

Mendocino County Fire Safe Council

~ WILDFIRE RISK ASSESSMENT ~

How does your home rate?

This assessment will reveal your home's vulnerabilities to wildfire and thus help you better protect your life and home. Your home's potential for ignition – its chance of catching on fire -- is determined by its characteristics in relation to (1) burning embers flying through the air and (2) the flammable items within 100 feet of your home.

For each item below, circle the number across from the description that's most like your home's situation, or estimate a score in between. Be honest! Then total your score (last page) and see how your home rates.

While assessing your home's situation, envision what it would take for your house to survive *without* firefighters being present -- a common situation during extreme wildfires. This is why the first section of this assessment rates whether or not your home could survive on its own. Situations ranked "0" are excellent and indicate there's a low potential that your home would ignite from that situation. This assessment starts with your home's condition and then proceeds to the conditions surrounding it.

Low potential for ignition makes firefighters' work easier, of course! The second section of this assessment deals with increasing firefighters' ability to protect your home.

This assessment was created with the assistance of Jack Cohen, a research scientist with the U.S. Forest Service whose work on how homes ignite in wildfires is central to the national Firewise program and is the subject of the DVD called "Wildfire! Preventing Home Ignitions," available free from Firewise (see www.firewise.org).

~ PART 1: HELPING YOURSELF AND YOUR HOME ~

BUILDING MATERIALS AND CONSTRUCTION

Your home can survive a wildfire without the fire department's intervention -- IF it is built and maintained to resist being ignited by both (1) burning embers entering into your house and/or accumulating on or near it, and (2) radiant heat from nearby flames. The largest cause of homes destroyed in large wildfires is "little things" -- burning embers directly igniting the house or igniting fires in the immediate surroundings that spread to the house.

My Roof *The roof is the most vulnerable part of a house, so it is top priority!*

- | | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| I have a fire-resistant roof covering in good shape (composition shingles, ceramic tile, metal, slate, etc.) | 0 |
| I have a ceramic tile roof covering with gaps between tiles and with open ends (Note: rounded Spanish tiles that are not sealed, and have open ends where birds nest and debris collects, are very vulnerable to embers) | 40 |
| My roof has rain gutters full of pine needles and dead leaves (bad news!) | 70 |
| My roof has flammable protrusions such as chimney boxes, dormers, roof offsets, etc., which are full of pine needles and dead leaves | 70 |
| I have a flammable wood (shake) roof covering (this is the area with the most extreme potential for ignition by burning embers) | 100 |

My Walls, Eaves, Deck/Porch, and Vents *Burning embers can penetrate vents that are damaged or have screen openings larger than 1/8". Embers can also penetrate gaps in siding, junctions between deck and walls, and facing boards.*

My home has fire resistant siding, eaves, and deck; and all vents are covered with <u>metal mesh with openings of 1/8" or less (excellent!)</u>	0
My home has a flammable deck and siding, but the undersides of my deck and porch are enclosed.	10
My home has fire resistant materials, but vents are not properly covered	40
My home is made of combustible materials, and vents are not covered	50
My home has a flammable deck abutting flammable siding, and the deck often contains deposits of pine needles and dead leaves	70
My home has a flammable deck and siding; and the area under the deck is open and contains stored and/or deposited flammable materials	70

Presence of flammable items on my deck and porch *These innocent little things are often where burning embers land -- and then they catch decks, walls, and homes on fire.*

I keep my deck/porch free of wood planter boxes, flammable decorations and doormats, lawn furniture with cushions, newspapers, towels, etc.	0
There are some flammable items on my porch or deck	30
Many of these flammable items are on my deck/porch all summer	50

Location of large fire hazards, including other buildings *In a wildfire, buildings often produce embers which quickly catch other buildings on fire. Note: anything flammable that is attached to the house—fences, decks, boardwalks, outbuildings, etc.—should be considered part of the house and given the same consideration as the house. (Circle ALL that apply to your home.)*

All firewood, lumber, fuel tanks, chemicals, equipment, wood fences, sheds, and other fire hazards are at least 30 feet from my home	0
There's a wooden fence attached to my house	20
There are old sheds, barns, and other buildings within 30' of my home	30
Firewood, lumber, or tanks are adjacent to or under an opening in home or deck	70

My Windows *Radiant heat is absorbed by window glass. With sufficient heating, the window can thermally break and subsequently collapse. Without metal screens, a collapsed window pane forms an opening that allows burning embers to enter the home, causing the home to burn down from the inside out.*

Plate glass requires much less heating than tempered glass to fracture (tempered glass is labeled as such in one of the corners). The larger and thinner the plate glass panes, the more likely they are to collapse after breaking.

