Woodside Fire Protection District Structure Assessment Form

Date:	
Property Owner:	
Address:	
Email:	
	utbuilding Care Facility Hotel/Lodge/Camp public Facility Other
Number of Occupants: # of A	dditional Structures & type:
Responding Fire Department:	phone:
Assessor:	
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 California. 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 fire. 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, and predominant wind direction:	<u> </u>

	General overview of surrounding area	
Topography and Terrain	Why does this matter?	What can be done?
Slope within 15 feet of structure: 0-10%	Fire moves faster upslope than across flat ground, especially when slope and wind are in alignment.	Take aggressive measures with fuel mitigation by increasing the spacing between trees and shrubs, especially those downslope from the structure. (See additional recommendations in the vegetation section)
Aspect: N NE E SE S SW W NW	South-facing slopes generally receive more direct sunlight resulting in drier vegetation and a more combustible environment.	Same as above
Position of structure on the slope: Ualley bottom or lower slope Mid-slope Upper-slope Ridge top/chimney	Position on slope can influence fire behavior, equipment access, response times, or safe evacuation.	Same as above
Features present: ☐Steep slopes ☐Canyons ☐Chutes or chimneys ☐Saddles	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.	Same as above
Weather	Why does this matter?	What can be done?
Local weather and prevailing winds: N NE E SE S SW W NW	The common occurrence of dry weather and strong winds increases probability of wildfire starts and aggressive fire spread in your area. High winds will cause a fire to move	Take action to prevent wildfires. Be more aggressive with fuels mitigation around your home, especially those from the prevailing wind and weather side.
Periods of severe dry weather: Y or N	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.	Keep your roof, decks, and perimeter of your home clean of an needle and leaf debris.
# of days/month with strong dry winds:	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.	Stay updated on fire weather and conditions during the fire season. Including: Weather Internet Sites Fire Danger and Fire Wx

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

Chimney	Why does this matter?	What can be done?
Present: Y or N Screened: Y or N Vegetation nearby: Y or N Notes:	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. 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. Spark arrestors are required to prevent large embers from escaping through your chimney.	Install a spark arrestor with ½-in mesh. These are available at lumber yards, hardware stores, or fire place specialty stores. Remove overhanging branches and trees that are within 10 feet of your chimney.
Gutters	Why does this matter?	What can be done?
Type: None Metal Plastic or vinyl Clean of litter: Y or N Notes:	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. During a wildfire, plastic or vinyl gutters melt, detach, and fall to the ground igniting combustible materials below, including vegetation and combustible siding.	Remove tress or branches overhanging your home to minimize debris in gutters. Clean gutters of all debris before and during each fire season. Replace plastic or vinyl gutters with metal. Keep clean, especially during fire season. Install a solid cover or mesh screen to keep gutters from collecting debris. These will also require maintenance to keep clean. Remove gutters entirely and install rock mulch under the drip line to create a noncombustible perimeter around the home.

Eaves	Why does this matter?	What can be done?
Type: ☐Boxed-in or fire-treated ☐Open and/or not treated Notes:	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.	Box in eaves to eliminate the possibility of embers blowing in. Place soffit vents near the roof edge, not near the exterior wall.
Notes:	Without boxed-in eaves your attic is very susceptible to ignition from windblown embers.	Inject sealant (caulking) in any gaps. Remove all vegetation within 5-feet of home to minimize intense heat close to the home.
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Exterior walls & siding	Why does this matter?	What can be done?
Siding material:		
□ Noncombustible or metal □ Log or heavy timber □ Smooth wood or vinyl siding	Some siding materials are more resistant to radiant heat and direct flame impingement than others.	Replace wood siding with noncombustible material like cement board, masonry, or stucco, or treat wood with fire-resistant
☐Wood shake or ember ☐Receptive siding	Log structures resist ignition better than	treatment.
Condition: good or poor	wood siding of thinner material, but it is vulnerable to ember intrusion between log	Inspect and replace any broken or missing chinking between logs.
Structures distance from slope if slope is >25%:	joints. Radiant heat can pre-heat wood siding that may ignite more readily with direct	Caulk/seal any gaps in siding and where the siding meets the trim.
Skirting material:	flame contact.	Consider noncombustible skirting around the building:
Notes:	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. If siding is too close to ground, < 2-inches, even ground fuels may ignite the siding.	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.
Windows	Why does this matter?	What can be done?
Type of windows: □Single-paned □Double-paned □Tempered glass Window Frame Material:	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.	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.
□Metal □Fiberglass □Aluminum-clad wood □Plastic	Single-pane windows are more vulnerable than dual-paned, multi-paned, or tempered glass windows.	Even the best windows will not protect if they are left open. Close all windows upon evacuation.
	Because of the temperature difference between the glass and the frame, larger windows are more vulnerable to breaking than smaller windows.	

