

Actions You Can Take Today!



Weed around the property regularly, especially areas that a lawn mower is not appropriate for (tall dry grasses, rocky terrain, etc.)



Remove leaf litter and other debris that accumulate around the building, under vegetation, and other collection areas.



Remove leaf litter, straw and other debris from under and around propane tanks to create 10 feet of clearance around it.



Eliminate ladder fuels by pruning tree branches on trees around the property to within at least 6 feet of the ground, using a bypass lopper (seen above), pruner saw, or long reach/hand pruner.



Remove flammable materials from underneath the house, decks, porches, and lanai. Common flammables include scrap-wood, firewood, and combustible furniture.



Mow the lawn regularly to keep grasses shorter than 4 inches tall around the home. Do not mow in the heat of the day or when the wind is blowing. Never mow in dry vegetation.

Watch Out for Exotic Vegetation

Non-native trees, such as ironwood (seen below) constantly drop needles, leaves, branches, and other debris, so it's best to stay on top of removing them from the ground before the pile becomes a major project. Consider reforesting these areas with native trees that don't drop large amounts of debris.



Invasive grasses such as guinea and fountain grass grow rapidly when un-managed and can dry out very quickly, creating a major fire hazard. Weed them often and consider replanting with low-lying, drought-tolerant, native ground cover.



Defensible Space - Hawaiian Style

Consider selecting native plants from this list that are most relevant to your area:



Mamaki



Kolea



Maia Pilo



'Ilima Papa



Bonamia



'Ākia



'A'ali'i



'Akoko



'Ihi



Nānū



Pōhinahina



Ma'o Hau Hele



Koki'o



'Ūlei



Wiliwili



Koai'a



Uhiuhi



Hala Pepe



'Ohi'a Lehua



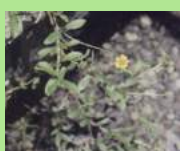
Ko'oko'olau



'Ohe Makai



'Iliahi



Nehe



Alahe'e



'Ala'ala Wai Nui



Kolomona



Koai'a

Creating defensible space does not necessarily mean eliminating the presence of greenery on your property. You can still landscape around your home to make it fire-safe without compromising beauty and aesthetics. By planting native, drought-tolerant plants (**xeriscaping**) around your home, you can:

- Protect your home from wildland fire ignition and spread
- Beautify your property
- Perpetuate an important natural and cultural resource
- Decrease the maintenance needs of your landscaping

For the drier areas of Hawaii, consider that native dryland plants are specially adapted to local conditions and require less upkeep, water, and fire maintenance, saving yourself a great deal of time, money, and resources. Non-native, lush plants often drop hazardous debris and can become fire prone in drought conditions.

Homes with Great Xeriscaping



Did You Know?

The same winds that blow hazardous debris toward a collection area (underneath shrubs, under the lanai, next to outer edges of home, etc.) will likely carry embers during a wildland fire to that same spot, and ignite that pile. That's why it's incredibly important to consistently remove debris from these areas long before a wildland fire occurs.

What is a Hardened Home?

Construction materials and the quality of the defensible space surrounding it are what give a home the best chance to survive a wildland fire. Embers from a wildland fire will find the weak link in your home's fire protection scheme and gain the upper hand because of a small, overlooked or seemingly inconsequential factor. However, there are measures you can take to safeguard your home from wildland fire. While you may not be able to accomplish all the measures listed below, each will increase your home's, and possibly your family's, safety and survival during a wildland fire.

Home Improvements

Gutter Guards or Screens



Enclosed Eaves



Screened Vents



Non-Combustible Fencing



Windows Clear of Vegetation



ROOFS

Roofs are the most vulnerable surface where embers land because they can lodge and start a fire. Roof valleys, open ends of barrel tiles and rain **gutters** are all points of entry.

EAVES

Embers can gather under open **eaves** and ignite exposed wood or other combustible material.

VENTS

Embers can enter the attic or other concealed spaces and ignite combustible materials. Vents in eaves and cornices are particularly vulnerable, as are any unscreened **vents**.

WALLS and FENCING

Combustible siding or other combustible or overlapping materials provide surfaces or crevices for embers to nestle and ignite. Combustible **fencing** can become engulfed and if attached to the home's sidings can carry the fire right to the home.

WINDOWS and DOORS

Embers can enter gaps in doors, including garage doors. Plants or combustible storage near **windows** can be ignited from embers and generate heat that can break windows and/or melt combustible frames.

