

Prepare and Protect Your Home from Wildfire

**BE WILDFIRE
READY**

A guide to help you protect
your property from wildfire.

In a wildfire disaster, homes are ignited by embers, flames and/or radiant heat. Embers pose the greatest threat as wind can carry them ahead of a fire front, igniting spot fires in and around residential areas. In neighborhoods where hundreds of homes are lost, IBHS has documented and tested vulnerable factors in and around homes. We can't stop the wildfire, but IBHS has the science to provide measures to reduce property losses and prevent avoidable suffering. These are the specific actions homeowners can take.

Start with Critical Prep!

Protecting your home from wildfire requires a system of proactive measures. No one thing reduces risk completely. By combining the following critical actions, preparing your home and creating defensible space, you significantly improve the likelihood of your home's survival.

1. Create a wildfire plan for your family and home

- **A wildfire plan should include the following:**
 - Compile a list of emergency contacts including fire, police, family, neighbors, friends, and your insurance agent.
 - Identify and map out an evacuation plan for your family, including a designated meeting place and multiple evacuation routes. Know where your evacuation centers and shelters are located.
 - Create a communications plan for how you will communicate with family during a wildfire event.
 - Prepare an emergency supply kit that includes important documents.
 - Identify who will complete last-minute home prep to remove combustible items and debris around your home.
 - Purchase fire safety equipment such as fire extinguishers and hoses.
 - Create an evacuation plan for pets.
- **Know how to open your garage door when the power is out.**
- **Stay informed:**
 - Download the FEMA App to receive alerts from the National Weather Service.
 - Sign up for community alerts in your area.
 - Enable Wireless Emergency Alerts (WEAs) on your cell phone.



Why?

Having a wildfire plan in place ensures the safety of you and your family. In the event of an evacuation, a plan enables you to make time-sensitive decisions, communicate clearly, safeguard important documents and proactively implement measures to prevent damage to your home.

- **Know what your insurance covers and what it doesn't and be sure to document your belongings.**
- **Begin proactive critical prep to protect your home before an impending wildfire.**

PREPARE YOUR HOME

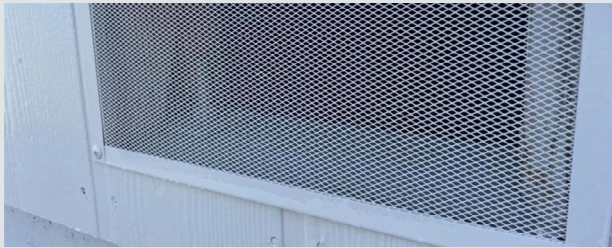
2. Check and maintain your roof and gutters

- Maintain your roof and gutters by regularly removing all debris, including leaves and pine needles.
- Replace a wood shake or wood shingle roof with a Class A fire-resistant-rated roof cover. Class A-rated roof covers include most asphalt shingles, tile, slate, and metal roofs.
- Replace domed, plastic skylights with flat, multipaned, tempered glass skylights.
- Replace plastic gutters with metal gutters such as aluminum.



Why?

The roof is the most vulnerable part of your home. Embers can travel miles ahead of a fire front and land on your roof and in open gutters. These embers can ignite anything combustible like plastic skylights, wood shake shingles and built-up tree debris.



Why?

Wind-blown embers can enter your home through vents in your attic, roof, gables, and crawlspace and ignite materials inside.

3. Install ember-resistant vents

- Install ember-resistant vents or cover existing vents with 1/8-inch metal wire mesh.
- Ensure your metal dryer vent has a louver or flap to reduce ember entry. Due to its design and function, wire mesh should not be used on dryer vents.
- Clean vent screens periodically by removing accumulated debris.
- Install spark arrestors with 1/2-inch mesh screening at the outlet of all chimneys.

4. Ensure a 6-inch vertical clearance on exterior walls

- Ensure there is a minimum of 6 vertical inches (measured from the ground up and from any attached horizontal surface like a deck) of noncombustible siding material, such as fiber-cement, brick, stone, stucco, or exposed concrete foundation.

