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Saving Lives and Property through Advance Planning and Action

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he wildland fire season is becoming a year-round reality in the United States. This strains firefighting resources and emphasizes the need for residents to be proactive and prepared for the threat of wildland fire.

Wildland fire is, and always has been, a natural occurrence. Hills, canyons, grasslands, and forests burn periodically as part of a healthy ecosystem. Wildland fires are fueled by dry vegetation, driven by increasing seasonal temperatures and fanned by dry winds. Wildland fires are also increasingly dangerous with the inclusion of homes in vegetated areas.

Each year, wildland fire threatens thousands of homes in the wildland-urban interface (WUI) – an area or zone where human development meets or mixes with natural vegetation. Studies show as many as 80 percent of homes lost to wildland fires could have been saved if their owners had followed simple risk-reduction practices. In addition, wildland fire related deaths can occur because people wait too long to leave their homes.

Proactive mitigation around your property and safe and early evacuation can help protect you, your household and your property. In this Action Guide, we provide tips and tools you need to prepare your home, your property and your household for a wildland fire threat; to have situational awareness when a fire starts; and to act early as directed by local officials.

Remember, all efforts to improve defensible space on your property can decrease property damage and help firefighters with suppression efforts. Taking advance personal action can result in improved safety for all involved.

The Ready, Set, Go (RSG)! Program works in collaboration with existing, local wildland fire public education efforts and amplifies the common goal for wildland fire preparedness.

The tips on the following pages are designed to help guide action and create a safer environment for you, your household, and first responders.

It is not a question of if, but when, the next major wildland fire will occur. Use this Action Guide to help you become wildland fire ready!

Visit us at wildlandfireRSG.org to learn more about becoming prepared.

# Ready begins with property owners taking action.

Defensible space around property created with different types of rock mulch.



Defensible space works with well maintained fire-resistant vegetation





#### Defensible Space and Fire Resistant Landscaping Can Protect Your Home

If you live next to a dense vegetation area, the WUI, you should provide defensible space to better protect your home and create a safer area for firefighters to operate if they have the capacity to defend your home. Creating a buffer zone by removing weeds, dried grass, brush, and other vegetation helps keep the fire away from your home and reduces the risk of ignition from flying embers.

#### **Consider This**

Unmanaged and overgrown vegetation between and around homes increases the risk of wildland fire spreading throughout the community and endangering lives and property. Pre-fire planning through mitigation and vegetation management allows firefighters the ability to fight wildland fires more safely. The work you complete today may save your home and protect a firefighter tomorrow.

#### **Ember Zone**

An ember is a small, glowing fragment from a wildland fire that is carried by the wind. Embers are light enough to travel long distances and are the primary reason homes ignite, often times significant distances from the actual flame front of a wildland fire. Embers travel inside your home through vents, windows, and other openings.

#### Homes on the Wildland Boundary Are at Risk, Too

If your home is within one mile of a natural area, it may be considered part of an ember zone. Keep in mind, embers can destroy homes or neighborhoods far from the actual front of the fire. You and your home must be prepared well before a fire occurs. Use the following pages to help ready you and your home well before a fire occurs.

#### **Red Flag Warning**

A Red Flag Warning is issued by the National Weather Service when low humidity, warm temperatures, dry fuels and strong winds could combine to produce extreme fire behavior. Fires occurring during a Red Flag day can be very dangerous as wildland fires can spread rapidly. You should always follow the instructions provided by your local emergency response organizations and be prepared to take immediate action.

# Ready Create Defensible Space

Defensible space is the area around your home in which vegetation, debris, and other combustible fuels have been removed to slow the spread of fire to and from the home.

It can better protect the home from igniting due to direct flame contact and radiant heat. Defensible space is essential to help protect a structure and create a safer area for firefighters during a wildland fire.

You can create defensible space by removing weeds, brush and firewood and by spacing out vegetation around your property.

Although this might seem like a daunting task, we recommend starting in Zone 1 and working your way out. Follow the considerations below for each zone and your property can become safer with each step.