Screen Material: □Metal □Fiberglass □Plastic		If windows do break, metal or fiberglass screens may still keep firebrands and embers from entering the home, while plastic screen can melt.	Replace plastic screens with metal or fiberglass screens.
Vegetation near Y or N Notes:	windows:	Planting combustible vegetation near windows increases the chances of intense heat coming into direct contact with the windows.	Remove highly combustible vegetation in front of windows and replace with something highmoisture or low growing.
Vei	nts	Why does this matter?	What can be done?
All structure ven Non-combus protective sc Non-combus inch No screens Check vents if th screened with no	tible 1/8- inch reen tible screen = 1/4 ney are NOT oncombustible	In the event of a wildfire, embers can enter small spaces to ignite combustible materials within. Post-fire surveys have found that embers large enough to cause ignitions can pass through ‡ inch and even 1/8 inch mesh screening. **Screening will help reduce the risk of	Install 1/8 inch metal mesh screens on all vents. Until recently, minimu screen size allowed was ¼ inch. If 1/8-inch screening is installed, it wil take maintenance to keep it clean debris, allowing air to circulate so moisture does not build-up in enclosed space. Consider preparing vent covers of plywood or thin metal to install as
Attic	Gable	ember entry, but it is not a perfect solution (IBHS).	part of a pre-evacuation preparedness plan.
Dryer	Flat	Real Property of the Control of the	Install a lawyor ton a yout that atom
Eave	Soffit		Install a louver-type vent that stays closed unless the dryer is operating
Turbine	Ridge		
Crawl space	Foundation		

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

	Vegetation	
Zone 1a: 0-5 feet	Why does this matter?	What can be done?
Ember resistant zone 3-5 feet around the structure? Y or N Ground cover around structure: Wood Rock Gravel Grass Other Grass: None Short and maintained Native and tall Shrubs: None Light and no dead Heavy with dead material Trees: Y or N Ladder fuels: Y or N	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. Juniper bushes in particular are extremely flammable. Home Ignition Zone — Is the home and its surroundings out to 200 feet. Zone 1a: 0-5 ft Zone 1b: 5-30 ft Zone 2: 30-100 ft Zone 3: 100-200 ft	Use nonflammable mulches, rock and noncombustible hard surfaces. 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) Shrubs adjacent to trees need to be removed to eliminate them from spreading fire into the trees tops. Consider low growing herbaceous (non-woody) or succulent plants near structure. Pick up dead and downed vegetation sticks and logs where they have heavy accumulation.
Zone 1b: 5-30 feet	Why does this matter?	What can be done?
Overall, are combustibles 5-30 feet from structure: Not present Light Moderate Heavy Grass: None Short and maintained Native and tall Shrubs: None Light and no dead Heavy with dead material	Deciduous plants tend to be more fire resistant, because leaves have higher moisture content. Trees and shrubs within the 5-30 foot home ignition zone can cause a significant amount of radiant and convective heat on your home. 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.	Break up continuous vegetation. Consider broadleaf/deciduous trees because they are less flammable then conifer trees. Keep 20-30 feet spacing between trees tops or create small groupings of trees and/or shrubs. 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)

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

> 10 feet

this zone. Use drought resistant and

low water use species.

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

kept next to the home or within 30 feet are ignited by embers they increase the chances of intense heat coming into direct contact with the home. Propane tanks when heated by nearby vegetation or combustible materials can explode if they don't vent properly. 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).	Ensure propane tanks are not moved or altered so they will vent properly if heated. Ensure vegetative clearance above, below and adjacent to power lines. Have power line structures inspected and replaced if needed. Specific Recommendations:
Why does this matter?	What can be done?
Ignition sources can escape and start a wildfire. It is important to ensure ignition sources are never left unattended and always extinguished properly. 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. 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. Specific Recommendations:	Insure a minimum of 10-15 feet clearance of burnable vegetation above and around ignition source. Remain with fire and/or ignition sources at all times. Keep fires small. Always have plenty of water nearby. Check weather forecast. Don't burn on windy dry days. Check on the burned area the following day to ensure it is not holding any heat. Keep fire extinguisher's available. Dispose of ashes in a safe manor (mix with water in metal container). Consider alternatives to burning (composting or chipping).
	are ignited by embers they increase the chances of intense heat coming into direct contact with the home. Propane tanks when heated by nearby vegetation or combustible materials can explode if they don't vent properly. 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). Why does this matter? Ignition sources can escape and start a wildfire. It is important to ensure ignition sources are never left unattended and always extinguished properly. 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. 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.

Water Sources	Why does this matter?	What can be done?
Available water sources: ☐Hydrants ☐Outside faucets ☐Pond or creek	Water sources are important when you have a wildfire or are trying to prevent a wildfire.	Have multiple garden hoses available to reach areas 200 feet from your home.
□Outside sprinkler system □None	Being able to apply water to areas 200 feet from your home is important.	If you have ponds, a pool, creek, or irrigation ditches, consider having a pump and hose available to apply
Notes:	Water supplies can also assist emergency response vehicles and personal if they are available and can safely work in the area.	water if needed. Consider how to apply water if the electric power is turned off. (Generator, pump with gas motor).
	Appendix B	
Access	Why does this matter?	What can be done?
Address visible, reflective and noncombustible: Y or N Locked gate blocking access:	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.	Ensure your property is clearly marked will reflective and noncombustible material and can be seen from the road.
Y or N If yes, does fire department have access: Y or N	Providing gate access to emergency service is important so they can assist.	Provide local fire department and/or emergency responders with gate access.
Community access: ☐Two or more roads in/out ☐One road in/out Width of driveway: ☐15 feet or less	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.	Create an alternative evacuation route out of your property and/or community.
□16 feet or more Length of driveway: □< 50 feet □50 to 150 feet □150 to 500 feet □500 feet or more Adequate turnaround: Y or N Bridge weight limits: Y or N □Unknown □Not applicable	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.	Make sure driveway is clear of overhanging trees and vegetation is cleared at least 5 feet on each side of driveway. Consider creating a turnaround route for emergency vehicles.

Notes and Comments		