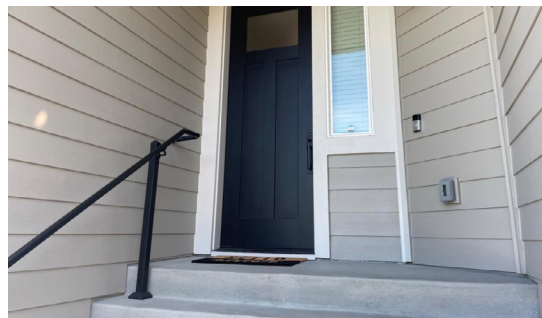


Why?

Embers accumulate against homes at the base of exterior walls and on other horizontal surfaces like decks that can ignite the home.

5. Clear and maintain decks and covered porches

- On top of the deck or on the porch:
 - Maintain your deck by regularly clearing vegetative debris.
 - Remove combustible furniture, including wood or plastic furniture.
 - Remove large combustible rugs and planters.
 - Choose noncombustible furniture such as cast aluminum or metal furniture.
 - Ensure any items like cushions or door mats are small enough to easily be moved inside on Red Flag days.
- Underneath the deck:
 - Remove anything stored under the deck or stairs.
 - Remove all vegetation—including grass or weeds—from under the deck and stairs.
- For decks 4 feet or less (measured from the ground to the walking surface)
 - Enclose the area underneath to keep debris and embers out by:
 - Installing 1/8-inch or finer metal wire mesh around the outer edge of the walking surface extending to the ground, or
 - Installing a noncombustible wall covering.



Why?

Decks and porches attached to or built near your home provide a path for fire to reach your home. Reducing or eliminating the vulnerabilities of a deck or porch—including items on top of or underneath—reduces the chance your home ignites.

CREATE DEFENSIBLE SPACE

6. Create a 5-foot noncombustible buffer

- **Remove all vegetation and groundcover in the first 5 feet**
 - Remove all vegetation, grass, weeds, shrubs, plants, trees, etc.
 - Remove wood mulch, pine straw, rubber mulch, or other combustible ground covers.
 - Trim back branches that overhang the 5-foot area.
 - Do not allow vines to grow on buildings, fences, or other structures within 5 feet of the building.
- **Install 5-feet of hardscape around your home**
 - Install hard groundcover material such as gravel, pavers, river rocks, steppingstones, or concrete.
 - Install 5 feet of hard groundcover surrounding any decks or covered porches, including under the stairs.
- **Replace combustible fencing within 5 feet**
 - Replace any wood or plastic fencing and gates located within 5 feet of the home with a noncombustible fence, such as metal (aluminum or chain link).
- **Maintain the 5-foot Home Ignition Zone**
 - Routinely clear tree debris, weeds, grass, and dead plant material.
 - Do not park or store any vehicles, boats, RVs, or ATVs within 5 feet of the home. Ideally, store these items in a closed garage or park them at least 30 feet away from the home.



Why?

During a wildfire, embers can travel miles ahead of a fire front and accumulate at the base of your home's exterior walls and within the first 5 feet.

Anything combustible in this critical zone acts as a fuel source for ignition, increasing the risk of flames spreading to your home.

It is crucial to establish a clear, noncombustible zone that extends 5 feet out from the exterior walls of your home or any nearby structures. This noncombustible area should also be created around attached decks, patios, covered porches and stairs. By implementing this zone, you can significantly reduce potential for ignition.

- Do not store anything combustible such as firewood, potted plants, outdoor furniture, trash cans, pet houses, lawn tools, children's playsets, etc., in this zone.