#### ZONE 1

# 0-5 feet around your home or to property line

- Use hard scape such as concrete or noncombustible rock mulch around your home.
- Clean roofs and gutters of dead leaves, debris and pine needles.
- Store firewood and other combustible materials away from your home, garage, or attached deck.
- Prune away touching or over-hanging branches from the roof to a distance of at least 10 feet.
- Replace or repair any loose or missing shingles or roof tiles to prevent ember penetration.
- Rake and remove flammable vegetation, such as leaves and needles or wood mulch, from underneath your deck and away from your home.
- Use non-wood, low-growing herbaceous vegetation. Succulents, or other fire-resistant plants, are recommended choices.

#### Remember the Ember Zone

#### ZONE 2

#### 5-30 feet around your home or to property line

- Create vegetation groups or islands to break up continuous fuels around your home.
- Remove ladder fuels to create a separation between low-level vegetation and tree canopies and keep fire from climbing into trees.
- Remove leaf and needle debris from the yard.
- Keep lawns, native grasses, and wildflowers less than four inches in height.
- Store firewood and other combustible materials away from outbuildings, such as a shed or barn.
- Move trailers, recreational vehicles, storage sheds and other combustible structures out of this zone and into Zone 3. If unable to move, create defensible space around them as if they were a part of your home.

#### ZONE 3

# 30-200 feet around your home or to property line

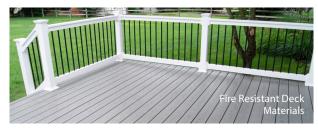
- Create and maintain a minimum of 10 feet between the tops of trees.
- Safely remove ladder fuels up to a height of 10 feet, while retaining at least 75 percent of the foliage, to create separation between the ground and tree branches. This keeps fire from climbing into the canopies of the trees.
- Store firewood in this area, keeping a safe distance from your property.
- Create space between shrubs and trees to eliminate a continuous fuel bed at the ground level.
- Remove dead trees, shrubs and all other dead or dry vegetation.
- Create separation between your property and neighbors. Consider your trees may pose a greater risk to your neighbor than to your home.

Embers are burning pieces of airborne material that can be carried more than a mile by the wind. Research points to embers and small flames as the main way homes ignite in wildland fires.



# Ready Make Your Home Fire Resistant - Harden Your Home

C onstruction materials and the quality of the defensible space surrounding the structure are what increases the chance of survival in a wildland fire. Embers from a wildland fire will find the weak spot in your home's fire protection scheme and can easily lodge in small, overlooked, or seemingly inconsequential areas. Below are some home hardening measures you can take to safeguard your home.













#### **Balconies and Decks**

Construct your balconies or decks with noncombustible materials, and do not store combustible items underneath them. If there is a fire threat, bring any furniture into your home. Embers can collect in or on combustible surfaces, or beneath decks and balconies, igniting the material and giving a path for the fire to enter your home. Remove pine needles, leaves, grass, or any other flammable materials from underneath your deck.

#### Roofs

Roofs are vulnerable to embers that become lodged and can start a fire, especially anywhere on the roof with litter buildup. Roof valleys, open ends of barrel tiles, and rain gutters are all points of entry. **Block off all open spaces, and regularly inspect these areas. Remove any combustible material.** 

#### **Eaves**

Embers can gather under open eaves and ignite combustible material. Enclose your eaves with non-combustible or ignition resistant material to prevent ember intrusion, and regularly clear away debris that collects here.

#### Vents

Embers can enter the attic or other concealed spaces and ignite combustible materials through open and unscreened vents. Vents in eaves, gables and cornices are particularly vulnerable if not properly screened with wire mesh. **Use corrosion resistant metal mesh to screen all vents, and check them regularly to remove any debris that collects in front of the screen.** 

#### **Walls and Fencing**

Combustible siding or fencing provide surfaces and crevices for embers to nestle and ignite. **Ensure wooden fences do not connect directly to the house. Create a break in the fence by using a gate or noncombustible substitute to connect to the house.** Build or remodel with noncombustible or ignition-resistant materials wherever possible, regularly clear away debris from any crevices, and perform annual upkeep.

