



## Flood After Fire: The Risk

Floods are the most common and costly natural hazard in the nation. Whether caused by heavy rain, thunderstorms, or tropical storms, the results of flooding can be devastating. While some floods develop over time, flash floods—particularly common after wildfires—can occur within minutes after the beginning of a rainstorm. Even areas that are not traditionally flood-prone are at risk because of changes to the landscape caused by wildfires. Residents need to protect their homes and assets with flood insurance **now**—before a weather event occurs and it's too late.

Residents and business owners are urged to purchase flood insurance now to guarantee financial protection from flooding. There is typically a 30-day waiting period before flood insurance takes effect. But the Biggert-Waters Flood Insurance Reform Act of 2012 allows for an exception to the waiting period in certain cases where property is affected by flooding on burned Federal land that is a result of, or is exacerbated by, post-wildfire conditions.

### WILDFIRES

Large-scale wildfires dramatically alter the terrain and ground conditions. Normally, vegetation absorbs rainfall, reducing runoff. However, wildfires leave the ground charred, barren, and unable to absorb water, creating conditions ripe for flash flooding and mudflows. Flood risk remains significantly higher until vegetation is restored—up to five years after a wildfire. Flooding after fire is often more severe than other flood events because debris and ash left from the fire can form mudflows. As rainwater moves across charred and denuded ground, it can also pick up soil and sediment and carry it in a stream of floodwaters. These mudflows can cause significant damage.

Wildfires can happen almost anywhere, but the most commonly affected states are Arizona, California, Idaho, Nevada, Oregon, and Washington.

### HEAVY RAINS

Excessive amounts of rainfall can happen throughout the year, putting property at risk. Properties directly affected by fires and those located below or downstream of burn areas are most at risk for flooding.

### FLASH FLOODS

A flash flood is a rapid flooding of a low-lying area in less than six hours, which can be caused by intense rainfall. Flash floods are known to roll boulders, tear out trees, and destroy buildings and bridges.

### MUDFLOWS

Mudflows are rivers of liquid and flowing mud on the surface of normally dry land, often caused by a combination of brush loss and subsequent heavy rains. Mudflows can develop when water saturates the ground, such as from rapid snowmelt or heavy or long periods of rainfall, causing a thick, liquid, downhill flow of earth. Mudflows are covered by flood insurance but are different from other non-

covered earth movements where there is not a flowing characteristic—such as landslides or slope failures.

## **REDUCE YOUR RISK**

You do not have to live in a high-risk flood area to suffer flood damage. Around twenty percent of flood insurance claims occur in moderate-to-low risk areas. Property owners should remember to:

**Prepare Now.** Gather supplies in case of a storm, strengthen your home against damage, and review your insurance coverages. No flood insurance? Remember: it typically takes 30 days for a new flood insurance policy to go into effect, so get your policy now.

**Buy Flood Insurance.** Most standard homeowner's policies do not cover flood damage. Flood insurance is affordable. An average flood policy costs around \$600 a year. Rates start at just \$129 a year for homes in moderate- to low-risk areas.

**Plan Ahead.** Plan evacuation routes. Keep important papers in a safe, waterproof place. Conduct a home inventory; itemize and take pictures of possessions.

For more information regarding a policy, please call your insurance agent or contact the National Flood Insurance Program Referral Call Center at (888) 379-9531 to request an agent referral.

Visit the National Flood Insurance Program's website at [fema.gov/flood-after-fire](https://www.fema.gov/flood-after-fire) to learn more about your flood risk and flood insurance.

# FLOOD AFTER FIRE

Did you know that wildfires dramatically alter the terrain and increase the risk of floods?

**Reduce your risk.  
The time to buy flood  
insurance is now.**

Contact your local insurance agent for more information or visit the National Flood Insurance Program at [www.fema.gov/national-flood-insurance-program](http://www.fema.gov/national-flood-insurance-program)



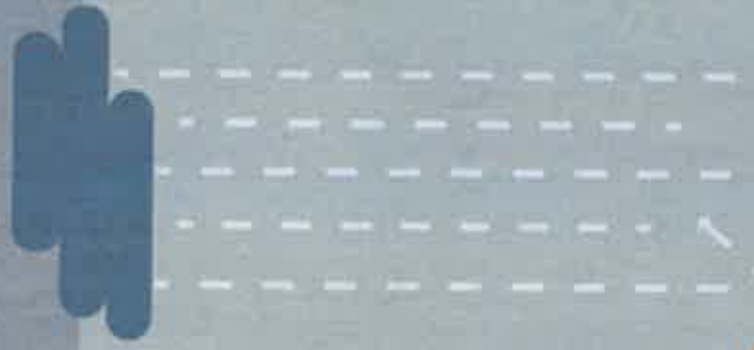
During normal conditions, vegetation helps absorb rainwater.



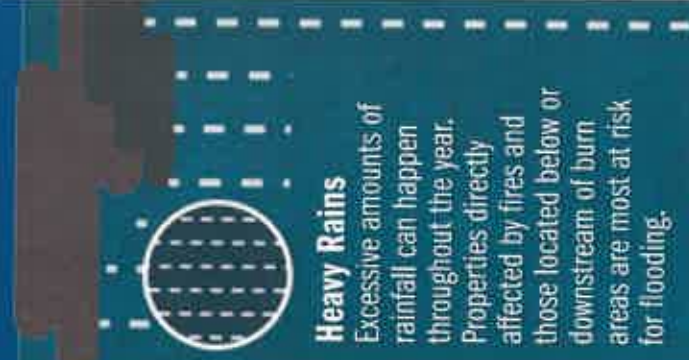
But after an intense wildfire, burned vegetation and charred soil form a water repellent layer, blocking water absorption.



During the next rainfall, water bounces off of the soil.



And as a result, properties located below or downstream of the burn areas are at an increased risk for flooding.



## Heavy Rains

Excessive amounts of rainfall can happen throughout the year. Properties directly affected by fires and those located below or downstream of burn areas are most at risk for flooding.



## Degree of Land Slope

Higher degrees of land slope speed up water flow and increase flood risk.



## Flash Floods

Intense rainfall can flood low lying areas in less than six hours. Flash floods roll boulders, tear out trees and destroy buildings and bridges.

## Mudflows

Rivers of liquid and flowing mud are caused by a combination of brush loss and subsequent heavy rains. Rapid snowmelt can also trigger mudflows.