7. Extend your Defensible Space (5-30 feet)

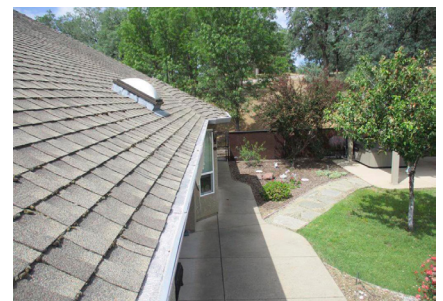
- **Maintain the yard**
 - Cut grass to at most 4 inches and keep watered.
 - Routinely clear tree debris such as leaves and pine needles. Make sure areas around fences and underneath gates are clear of debris, as this is another area where embers can collect.
 - Remove dead vegetation, including piles from pruning and firewood.
 - Firewood and large propane tanks should be located at least 30 feet from any structures.
- **Trim trees**
 - Remove tree branches less than 6 feet above the ground.
 - Trim upper branches of trees to ensure at least 10 feet of space between the canopies of neighboring trees.
 - Work with your neighbors to address trees near the property line that affect both properties.
 - Ask your power company to remove branches that are near power lines. Never attempt to do this job yourself.
- **Shrubs**
 - Choose low growing, fire-resistant plants.
 - Relocate any shrubs located under or near trees.
 - Keep low-growing bushes and shrubs spaced out or in small groupings (no more than 3 shrubs) that will result in a discontinuous path of vegetation.
 - Remove any hedges or rows of bushes that will create more fuel and a pathway for fire to reach your home.
- **Maintain small structures near your home**
 - Place structures (i.e., sheds, pergolas, and playsets) at least 10 feet away from the home or any attached decks.
 - Create a 0-5-foot noncombustible zone around each structure.
 - Ensure there is a minimum of 6 vertical inches (measured from the ground up) of noncombustible siding material at the base of each structure or any horizontal surfaces such as a wooden playset, just as you would for your home. For an elevated structure like a shed, enclose the base with no larger than 1/8-inch or finer metal wire mesh.
 - If you have multiple structures, such as a shed and playset, ensure these structures are spaced at least 10 feet apart. Have at most 3 of these structures within 30 feet.

Why?

Embers blown from miles away can easily start spot fires around your home.

Creating and maintaining defensible space on your property will slow the spread of fire and reduce flame intensity near your home.

By spacing out bushes and trees, you are removing ladder fuels that allow fire to spread and reducing the intensity of a fire near your home.



These fundamental, critical steps serve as a starting point before progressing to the next set of actions. If you're ready for additional layers of wildfire protection, consider leveling up with **Home Upgrades**.

Home Upgrades to Further Protect Against Wildfire

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Level Up!

After addressing the critical mitigation prep, this group of larger home improvements will give your home an additional level of protection against flame exposure during a wildfire.

1. Enclose underside of eaves

- Enclose eaves on the underside by installing noncombustible or ignition-resistant soffits (e.g., a noncombustible siding material) or 2-inch or thicker lumber.
 - Remember, eave vents should be ember resistant or include no larger than 1/8-inch or finer metal wire mesh.



Why?

Because of their geometry, radiant heat can build up in an open eave and ignite exposed materials. Flames from nearby fuels such as a shed or vegetation can also ignite eaves.

2. Cover gutters

- Install noncombustible gutter guards.
- Ensure gutter guards are clear of tree debris. Depending on the type of cover that was installed, some require little to no maintenance.



Why?

Tree debris can collect in gutters providing fuel for embers to land on and ignite. When ignited, this debris could expose the fascia, roof, and attic to flames. While regularly cleaning gutters can also address this vulnerability, adding gutter covers reduces maintenance.

3. Move structures farther away from your home

- Move structures like sheds, pergolas, playsets, and other outbuildings at least 30 feet away from your home.



Why?

Burning sheds, pergolas, playsets, and other structures increase the risk to a home because of the additional radiant heat, flames, and embers produced. Moving these accessory structures farther away better protects the home.

4. Upgrade windows and doors

Windows

- Replace all exterior windows with tempered, multipaned glass or fire-resistant glass blocks.

Doors

- Upgrade to solid exterior doors that have a metal threshold and are constructed with a noncombustible or ignition-resistant material such as metal, fiberglass or solid hardwood.
- If you choose a door that includes glass, make sure it is made with tempered, multipaned glass.
- Alternatively, install a noncombustible storm door as the outermost door.



Why?

During a wildfire, windows and doors are susceptible to flames. Upgrading windows and doors can help keep flames from entering and igniting materials inside the home.

5. Install noncombustible siding

- Replace combustible siding including wood, wood-fiber, or vinyl siding with a noncombustible material like concrete-fiber board, stucco, brick, or stone veneer.



Why?

Radiant heat, embers, and flames can ignite combustible siding.