Keep flammable items, and therefore flames, away from your windows to reduce the heat that could result in windows breaking and collapsing.

All my windows and glass doors have double-paned or tempered glass	0
I have large single-paned plate glass windows facing wildland areas or other flammable objects (check: your glass doors should be of tempered glass)	20

FLAMMABLE VEGETATION AND OTHER ITEMS NEAR MY HOME

Removing dead grass, weeds, brush, dead tree branches, and other flammable items from near homes is crucial to keeping them safe in a wildfire. Contrary to popular opinion, homes ignite more frequently from small fires near the surface (in grass, weeds, and brush) than they do from high-intensity flames in treetops.

Removing vegetation does not mean you need to cut down mature trees, remove all plants, and create a moonscape! It means reducing the amount of flammable items near your home so that fire intensity is reduced and fire will not spread to your home or any of its flammable attachments. (Any flammable attachment to your home is part of your home.)

It's important to separate flammable items from each other in two ways:

1. Keep clumps of plants, bushes, and other items horizontally separated enough from each other so if one clump is on fire, its heat and flames won't catch the next one on fire. For example, canopies of coniferous trees (Douglas-firs, pines, etc.), individually or in clumps of 3 or less, should be separated by 20 feet or more. Canopies of flammable shrubs should be separated by 10 feet or more.
2. Keep fire from burning into tree and shrub canopies by preventing fire from spreading vertically. This can be done by (a) pruning lower branches and (b) removing most flammable vegetation beneath the trees or shrubs, out to at least the width of their canopy. Dead vegetation must be removed from shrubs (half-dead junipers are especially flammable).

Presence of all flammable items (plants, dead leaves, etc.) **within 5 feet** of my foundation

I keep <u>everything</u> that's flammable cleared, raked, and moved away	0
Mowed dead grass and flammable mulch is right next to flammable wall siding	50
There's unmowed dead grass, other dead vegetation, and flammable materials that could burn with flames touching fire-resistant walls without windows	60
There's unmowed dead grass, other dead vegetation, and flammable materials that could burn with flames touching flammable walls with windows	100

Condition of **vegetation within 30 feet** of my house

I have removed dead vegetation from under and within my shrubs and trees, with particular attention to flammable shrubs and trees (e.g., junipers, native chaparral, and conifers). My coniferous trees have 20 feet separating their canopies (and outside branches), and branches are pruned to 8 feet above the ground. Dead grass has been mowed within a few inches of the ground's surface (surface pine needles are okay). Great job!	0
There's unmowed dead grass and accumulated dead vegetation, but trees and shrubs are scattered with greater than 20 feet between their canopies	30
There's unmowed dead grass and accumulated dead vegetation with continuous shrub and tree canopies	70

Condition of **trees more than 30 feet** from my home

My flammable trees have at least 15 feet between canopies and branches pruned up at least 8 feet above the ground. There are no areas of heavy dead branches and dead shrubs. Shrubs have at least 10 feet between canopies	0
I've done some thinning, pruning and heavy dead vegetation removal, but nowhere near this much (some shrub and tree canopy burning is likely)	30
There are continuous flammable shrubs and trees (can burn with high intensity!)	60

TOPOGRAPHY/TERRAIN NEAR MY HOME

Fire burns more intensely uphill than downhill, because heat rises. All else being the same, a steeper slope will burn more intensely. Narrow canyons and gullies can channel the wind, resulting in higher intensity burning. This will likely increase your home's exposure to burning embers -- and potentially will increase embers in the smoke column above the fire.

<u>My home's location relative to slopes covered with flammable vegetation (if applicable)</u>	
My home is set back more than 100' from a steep upslope	0
My home is 30-100' back from a steep upslope	10
My home is located right on the edge of a steep upslope	30
<u>Other terrain features that can increase a wildfire's intensity (circle all that apply)</u>	
My home is on top of a hill	10
My home is in a narrow canyon	20
My home is at the top of a canyon or gully	20

TOTAL POINTS FOR HOW MY HOME RATES: _____

~ PART 2: HELPING FIREFIGHTERS HELP YOU ~

During a wildfire, vehicles will be leaving -- and fire engines will be attempting to enter -- areas on the same road(s). Will you be able to evacuate safely if necessary?

