

Checklist

for
Berkeley
Hills
Residents

Create Defendable Space to Protect Your Home from Wildfire



Berkeley Fire Department

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QUICK FIX CHECKLIST

It's the "little things" that will endanger your home. Just an ember landing on a little pile of flammable material can start a fire. Finding and eliminating those flammable materials outside, no matter how small, will make your home much safer.

Here are some relatively inexpensive and easy-to-complete quick fixes that can quickly increase your defendable space.

Plants near your house

The greatest risks to your house are plants near it.

- Remove older, larger or dying plants within the "home zone" (within 6' of your house). Vigorous, smaller, and leggy plants, like azaleas, roses and daylilies, are better. See "Plants and Landscapes for Summer-Dry Climates of the San Francisco Bay Region" (www.ebmud.com) for details.
- Keep your plants in good condition. Water them regularly, preferably with a drip system. Get rid of dead branches and dead material under the plants.
- Minimize plants under windows, near decks, or at inside corners of your house.
- Add new plants that are "fire-safe" (that have all the characteristics above). Avoid plants with fine materials such as junipers and cedars.



Other plants and trees on your lot

- Cut tree branches within 6' of your roof (or remove the tree, if necessary).
- Create islands of vegetation so that fire does not have a path to your house. Be sure no large bushes are under trees that could cause a crown fire.
- Minimize landscaping bark and mulch, which allow embers to smolder.
- Cut annual grasses or get them grazed before they die. Annual

grasses are a major hazard in the fall, especially if you have grasses on a slope leading up to your house.

Other combustibles

- The area within the “home zone” (6’ from your house) is especially hazardous. Don’t store firewood and other burnable material within this zone, especially under decks or against outside walls. Move your firewood as far from the house as possible. If you’re concerned about sheltering your woodpile from rain, place the wood under a tarp or some other covering.
- Clear your gutters regularly, especially when the rainy season is over and you’re less likely to think about gutter debris. If possible, cover your gutters with metal screening.
- Keep your barbecue propane tank as far away from the house as possible.

Gutters

Gutters are in a vulnerable spot of a house, the intersection of eaves and roof, and are usually in contact with combustible moldings. When you’re cleaning gutters, pay special attention to:



- Upper story gutters that are difficult to reach (even with a good ladder), and
- The portion of lower gutters that are fed by roof tiles rather than downspouts.

In conjunction with cleaning gutters, roofs also need to be cleared of debris, such as leaves. Most leaves fall about the time that fire weather peaks, so fall debris cleaning may have to be done several times.

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Other Quick Fixes

Look for decayed wood. Some key places to look for decay is at the bottom corner of wooden windowsills (where embers land), the perimeter of decks, and any other area where water can be trapped. A small amount of decay can be chiseled out and the gaps filled with waterproof fillers and caulk. Larger amounts of decay might require replacement of the wood piece.

Your chimney is required to have an approved spark arrester. Sparks from your chimney can cause your neighbor’s house to catch on fire. Prune branches and shrubs within 10’ of chimneys and stovepipes.



Add screens to windows. Metallic screens provide protection to windows from radiant energy from fires and possibly some protection against wind-blown debris.

Garages, sheds and other structures also need to be fire resistant. Use weatherstripping or wood to block gaps underneath your garage door. Keep vegetation and debris away from these structures, and be sure you keep them in good condition.

Web links/local resources

Check out the following links for more information:

Berkeley Fire Department
www.ci.berkeley.ca.us/fire

The Fire Safe Council
www.firesafecouncil.org

Firewise
www.firewise.org

California Department of
Forestry and Fire Protection
www.fire.ca.gov/php

LONG-TERM ACTIONS

How a house is designed, where it is built, materials used in its construction and landscape, and access to the house all influence survivability during wildfire. Much of the defendability of your home depends on what you've done to mitigate fire danger and how accessible your home is.

Before you make major changes in your property (such as installing a new roof, building a fence, creating landscaping, or remodeling your home) think in terms of defensible space.

Roof and roofing materials

Use construction materials that are fire resistant and non-combustible whenever possible.

For roof construction, use Class A asphalt shingles, slate or clay tile, metal, cement and concrete products, and terra-cotta tiles. In the Berkeley Hazardous Hills Area, only Class A roofs not using wood shakes are allowed.