#### **Windows and Doors**

Embers can enter gaps in doors, including garage doors. Install weather proofing around your garage door, and if your garage is attached to your home make sure the interior door is solid and on self-closing hinges.

Plants or combustible storage near windows can be ignited from embers and generate heat that can break windows and/or melt combustible frames. **Wherever possible, use dual-paned windows with tempered glass, as they are less likely to shatter from radiant heat.** 

#### Tour a Wildland Fire Prepared Home

Home Site and Yard: Ensure all vegetation within 200 feet around your home or to your property line is well-managed. This area may need to be enlarged in severe fire hazard areas due to topographic conditions. This may mean considering the impact a common slope or neighbor's yard may have on your wildland fire risk. Remember the importance of routine maintenance, creating defensible space is not something you do just once, it's continual. Maintain your defensible space and remove any regrowth. Keep woodpiles, propane tanks, and combustible materials away from your home and other structures such as detached garages, barns, and sheds. Ensure trees are away from power lines.

**Roof:** Use a Class A fire-rated roof covering, such as composition shingles, metal, or tile, when roofing or re-roofing. Block any spaces between roof decking by using a noncombustible underlayment covering to minimize ember intrusion. Clear pine needles, leaves, and other debris from your roof and gutters. Prune tree branches within 10 feet of your roof.

**Deck/Patio Cover:** Use heavy timber or noncombustible construction material for decks.

Keep your deck clear of combustible items, such as baskets, flower arrangements, and other material. Combustible materials should not be stored under your deck.

TANDAR MARKET

**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.

**Address:** Make sure your address is clearly visible from the road and constructed of noncombustible materials. Reflective numbering is recommended. Check with your local fire department to see if they offer reflective address signs.

Ladders: Having a ladder readily accessible could assist responders in protecting your home during a wildland fire.

Vents: At a minimum, all vent openings should be covered with 1/8-inch corrosion resistant metal mesh.

**Windows:** Radiant heat from burning vegetation or a nearby structure can cause the glass in windows to break. This will allow flames to enter your home and start internal fires. Single-pane and large picture windows are particularly vulnerable to glass breakage. Install dualpaned windows with a minimum of one pane being tempered glass to reduce the chance of breakage during a fire. Metal blinds are best to protect the interior from radiant heat.

**Chimney:** Ensure your chimney or stovepipe outlets are equipped with a spark arrestor that has a mesh size no greater than <sup>1</sup>/<sub>2</sub>-inch. This limits the size particulate leaving the chimney.

**Walls:** Wood, vinyl, and other plastic siding and trim products are combustible. Consider building or remodeling with ignition-resistant or noncombustible building materials such as brick, cement, masonry, or stucco.

**Gutters:** Screen or cover rain gutters with a flat noncombustible guard or screen. If possible, the guard or screen should follow the slope of the roof and fit onto or inside of the gutter. Remove debris from gutters at least twice a year, or more if necessary.

**Eaves:** Box in eaves with a noncombustible or ignition resistant material.

**Fencing:** Use noncombustible fencing within 5 feet of your home. Area at the base of the fence should be kept clear of debris.

**Water:** 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, pond, or irrigation ditch, consider a pump.

**Garage:** Install weather stripping around and under the vehicle access door. This will reduce the intrusion of embers. If the garage is attached to the home, install a solid door with self-closing hinges between living areas and garage. Keep combustible and flammable liquids away from combustion equipment (e.g. hot water heater). **Driveways:** Driveways should be designed to allow emergency vehicles and their equipment to reach your house. Ensure that all gate openings are wide enough to accommodate emergency vehicles and equipment. Trim trees and shrubs overhanging the road back to a minimum of 15 feet to allow emergency vehicles access.

### Create Your Own Action Guide

Your Wildland Fire Action Guide must be prepared with all members of your household well in advance of a wildland fire. Use these checklists to help you get Ready and Set with situational awareness in the threat of wildland fire.