BALCONIES and DECKS

Embers can collect in or on combustible surfaces or the undersides of decks, lanai, and balconies, ignite the material and enter the home through walls or windows. Post-and-pier homes, common throughout Hawaii, are especially vulnerable since most, if not all, of the underside of the house is exposed.

To harden your home even further, consider protecting your home with a residential fire sprinkler system. In addition to extinguishing a fire started by an ember that enters your home, it also protects you and your family year-round from any fire that may start inside your home.

Roof: Your roof is the most vulnerable part of your home because it can easily catch fire from wind-blown embers. Homes with wood-shake or shingle roofs are at high risk of being destroyed during a wildland fire.

Build your roof or re-roof with fire-resistant materials such as composition, **metal** (as seen in picture) or tile. Block any spaces between roof decking and covering to prevent ember intrusion.

Clear pine needles, leaves and other debris from your roof and gutters.

Cut any tree branches within ten feet of your roof.

Deck/Patio Cover: Use heavy timber or non-flammable construction material for decks.

Enclose the underside of balconies and decks with fire-resistant materials to prevent embers from blowing underneath.

Keep your deck clear of combustible items, such as baskets, dried flower arrangements and other debris.

The decking surface must be ignition resistant if it's within 10 feet of the home.

Non-Combustible Fencing: Make sure to use non-combustible fencing to protect your home during a wildland fire.

Home Site and Yard: Ensure you have at least a 100-foot radius of defensible space (cleared vegetation) around your home. Note that even more clearance may be needed for homes in severe hazard areas. This means looking past what you own to determine the impact a common slope or neighbors' yard will have on your property during a wildland fire.

Cut dry weeds and grass before noon when temperatures are cooler to reduce the chance of sparking a fire.

Landscape with fire-resistant plants that have a high moisture content and are low-growing.

Keep woodpiles, propane tanks and combustible materials away from your home and other structures such as garages, barns and sheds.

Ensure that trees are far away from power lines.

Inside: Keep working fire extinguishers on hand. Install smoke alarms on each level of your home and near bedrooms. Test them monthly and change the batteries twice a year.

Driveways and Access Roads: Driveways should be designed to allow fire and emergency vehicles and equipment to reach your house.

Access roads should have a minimum 10-foot clearance on either side of the traveled section of the roadway and should allow for two-way traffic.

Ensure that all gates open inward and are wide enough to accommodate emergency equipment.

Trim trees and shrubs overhanging the road to a minimum of 13 1/2 feet to allow emergency vehicles to pass.

Home in the WUI

Chimney: Cover your chimney and stovepipe outlets with a non-flammable screen of 1/4-inch wire mesh or smaller to prevent embers from escaping and igniting a fire.

Make sure that your chimney is at least 10 feet away from any tree branches.

Vents: Vents on homes are particularly vulnerable to flying embers.

All vent openings should be covered with 1/8-inch or smaller metal mesh. Do not use fiberglass or plastic mesh because they can melt and burn.

Attic vents in eaves or cornices should be baffled or otherwise protected to prevent ember intrusion (mesh is not enough).

Address: Make sure your address is clearly visible from the road.

Walls: Wood products, such as boards, panels or shingles, are common siding materials. However, they are combustible and not good choices for fire-prone areas.

Build or remodel with fire-resistant building materials, such as plaster, cement, masonry or stucco.

Be sure to extend materials from foundation to roof.

Non-Combustible Enclosed Eaves: Box in eaves with non-combustible materials to prevent accumulation of embers.

Raingutters: Screen or enclose rain gutters to prevent accumulation of plant debris.

Water Supply: Have multiple garden hoses that are long enough to reach any area of your home and other structures on your property.

If you have a pool or well, consider a pump.

Garage: Have a fire extinguisher and tools such as a shovel, rake, bucket and hoe available for fire emergencies.

Install a solid door with self-closing hinges between living areas and the garage. Install weather stripping around and under door to prevent ember intrusion.

Store all combustibles and flammable liquids away from ignition sources.

Windows: Heat from a wildland fire can cause windows to break even before the home ignites. This allows burning embers to enter and start internal fires. Single-paned and large windows are particularly vulnerable.

Install dual-paned windows with the exterior pane of tempered glass to reduce the chance of breakage in a fire.

Limit the size and number of windows in your home that face large areas of vegetation.