Don't assume that a tile roof is safe. If it has unstopped openings at the edges or has valleys where trash, leaves or embers can collect, this can be as hazardous as a shake roof.

If you are changing a shake roof to a heavier roofing material, such as tile, get advice about reinforcing your roof for the added weight. Qualified roofers should be able to provide this.

Nearby fences and gates

Wooden fences can easily catch on fire. A fence with a combustible gate attached to the side of your house is a great hazard. If you



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attach an all-wood fence to your house, use masonry, metal or a protective barrier between the fence and your house.

We recommend that your gate be made of non-combustible material. We also recommend that you create a 1" gap at the bottom ends of the fence boards. This reduces the potential of decay at the bottom of the boards, making them more fire-resistant.

Decks and porches

Any structure attached to the house, such as decks and porches, should be considered part of the house. These structures act as fuel bridges, particularly if constructed from flammable materials. Embers can lodge into seams and gaps and initiate a destructive fire. The intersection between horizontal and vertical surfaces is especially susceptible to fire and very difficult to make fire safe.

It is very helpful to keep gaps and corners clean of combustibles, including trash and leaves. Remove anything that can burn from beneath the structures (such as the woodpile under the deck) and screen the under areas to prevent embers from entering. The screen should be no larger than 1/8" mesh.

Windows

Windows can be a major fire entry point. The impact of wind-blown embers or flames colliding onto glass can break windows or sliding glass doors. Smaller window 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. It is also possible for materials inside your home (such as drapes) to catch fire from radiation through windows.

We recommend removing any combustibles (including large plants) from beneath first floor windows. The safest approach is to have low-form ground-cover plants under windows.

The highest priority for double paned windows is for those on

the first floor, especially on the side of the house from which a fire would most logically approach. Another recommendation is to install non-flammable shutters on windows and skylights.

Vents

These openings in houses remove excess moisture and reduce roof and attic temperatures. Many types of vents are located in soffits, which are the undersides of a part of a building such as an arch, overhang or beam. Vents are also located in roofs ("eyebrow" vents), on tops of roofs (ridge vents), on top ends of walls (gable vents) and in crawl spaces. Soffit vents are most vulnerable to fire.



We recommend the following for soffit vents:

- Do not block these vents without adding adequate vents. Building code requires minimum venting and this is barely adequate for most houses. Reduced venting can lead to serious decay damage from accumulation of condensation in the attic.
- Consider advice from a contractor about your options. If you are considering replacing your roofing material, then the roof-type vents should be seriously considered. Gable vents are also a good retrofit option for some walls.
- Do not have large plants at the ground line directly below soffit vents. A poorly maintained bush about 3' high can burn with flames high enough to reach your soffits and go through the vents.

To prevent sparks from entering your home through vents, cover exterior vents with wire screening no larger than 1/8" mesh. Make sure under-eave and soffit vents are as close as possible to the roof line.

Siding

Most house siding is combustible, with the exception of stucco and cement. Combustible siding can act as a "fire ladder" and move the fire vertically into the eaves and potentially through the soffit material or vents. However, combustible siding may not be a fire hazard if:

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- There are no combustibles at the base (plants, decks, etc.)
- The material does not have openings for embers to enter. This is particularly important for lapped siding (both horizontal and vertical), and for inside corners of buildings.
- The combustible material is thick enough (about 3/4") so that it is unlikely to burn into the wall cavity.

Stucco siding can be acceptable as long as the stucco is thick enough (about 7/8") and has sheathing beneath it. The horizontal lapped type of cement siding may be non-hazardous if the laps are tight. However, any lapped material, if warped sufficiently to provide fire entry, may permit fire to enter into the area of the sheathing.

Landscaping

- Trees don't have to be a problem as long as they're some distance from your house. The closest branches should be 6' away. A deciduous tree (one that loses its leaves annually) is a good choice, especially on the south side of your house. It provides shade in the summer and loses its leaves before the fire weather.
- If you have a down slope from your house with annual grasses/weeds, consider a low-form, fire-resistant, drought-resistant plant. This may take a few years to fully develop (with watering in the first year or so), but it can serve as a significant barrier to the spread of fire.
- Spacing between shrubbery, with materials like grass or gravel, will provide a firebreak. Create green islands instead of large clumps of vegetation. The gaps should be greater as you approach the house.
- If your house is on the edge of a slope, create radiation shields and wind breaks with trees, hedges, or non-flammable walls.

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