While the 6-inch vertical noncombustible zone protects against embers, replacing all combustible siding provides greater protection against flames and radiant heat. Flames can spread across combustible siding to reach other vulnerable areas—like windows and eaves—and can begin a cascade of damage.

6. Enclose under bay windows

- Enclose the area underneath a ground floor bay window with an exterior wall and noncombustible siding.



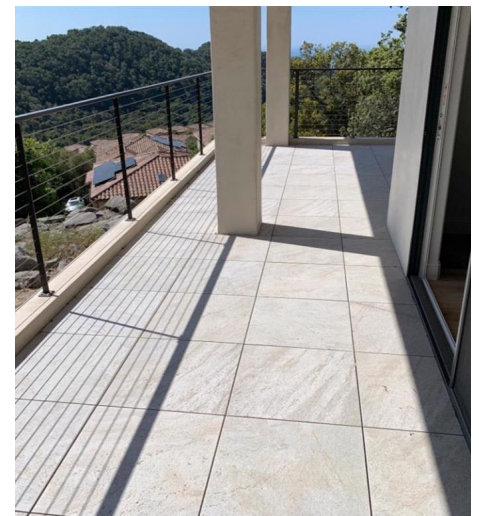
Why?

The geometry of ground-level bay windows traps heat which can ignite the home.

Embers can also collect under ground-level bay windows and ignite tree debris.

7. Build a fire-resistant deck

- When building a new deck, use metal joists and a fire-resistant walking surface like a lightweight concrete, aluminum, or fire-rated composite deck material.
- When retrofitting an existing deck, use noncombustible materials like metal (aluminum or steel), stone veneer, or a lightweight concrete to:
 - Ensure the bottom 6 inches of posts are noncombustible.
 - Select noncombustible hand railings especially in the first 5 feet attached to the home.
 - Choose a solid (no gap), noncombustible walking surface, including the stairs.



Why?

Attached decks made from combustible material are vulnerable to ignition and can be a pathway to carry fire to your home. Eliminating the combustible material reduces this risk.

8. Remove back-to-back fencing

- If you and your neighbor(s) have separate, parallel fences that are less than 5 feet apart, work with your neighbor to remove any sections of back-to-back fencing.



Why?

Back-to-back fences can trap debris between them, creating a susceptible fuel bed for embers to ignite both fences. The two fences together provide greater fuel for a more intense fire.

9. Improve fire-fighting capabilities

Provide proper address identification

- Choose numbers that are 4 inches on a contrasting background and/or reflective or illuminated.
- Place address numbers so that they are visible from the street and from both directions of travel.

Improve access

- Create a driveway clearance of at least 12 feet wide and 13.5 feet tall.
- If the property is gated, gates should open inward and be placed at least 30 feet from the roadway.



Why?

When there is an emergency you will want to make sure emergency services personnel can quickly locate your home to render services.

10. Work with your neighbors and community

- Talk to your neighbors about wildfire, what you've proactively done and how they can make improvements.
- Work with community-organized fire safe councils to help spread the message and prepare for wildfire at scale.



Why?

Communities are growing and homes in suburban neighborhoods are built in close proximity. This makes working with neighbors vital. No matter how well-prepared your home may be, it is not immune to fire if your neighbor's house catches fire. What your neighbor has on their property will likely affect what will happen to yours.

Wildfire Pre-Evacuation Steps for Your Home

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Do you know what to do if a wildfire is approaching? When wildfire may threaten and time allows, follow these last-minute steps to protect your home.

STAY INFORMED & ACTIVATE PLAN

Stay vigilant and monitor wildfire

- Ensure the FEMA App is set up to receive alerts from the National Weather Service.
- Watch for community alerts in your area. Stay aware of the latest emergency evacuation updates including recommended routes.
- Follow evacuation instructions by local authorities via official websites, social media accounts and local news outlets.