Ready Get Ready	
Create a Household Action Plan that includes evacuation meeting locations and communication plans - rehearse it regularly. Include the evacuation of all pets and large animals, which may include horses and livestock, in your plan.	REMEMBER THE 8 P'S!
<ul> <li>Designate an emergency meeting location outside the wildland fire hazard area.</li> <li>Plan and practice several different evacuation routes.</li> <li>Have fire extinguishers on hand and teach your household how to use them.</li> <li>Ensure that everyone in your household knows where your gas, electric, and water main shut-off controls are located and how to use them.</li> <li>Assemble a Go Kit as recommended by the American Red Cross. Keep an extra kit in your vehicle. Check page 10 for a list of recommended emergency supplies.</li> </ul>	<ul> <li>People &amp; Pets</li> <li>Pictures &amp; Photo Albums</li> <li>PC's</li> <li>Papers (important)</li> <li>Prescriptions &amp; Medications (don't forget your pets!)</li> <li>Plastics (credit cards)</li> <li>Personal Devices (phones and chargers)</li> <li>Passports &amp; IDs</li> </ul>
<ul> <li>Maintain a list of emergency contact numbers in your Go Kit.</li> <li>Have a portable radio or scanner so you can stay updated on the fire and weather emergency announcements.</li> <li>Assemble a Go Kit for your pet(s) including food, water, medications, and vaccination records.</li> <li>Appoint an out-of-area friend or relative as a point of contact so you can communicate with family members.</li> <li>Sign up for your local emergency notification system. Check your local fire department or emergency management agency websites for information on the system used in your area.</li> </ul>	



### Seference and Be Aware

☐ Monitor fire weather conditions and fire status. Check your local fire department or emergency management websites and social media accounts for wildland fire information. Stay tuned to your TV or local radio stations for updates, including Red Flag Warnings in your area.

Alert household and neighbors.

Dress in appropriate clothing (i.e., clothing made from natural fibers, such as cotton, and work boots). Have goggles and a dry bandana or particle mask handy.

■ Ensure that you have your Go Kit on hand that includes all necessary items, such as a battery powered radio, spare batteries, emergency contact numbers, and drinking water.

Remain close to your house, drink plenty of water, and ensure your household members and pets are accounted for and ready to leave.

#### **INSIDE CHECKLIST, IF TIME ALLOWS**

Close all windows and doors.

Remove all shades and curtains from windows and ensure all blinds remain open, unless you have metal blinds. Close all metal blinds.

Move furniture to the center of the room, away from windows and doors.

Turn off pilot lights and air conditioning units.

Leave your lights on so firefighters can see your house under smoky conditions.

#### **OUTSIDE CHECKLIST, IF TIME ALLOWS**

☐ Make sure combustible items are a safe distance away from the exterior of the house (e.g., patio furniture, children's toys, door mats, etc.) If you have time, place these items inside your garage or home where they will not become a hazard.

Turn off propane tanks and other gas at the meter.

Don't leave sprinklers on or water running. They can effect critical water pressure.

Leave exterior lights on.

Back your car into the driveway to facilitate a quick departure. Shut doors and roll up windows.

□ Have a ladder ready to cover attic vents and ground vents with pre-cut plywood or commercial seals. Do so in a safe manner, and only if time permits.

Patrol your property and extinguish small fires, if you can do so safely, until you leave.

#### IF YOU ARE TRAPPED: SURVIVAL TIPS

□ If you have become trapped and cannot evacuate, call 9-1-1 immediately.

Stay in your home, sheltering away from walls, until the fire passes or emergency personnel tell you differently. Follow their instructions and commands.

Look for spot fires and extinguish if found inside house.

Wear long sleeves, long pants and a bandana made of natural fibers, such as cotton.

Stay hydrated.

Ensure you can exit the home if it catches fire (remember if it's hot inside the house, it is four to five times hotter outside, be prepared).

Fill sinks and tubs for an emergency water supply.

Place wet towels under doors to keep smoke and embers out.

After the fire has passed, check your roof and extinguish any fires, sparks or embers if you are able to safely do so. Check the attic as well.

