

Most Wildfire Damage Is Caused by Embers

Fire is a natural part of the life cycle of many ecosystems.

It serves to eliminate the dead organic matter that has accumulated (such as, on the forest floor). This is actually a very healthy process that makes a more nutrient-rich habitat for plant species that attract local herbivores.



An overabundance of dead biomass can significantly contribute to the risk of wildfire. As a result, methods have been developed over the years to reduce this accumulation of dead biomass and minimize the risk of an out-of-control wildfire.

One such method, known as a “prescribed burn,” is a controlled fire set under specific conditions for the purpose of reducing wildfire fuel. Too

much dead biomass, and a wildfire can easily get out of hand.

Not because of the flames, but because of the embers.

Those Deadly Embers

An ember is a small, glowing piece of superheated wood, coal or other material that remains after (or sometimes precedes) a fire. Embers can glow as hot as the fire from which they arise, and are light enough to be carried by the wind for long distances without being extinguished. **They're the primary reason properties go up in flames whenever a wildfire is nearby.**

—Article Continues Below—

**GET READY,
GET SET, GO!**
Wildfire Is Coming. Are You Ready?

GET PREPARED FOR WILDFIRE BEFORE IT STRIKES BY FOLLOWING THE READY, SET GO! GUIDE:

BEING READY

100^{FT}
CREATE DEFENSIBLE SPACE: 100-FEET OF DEFENSIBLE SPACE IS REQUIRED AROUND YOUR HOME. LEARN HOW TO MAINTAIN THE TWO ZONES OF DEFENSIBLE SPACE NEEDED.

UP TO 1 MILE
HARDEN YOUR HOME: FLYING EMBERS CAN DESTROY HOMES UP TO A MILE FROM WILDLAND AREAS. LEARN HOW TO PROTECT AND HARDEN YOUR HOME FROM A WILDFIRE THREAT.

The infographic features a stylized illustration of a house and a road in a forest. A large yellow arrow points downwards from the title area to the 'BEING READY' section. The '100 FT' section includes a tree icon and a double-headed arrow indicating the distance. The 'UP TO 1 MILE' section includes a house icon with flames and a double-headed arrow indicating the distance.



GETTING SET



PREPARE YOUR HOME AND FAMILY FOR THE POSSIBILITY OF HAVING TO EVACUATE.

1. WHAT
2. HOW
3. WHO
4. WHEN

CREATE A WILDFIRE ACTION PLAN.



ASSEMBLE AN EMERGENCY SUPPLY KIT.



FILL OUT A FAMILY COMMUNICATION PLAN.



BEING READY TO GO



PRE-EVACUATION STEPS: PREPARE BOTH THE INSIDE AND OUTSIDE OF YOUR HOUSE FOR EVACUATION. GET THE CHECKLISTS.



REVIEW YOUR EVACUATION PLAN CHECKLIST.

GO!

EVACUATION STEPS: WHEN IMMEDIATE EVACUATION IS NECESSARY, GET READY TO GO!



ENSURE YOUR EMERGENCY SUPPLY KIT IS IN YOUR VEHICLE.



COVER-UP TO PROTECT AGAINST HEAT AND FLYING EMBERS. WEAR LONG PANTS, LONG SLEEVE SHIRT, HEAVY SHOES/BOOTS, CAP, DRY BANDANNA TO COVER FACE, GOGGLES OR GLASSES. 100% COTTON IS PREFERABLE.



LOCATE YOUR PETS AND TAKE THEM WITH YOU.

ONE LESS SPARK
ONE LESS WILDFIRE



FOR MORE INFORMATION VISIT:
READYFORWILDFIRE.ORG
#READYFORWILDFIRE

The risk of this occurring is heightened in dry, hot climates and wherever flammable material surrounds residential areas. Dry or dead plant matter and flammable furniture act as tinder for the embers to quickly spread and

jump from your yard to your house.

An event known as an “ember attack” commonly occurs during bushfires. It causes burning parts of branches or leaves to become airborne and fly off as a large cluster of glowing embers. Not only can these embers be carried to the outside of your property, but they can make contact with the inside by floating through vents, windows or crawl spaces. As a result, they can ignite any and all flammable objects you own, including the house itself.

The following [Weather Channel](#) video clip illustrates how stray embers can ignite a firestorm:

But aside from an ember attack, even ***just one ember*** is enough to kick off the structure-destroying process. This is why embers are known as the number one cause of house fires.

Let’s look at some recent California wildfires which were intensified by flying embers:

2018 Woolsey Fire

This famously destructive wildfire started in Woolsey Canyon, between Los Angeles and Ventura counties, in November 2018.



The fire was pushed in a southerly direction throughout the first day by the notorious [Santa Ana winds](#).

The Ventura freeway had to be closed due to the spread of these massive flames. The fire then headed further into the mountains. It plowed over steep canyons covered in chaparral, which became easy fuel for the embers that followed.

Hundreds of Malibu homes were destroyed or damaged on both sides of the Pacific Coast Highway. The entire portion of the Malibu coast west of the community of Solromar suffered damage from the [Woolsey Fire](#). The evacuations of residents along the Malibu coast lasted for many days, as the fire spread even closer to major residential areas, fanned by the area's increasing winds.

How did this wildfire spread so fast? The extensive amount of embers

emanating from the fire's point of origin floated off into more even flammable conditions. And the roaring flames followed close behind. Essentially, the embers created a path that allowed the flames to spread across vast expansions of land.

1991 Oakland Firestorm

"Diablo winds"—a term that was coined shortly after this firestorm—are strong, hot winds that blow in from the northeast, typically in the San Francisco Bay Area during the spring and fall. These winds often fan the bushfires that plague this area, and spread the embers created from the fires themselves.



The economic destruction here was catastrophic—an estimated 1.5 billion dollars. The fire was determined to have been caused by an incompletely

extinguished grassfire in the Beverly Hills area. The embers from the original fire reignited the flames after being stoked by diablo winds. They then went on to destroy 2,843 homes and 437 apartment buildings. At its peak, the Oakland Firestorm was estimated to have consumed one house every 11 seconds.

Firefighting teams were overwhelmed, as the diablo winds carried embers at speeds up to 70 mph. This high wind speed created extremely erratic fire behavior, continuously feeding the flames and igniting more fires.

2003 Cedar Fire

This massive wildfire burned a total of 273,246 acres of land in San Diego County, California, throughout October and November of 2003. Embers carried by the Santa Ana winds are credited with spreading the fire at a rate of 3,600 acres (5.6 miles) per hour.



Before the chaos was fully contained in early November, it had destroyed 2,820 buildings (including 2,232 homes) and killed 15 people.

But even after the worst of it had been extinguished, several hot spots continued to burn until early December of that year.

The Cedar Fire remains one of the largest and most destructive wildfires in California history. As of 2018, it ranks as the state's third largest and the fourth most destructive, causing more than \$1.3 billion in damages.

2018 Mendocino Complex Fire



As the largest recorded fire in California history, the Mendocino Complex Fire burned through 459,123 acres of land. It raged across Mendocino, Colusa, Lake and Glenn counties, from late June and into mid-September of 2018. This wildfire was initially comprised of two vegetation fires that

burned closely together near Clear Lake in the north.

Within the first few hours of being reported, the fire had injured two firefighters. Diablo winds carried embers over the area and lead to the fire's rapid spread across so many acres.

Educate Yourself

California's climate and conditions tend to make it a "fuel valley" for wildfire. But many situations like the ones described above can be prevented. A single negligent action can result in the destruction of thousands of habitats, homes and lives. Educating yourself is the best way to protect you and your community from a wildfire disaster.