**Note: Defending a home against wildfire can be extremely dangerous and your safety should be top priority.*

Activate your wildfire plan

OUTSIDE YOUR HOME

Double check your 5-foot Noncombustible Zone

- Bring in combustible items from your front porch, deck, and around your home—like door mats, patio furniture, cushions, trash/recycling bins, planters, and toys.
- Clear tree debris on your deck and this zone.
- Move propane grills as far from your home as possible, ideally at least 30 feet away. Consider proximity to your neighbor's home when relocating a propane grill.
- Secure fence gate(s) in an open position if you have a combustible fence that attaches to your home.

Remove debris from your roof and gutters

- Clean debris from your roof, gutters, and downspouts.
- Place a ladder near or against your home to allow firefighters quick access to your roof if needed.

Cover and clean vents

- If you have metal wire mesh vent covers, remove any debris buildup.
- If you don't have 1/8-inch metal wire mesh covering vents, temporarily cover all outdoor vents with duct tape to block embers from entering. These covers should be removed once the fire and ember threat passes.
- Ensure your dryer vent flap/louwer is closed.

Shut off gas supply

It is standard practice by emergency response to shut off the gas supply to your home to prevent feeding a fire. Doing so yourself further reduces risks to your home.

- Turn the handwheel clockwise to close valves.
- Do not move propane cylinders anywhere near a house.
- If you have a large stationary propane tank, turn it off and remove weeds and other combustible debris from at least 10 feet around it.

Consider the water supply

- Do not leave sprinklers on. It can negatively affect water pressure needed by firefighters. Instead, leave buckets of water around your home.

INSIDE YOUR HOME

Move interior combustibles

- Move combustible items like curtains, window coverings, and furniture away from windows, doors, and vents.

Ensure your property is easily seen

- Leave exterior lights on to help firefighters see your home in smoky conditions if power has not been turned off to your area.

Close doors and windows

- Close all interior and exterior doors and windows. Exterior doors and windows are susceptible to fire getting inside the home and igniting it from the inside out. Closing interior doors will help stop the spread of fire.

Move your vehicle out of your garage

- Back your car into your driveway and pack it with essentials so you're ready to go quickly.

Evacuate and stay safe

- Follow instructions and evacuate immediately if authorities tell you to do so.
- Evacuate if you feel it is unsafe to stay. DO NOT wait to receive an emergency notification if you feel threatened by a fire.
- Leave your property.

ZONE 0 Noncombustible Zone
0' - 5'

ZONE 1
5' - 30'

ZONE 2
> 30'

Remove overhanging tree branches

Trim tree crowns 10' apart from other trees

Trim branches up at least 6'

Remove bushes from under trees



Create a Wildfire-Resistant Yard with Defensible Space



The leading cause of homes lost to wildfire are ignited by embers. Embers can travel miles ahead of an active wildfire; therefore, we need to think about defensible space. Defensible space is the buffer zone you create around homes and structures. It involves modifying

the surrounding vegetation and landscape such as grass, trees, shrubs and wildland area to create a more fire-resistant environment. When defensible space is thoughtfully created and well-maintained, it will increase the likelihood your home will survive a wildfire.

ZONE 0 (NONCOMBUSTIBLE ZONE): 0-5 FEET

It is crucial to establish a clear, noncombustible zone that extends 5 feet out from the exterior walls of your home or any nearby structures. This noncombustible area should also be created around attached decks, patios, covered porches and stairs. By implementing this zone, you can significantly reduce potential for ignition.

Why?

During a wildfire, embers can travel miles ahead of a fire front and accumulate at the base of your home's exterior walls and within the first 5 feet. Anything combustible in this critical zone acts as a fuel source for ignition, increasing the risk of flames spreading to your home.

How to create a 5-foot noncombustible buffer, called the Home Ignition Zone

1. Remove all vegetation and groundcover in the first 5 feet

- Remove all vegetation, grass, weeds, shrubs, plants, trees, etc.
- Remove bark mulch, pine straw, rubber mulch, or other combustible ground covers.
- Trim back branches that overhang the 5-foot area.
- Do not allow vines to grow on buildings, fences, or other structures within 5 feet of the building.

2. Install 5-feet of hardscape around your home

- Install hard groundcover material such as gravel, pavers, river rocks, steppingstones, or concrete.
- Install 5 feet of hard groundcover surrounding any decks or covered porches, including under the stairs.

