

# Gutters and Downspouts



FEMA

## Purpose

To provide guidance about installing fire-resistant gutters and downspouts to reduce the potential for damage to homes and other buildings from wildfires. Guidance pertains to both new and existing buildings.

## Key Issues

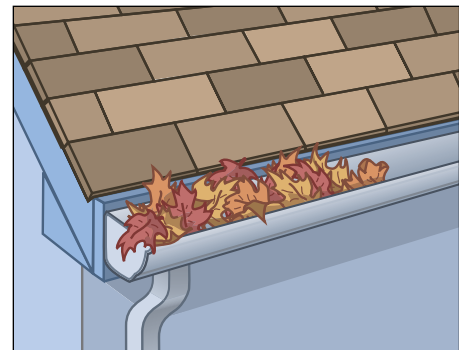
- Debris such as branches, leaves, and pine needles can become trapped in gutters (see Figure 1). The debris can be ignited by flying embers or firebrands during a wildfire, and the fire can spread to the roof.
- Gutters and downspouts are often constructed of plastic. Plastic can melt when exposed to the high temperatures that can occur during a wildfire.

## Guidance

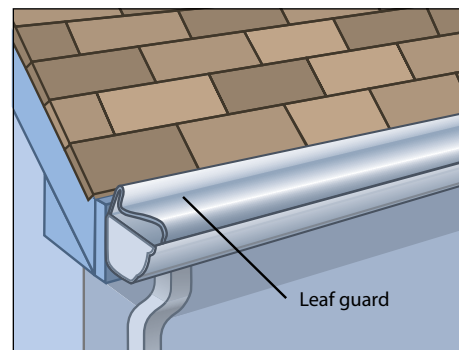
- Install noncombustible leaf guards over gutters to prevent the accumulation of combustible debris. Types of leaf guards include metal-mesh screens and metal hoods that fit into the gutter (see Figure 2).
- Use gutters and downspouts constructed of noncombustible materials such as galvanized steel, copper, and aluminum. Metal hood leaf guards are recommended because they do not melt and are relatively effective in keeping debris out of gutters (see Figure 2).

## Considerations

- Intense heat from a wildfire can distort noncombustible gutters, leaf guards, and downspouts, and they may need to be replaced after a wildfire.
- Some leaf guards can become dislodged over time, reducing their effectiveness.



**Figure 1.** Debris in gutters can ignite and lead to ignition of the roof or fascia board.



**Figure 2.** Leaf guards allow rainwater into the gutter but keep combustible debris out.

- Some types of leaf guards do not prevent all types of debris from accumulating in the gutter. For example, mesh-type leaf guards allow pine needles to accumulate. Leaf guards and gutters should therefore be checked regularly and debris removed if necessary.

## **Effectiveness**

Noncombustible gutters, leaf guards, and downspouts are effective in all Fire Severity Zones.