break up continuous vegetation.</p> <p>Consider broadleaf/deciduous trees because they are less flammable than conifer trees.</p> <p>Keep 10 feet spacing between trees tops or create small groupings of trees and/or shrubs.</p> <p>Lower limbs of trees need pruned to reduce the chance of a fire spreading to the canopy. (10-15 feet or 1/3 the tree height, whichever is less is a standard rule of thumb for pruning)</p>

<p>Trees:</p> <ul style="list-style-type: none"> <input type="checkbox"/> None <input type="checkbox"/> Deciduous - good separation <input type="checkbox"/> Deciduous - continuous <input type="checkbox"/> Mixed – good separation <input type="checkbox"/> Mixed – continuous <input type="checkbox"/> Coniferous-good separation <input type="checkbox"/> Coniferous – continuous <p>*Good separation = > 20 feet</p> <p>Ladder Fuels:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Absent <input type="checkbox"/> Scattered <input type="checkbox"/> Abundant <p>Heavy fuels on the ground:</p> <p>Y or N</p>	 <p><i>Ladder fuels may allow a surface fire to climb into the canopy of the trees.</i></p>  <p><i>Heavy ground fuels will increase flame length, fire intensity, and duration of heat.</i></p>	<p>Shrubs and tall grass adjacent and under to trees needs to be removed to eliminate them from being ladder fuel to tree canopies.</p> <p>Maintain grass so it is short and green (non-burnable).</p> <p>Walkways and paths can be effective for breaking up fuel continuity so that it is difficult for a fire to carry.</p> <p>Eliminate areas of heavy fuels on the ground.</p>
<p>Zone 2: 30-100 feet</p>	<p>Why does this matter?</p>	<p>What can be done?</p>
<p>Grass:</p> <ul style="list-style-type: none"> <input type="checkbox"/> None <input type="checkbox"/> Short and maintained <input type="checkbox"/> Native and tall <p>Shrubs:</p> <ul style="list-style-type: none"> <input type="checkbox"/> None <input type="checkbox"/> Light and no dead <input type="checkbox"/> Heavy with dead material <p>Trees:</p> <ul style="list-style-type: none"> <input type="checkbox"/> None <input type="checkbox"/> Deciduous - good separation <input type="checkbox"/> Deciduous – continuous <input type="checkbox"/> Mixed – good separation <input type="checkbox"/> Mixed – continuous <input type="checkbox"/> Coniferous – good separation <input type="checkbox"/> Coniferous - continuous <p>Tree canopy spacing:</p> <ul style="list-style-type: none"> < 10 feet > 10 feet 	<p><i>Isolated or small grouping of trees or shrubs are best. Treat groups as individual units.</i></p> <p><i>Trees within the 30-100 foot home ignition zone can cause a fire to spread within the tree tops and cause radiant and convective heat on your home.</i></p> <p><i>Shrubs and lower limbs are ladder fuels that cause a fire on the ground to climb into the canopies of the trees.</i></p> <p>Notes:</p>	<p>Consider broadleaf/deciduous trees because they are less flammable than conifer trees.</p> <p>Keep 10 feet spacing between tree canopies or create small groupings of trees and/or shrubs.</p> <p>Lower limbs of trees need pruned to reduce the chance of a fire spreading to the canopy. (10-15 feet or 1/3 the trees height, whichever is less is a standard rule of thumb for pruning)</p> <p>Walkways and paths can be effective for breaking up fuel continuity so that it is difficult for a fire to carry.</p> <p>Native grass lawns and recreated meadows are also possibilities for this zone. Use drought resistant and low water use species.</p>