3. Replace combustible fencing within 5 feet

- Replace any wood or plastic fencing and gates located within 5 feet of the home with a noncombustible fence, such as metal (aluminum or chain link).

4. Maintain the 5-foot Noncombustible Zone

- Routinely clear tree debris, weeds, grass, and dead plant material.
- Do not park or store any vehicles, boats, RVs, or ATVs within 5 feet of the home. Ideally, store these items in a closed garage or park them at least 30 feet away from the home.
- Do not store anything combustible such as firewood, potted plants, outdoor furniture, trash cans, pet houses, lawn tools, children's playsets, etc., in this zone.

ZONE 1 - EXTEND YOUR DEFENSIBLE SPACE: 5-30 FEET

Choosing a limited selection of well-spaced, fire-resistant plants can look good and be easy to maintain, as well as slow the spread of wildfire to your home.

Why?

Embers blown from miles away can easily start spot fires around your home. Creating and maintaining defensible space on your property will slow the spread of fire and reduce flame intensity near your

home. By spacing out bushes and trees, you are removing ladder fuels that allow fire spread and reducing the intensity of a fire near your home.

How to eliminate fire pathways to your home

1. Clear yard debris

- Maintain your yard by routinely clearing tree debris such as leaves and pine needles. Make sure areas around fences and underneath gates are clear of debris, as this is another area where embers can collect.
- Remove dead vegetation, including piles from pruning and firewood. Firewood should be stored 30 feet from any structures and/or cover it with a fire-resistant cover.

2. Trim trees

- Remove any tree branches less than 6 feet above the ground.
- Trim upper branches of trees to ensure at least 10 feet of space between the canopies of neighboring trees.
- Work with your neighbors to address trees near the property line that affect both properties.

3. Shrubs

- Choose low growing, fire-resistant plants.
- Relocate any shrubs located under or near trees.
- Keep low-growing bushes and shrubs spaced out or in small groupings (no more than 3 shrubs) that will result in a discontinuous path of vegetation.
- Remove any hedges or rows of bushes that will create more fuel and a pathway for fire to reach your home.

4. Maintain small structures near your home (i.e., sheds, pergolas, and playsets)

- Place structures at least 10 feet away from the home.
- Create a 0-5-foot noncombustible Noncombustible Zone around each structure.
- Ensure there is a minimum of 6 vertical inches (measured from the ground up) of noncombustible siding material at the base of each structure or any horizontal surfaces such as a wooden playset, just as you would for your home. For an elevated structure like a shed, enclose the base with no larger than 1/8-inch or finer metal wire mesh.
- If you have multiple structures, such as a shed and playset, ensure these structures are spaced at least 10 feet apart. Have at most 3 of these structures within 30 feet.

ZONE 2 - REDUCE FUELS: 30-100 FEET

Maintaining vegetation within 100 feet of the home or to the property line will help reduce the intensity of a wildfire and slow its advance toward your home.

Why?

Wind-blown embers and flames can easily ignite and burn quickly through fuels like trees, shrubs, tall grasses, and tree debris, especially when these fuels are on a slope in dry, drought-like conditions. A steeper slope yields a faster-moving fire with longer flame lengths. In Zone 2, tree and shrub spacing should force any potential fire in the tops of the trees, brush, or shrubs to drop to the ground.

How to reduce fuel to reduce fire spread:

1. Clear landscaping debris

- Cut tall grasses to a height of 4 inches or shorter.
- Remove dead vegetation such as tree limbs, leaves, and pine needles, including piles from pruning on a regular maintenance schedule.
- Clear grass, weeds, and other vegetation to bare earth from a 10-foot area surrounding propane tanks.

2. Trim trees

- Remove tree branches less than 6 feet above the ground.
- Trim tree canopies to ensure at least 10 feet of horizontal spacing between trees. Increase the spacing for trees on a slope.
- Work with your neighbors to address trees near the property line that affect both properties.
- Ask your power company to remove branches that are near power lines. Never attempt to do this job yourself.

3. Shrubs

- Remove any shrubs located under or near trees.
- Keep bushes and shrubs spaced out or in small groupings (no more than 3 shrubs) that will result in a discontinuous path of vegetation.