Go! Act Early

Leaving early gives you and your household members the best chance of surviving a wildland fire. You also help firefighters by keeping roads clear of congestion, enabling them to move more freely and do their job in a safer environment. Be sure to follow the direction of your local authorities.

#### WHEN TO LEAVE

Do not wait to be advised to leave if there is a possible threat to your home or evacuation route. Leave early enough to avoid being caught in fire, smoke, or road congestion. If you are advised to leave by local authorities, do not hesitate!

#### WHERE TO GO

Go to a predetermined location (it should be a low-risk area, such as a relative's house, a Red Cross shelter or evacuation center, motel, etc.)

#### **HOW TO GET THERE**

Have several travel routes in case one route is blocked by the fire or by emergency vehicles. Choose the safest route away from the fire.

#### WHAT TO TAKE

Take your Go Kit containing your household members' and pet's necessary items.

#### **EMERGENCY SUPPLIES LIST FOR GO KIT**

The American Red Cross recommends every household have an emergency supply kit assembled long before a wildland fire or other emergency occurs. Use the checklist below to help assemble yours. For more information on emergency supplies visit redcross.org/get-help.

Three-day supply of water (one gallon per person, per day) and non-perishable food for household members (3 day supply).

First aid kit and sanitation supplies, including toilet paper and baby wipes.

Flashlight, battery-powered radio, and extra batteries.

An extra set of car keys, credit cards, cash, or traveler's checks.

Extra eyeglasses, contact lenses, prescriptions, and medications.

Important household member documents and contact numbers, including insurance documents.

Map marked with evacuation routes. It is important to have a printed map in case your phone dies. It may also be easier to see the printed map than a phone screen under smokey conditions.

Easily carried valuables and irreplaceable items.

Personal electronic devices and chargers.

Keep a pair of old shoes and a flashlight handy in case of a sudden evacuation at night.

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## My Personal Wildland Fire ACTION PLAN

Write up your Wildland Fire Action Plan and post it in a location where every member of your household can see it. Rehearse it with your household.

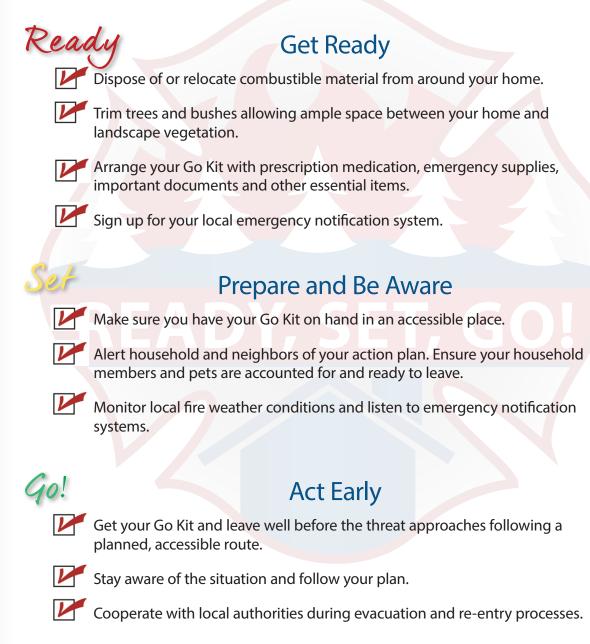
During high-fire-danger days in your area, monitor your local media for information and be ready to implement your plan. Hot, dry, and windy conditions create the perfect environment for a wildland fire.

IMPORTANT PHONE NUMBERS	DI
Out-of-Area Contact	Phone:
Work	
School	
Other	
EVACUATION ROUTES	
2	
3	
WHERE TO GO	
DEADV CET	COL
NLAUI, SLI,	
LOCATION OF GO KIT(S)	
NOTES	
Contact your local fire department for more tips on preparin	g before a wildland fire.

# My Personal Wildland Fire ACTION PLAN

### **Residential Safety Checklist**

Tips to Improve Household and Property Survival During a Wildland Fire







wildlandfireRSG.org