<p>Ladder Fuels: <input type="checkbox"/> Absent <input type="checkbox"/> Scattered <input type="checkbox"/> Abundant</p> <p>Heavy fuels on the ground: Y or N</p>		
Zone 3: 100-200 feet	Why does this matter?	What can be done?
<p>Heavy and/or continuous conifer trees 100-200 feet from structure: Y or N</p> <p>Grass: <input type="checkbox"/> None <input type="checkbox"/> Short and maintained <input type="checkbox"/> Native and tall</p> <p>Shrubs: <input type="checkbox"/> None <input type="checkbox"/> Light and no dead <input type="checkbox"/> Heavy with dead material</p> <p>Trees: <input type="checkbox"/> None <input type="checkbox"/> Deciduous - good separation <input type="checkbox"/> Deciduous – continuous <input type="checkbox"/> Mixed – good separation <input type="checkbox"/> Mixed – continuous <input type="checkbox"/> Coniferous – good separation <input type="checkbox"/> Coniferous - continuous</p> <p>Tree canopy spacing: < 10 feet > 10 feet</p> <p>Ladder Fuels: <input type="checkbox"/> Absent <input type="checkbox"/> Scattered <input type="checkbox"/> Abundant</p> <p>Heavy fuels on the ground: Y or N</p>	<p><i>By thinning, grouping or breaking up the continuous vegetation in this area you:</i></p> <ul style="list-style-type: none"> • <i>Reduce the number of embers that will threaten your home (?)</i> • <i>Decrease intensity of a fire that may be nearing your home.</i> • <i>Suppression efforts may be more effective with fewer forest fuels.</i> <p><i>Reducing ladder fuels helps keep a fire on the ground. This could be a fire that started away from your home or a fire that started in your yard from spreading to the neighboring area.</i></p> <p>Notes:</p>	<p>Keep 10 feet spacing between tree tops or create small groupings of trees. This can depend on the tree species.</p> <p>Lower limbs of trees need pruned to reduce the chance of a fire spreading to the canopy (10-15 feet or 1/3 the tree height, whichever is less is a standard rule of thumb for pruning)</p> <p>Specific Recommendations:</p>
Heat Source	Why does this matter?	What can be done?
<p>Structure is heated by: <input type="checkbox"/> Wood <input type="checkbox"/> Propane <input type="checkbox"/> Electric <input type="checkbox"/> Natural gas</p>	<p><i>As previously mentioned, it is important chimneys have a spark arrestor.</i></p> <p><i>The next important factor when heating with wood is storage. If wood piles are</i></p>	<p>Store fire wood 30 feet from structure or in an enclosed structure.</p> <p>Clear vegetation away from</p>

<p>Wood storage:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Not applicable <input type="checkbox"/> Adjacent to structure <input type="checkbox"/> < 30 feet away <input type="checkbox"/> > 30 feet away <input type="checkbox"/> Enclosed storage <p>Propane tank location:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Not applicable <input type="checkbox"/> Above ground with clearance <input type="checkbox"/> Above ground no clearance <input type="checkbox"/> Underground <p>Electric:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Not applicable <input type="checkbox"/> Above ground powerlines <input type="checkbox"/> Buried powerlines 	<p><i>kept next to the home or within 30 feet are ignited by embers they increase the chances of intense heat</i></p> <p><i>coming into direct contact with the home.</i></p> <p><i>Propane tanks when heated by nearby vegetation or combustible materials can explode if they don't vent properly.</i></p> <p><i>Overhead electric power lines when in contact with vegetation can cause a fire (tree falling into a power line or power line structures falling into a tree).</i></p>	<p>propane tanks.</p> <p>Ensure propane tanks are not moved or altered so they will vent properly if heated.</p> <p>Ensure vegetative clearance above, below and adjacent to power lines.</p> <p>Have power line structures inspected and replaced if needed.</p> <p>Specific Recommendations:</p>
Ignition Sources	Why does this matter?	What can be done?
<p>Barbecue: Y or N</p> <p>If yes:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Propane <input type="checkbox"/> Charcoal <p>Fire pit: Y or N</p> <p>If yes:</p> <ul style="list-style-type: none"> <input type="checkbox"/> < 10 feet clearance <input type="checkbox"/> > 10 feet clearance <p>Burn barrel: Y or N</p> <p>If yes:</p> <ul style="list-style-type: none"> <input type="checkbox"/> < 15 feet clearance <input type="checkbox"/> > 15 feet clearance <p>Screen on barrel: Y or N</p> <p>Other ignition sources:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Lawn equipment <input type="checkbox"/> Off road vehicles <input type="checkbox"/> Welding equipment 	<p><i>Ignition sources can escape and start a wildfire. It is important to ensure ignition sources are never left unattended and always extinguished properly.</i></p> <p><i>Barbecues, fire pits, debris burning and many other ignition sources can cause wildfires if left unattended; ashes are disposed of improperly; on windy dry days; or when burnable vegetation is to close.</i></p> <p><i>The last thing anyone wants to happen is to be the cause of a wildfire where property is lost and danger to human life is at risk.</i></p> <p>Specific Recommendations:</p>	<p>Insure a minimum of 10-15 feet clearance of burnable vegetation above and around ignition source.</p> <p>Remain with fire and/or ignition sources at all times.</p> <p>Keep fires small.</p> <p>Always have plenty of water nearby.</p> <p>Check weather forecast. Don't burn on windy dry days.</p> <p>Check on the burned area the following day to ensure it is not holding any heat.</p> <p>Keep fire extinguisher's available.</p> <p>Dispose of ashes in a safe manor (mix with water in metal container).</p> <p>Consider alternatives to burning (composting or chipping).</p>