Will fire engines be able to get to your home? Fire engines may be 28' long, 10' wide, and 15' tall. Will they have room to park, and firefighters to work, once they get there?

Options with a score of 20 would probably prevent fire engines from getting to your home at all. Work to improve these – or learn how to survive without evacuating. If you face these situations, contact the Fire Safe Council, Cal Fire, and your local fire department for advice on what you should do before and during a fire to enhance your safety.

Scores in this section are given to help you understand (1) your evacuation situation and (2) what firefighters need. They do not relate directly to how your home will survive a wildfire unattended, and should not be counted in your final score.

Number of Access Routes to my home

There are two or more roads in and out of my area	0
I live on a long dead-end road	15

Width of Roads to my home

The roads are all two lanes -- 18 or more feet wide	0
The roads are between 10 and 18 feet wide	10
Some roads are less than 10 feet wide	20

Existence of Turnouts for Passing on single-lane roads (if applicable)

Turnouts are located every 400 feet, and they are at least 10' wide x 80' long	0
There are some turnouts, but not this often and not this long	10
There are long narrow sections with no turnouts at all	20

Radius of Turns and Curves on Roads and Driveway to my home

All turns and curves have at least a 50' radius (gentle curves)	0
Some turns and curves are too tight for a fire engine to make at all	20

Vertical Clearance above Roads and Driveways

There's at least 15 vertical feet of clearance	0
There's 13-15 feet of clearance	10
There's less than 13 feet of clearance	20

Bridges on Roads or Driveways *A fire engine full of water can weigh 30,000+ pounds.*

If a bridge collapses, firefighters could be killed – and evacuation routes cut off. If you are not sure about your bridge's strength, consult a structural engineer.

All bridges can hold 40,000 pounds, and have signs posted that say so	0
Our bridge(s) can't hold that much weight	20

Room for Fire Engines to Maneuver near my home

- There’s a circular driveway or large open area (40’ x 40’) near my home 0
- There’s a place to turn around that’s at least 40’ long and 15’ wide 5
- There’s no place for fire engines to turn around near my home 20

In a large wildfire, firefighters from other counties may arrive. They will not know our neighborhoods. If they are given your address number, will they be able to find you?

Road and Street Signs

- Signs are present at all intersections, have reflective letters at least 3” tall, and are clearly visible in the dark in headlights (great!) 0
- Signs are hard to read, or are missing from some intersections 15
- There are no road or street signs in my area 20

My House Number Sign

- My sign is posted at the road, with reflective numbers at least 3” tall on a contrasting background, visible from 100’ away in both directions 0
- My sign is present but doesn’t meet the above requirements 10
- There’s no number sign for my house posted at the road 15

Water Supply *Most wildland fire engines carry only 500 gallons of water. Having water that fire engines – or you— can find and tap into is critical in rural areas. Tanks or hydrants must have a discharge with a male National Hose pipe thread fitting either 1½” or 2½” in diameter. Your Fire Safe Council has a detailed pamphlet on this subject; see below to contact us.*

- A pressurized fire department hydrant is within 1,000’ of my house 0
- I have a fire department fitting on a standpipe (small hydrant) or on my water tank, providing at least 500 gallons of water – and I have a blue reflectorized dot posted at my driveway’s entrance, and a sign pointing firefighters to where that fitting and water supply are located (great!) 0
- There’s a pond, pool, or stream near my home, where a fire engine could safely park within 10 feet of the water’s surface and pump from it 0
- There’s no water supply nearby that can be accessed for firefighting 15

Points re: things to do to assist firefighters and my own safety: _____

~ INTERPRETING YOUR HOME’S WILDFIRE RISK SCORE (FROM PAGE 4) ~

These are estimates; a low score does not guarantee that your home will be safe.

U.S. Forest Service scientist Jack Cohen assisted with this scoring,

based on his 30+ years of experiments and research into how homes ignite in wildfires.

- Up to 35 points = Low Risk
- 35 to 60 points = Moderate Risk
- 65 to 95 points = High Risk
- 100 points or more = Extreme Risk

Concerned about your score? See where your risk points are highest. Start with your home itself, and work outward. Proper vent screens are perhaps your cheapest, most crucial step. Do what you can. Every action you take will increase your safety from wildfire!

Mendocino County Fire Safe Council

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More at www.firewise.org www.firelab.org <http://firecenter.berkeley.edu> www.fire.ca.gov