Appendix A

Water Sources	Why does this matter?	What can be done?
<p>Available water sources:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Hydrants <input type="checkbox"/> Outside faucets <input type="checkbox"/> Pond or creek <input type="checkbox"/> Outside sprinkler system <input type="checkbox"/> None <p>Notes:</p>	<p><i>Water sources are important when you have a wildfire or are trying to prevent a wildfire.</i></p> <p><i>Being able to apply water to areas 200 feet from your home is important.</i></p> <p><i>Water supplies can also assist emergency response vehicles and personal if they are available and can safely work in the area.</i></p>	<p>Have multiple garden hoses available to reach areas 200 feet from your home.</p> <p>If you have ponds, a pool, creek, or irrigation ditches, consider having a pump and hose available to apply water if needed.</p> <p>Consider how to apply water if the electric power is turned off. (Generator, pump with gas motor).</p>

Appendix B

Access	Why does this matter?	What can be done?
<p>Address visible, reflective and noncombustible: Y or N</p> <p>Locked gate blocking access: Y or N</p> <p>If yes, does fire department have access: Y or N</p> <p>Community access:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Two or more roads in/out <input type="checkbox"/> One road in/out <p>Width of driveway:</p> <ul style="list-style-type: none"> <input type="checkbox"/> 15 feet or less <input type="checkbox"/> 16 feet or more <p>Length of driveway:</p> <ul style="list-style-type: none"> <input type="checkbox"/> < 50 feet <input type="checkbox"/> 50 to 150 feet <input type="checkbox"/> 150 to 500 feet <input type="checkbox"/> 500 feet or more <p>Adequate turnaround: Y or N</p> <p>Bridge weight limits: Y or N</p> <ul style="list-style-type: none"> <input type="checkbox"/> Unknown <input type="checkbox"/> Not applicable 	<p><i>If emergency service vehicles cannot find you property it can be difficult for them to assist if they are available and can safely work in the area.</i></p> <p><i>Providing gate access to emergency service is important so they can assist.</i></p> <p><i>By having two evacuation routes it increase the chances of a safe evacuation. One route could be blocked by downed power line, emergency vehicles, fire, or a downed tree.</i></p> <p><i>The length of your driveway, adequate turnaround and bridge weight limits are helpful for emergency personnel to know so they can determine if it is safe for them to enter.</i></p>	<p>Ensure your property is clearly marked will reflective and noncombustible material and can be seen from the road.</p> <p>Provide local fire department and/or emergency responders with gate access.</p> <p>Create an alternative evacuation route out of your property and/or community.</p> <p>Make sure driveway is clear of overhanging trees and vegetation is cleared at least 5 feet on each side of driveway.</p> <p>Consider creating a turnaround route for emergency vehicles.</p>

Notes and Comments