

# What Is Volcanic Ash?

Volcanic ash is rock that has been pulverized into dust or sand by volcanic activity. In very large eruptions, ash is accompanied by rocks having the weight and density of hailstones. Volcanic ash is hot near the volcano, but is cool when it falls at greater distances. Ashfall blocks sunlight, reducing visibility and sometimes causing darkness. Ashfall can be accompanied by lightning.

Fresh volcanic ash is gritty, abrasive, sometimes corrosive, and always unpleasant. Although ash is not highly toxic, it can trouble infants, the elderly and those with respiratory ailments. Small ash particles can abrade the front of the eye under windy and ashy conditions.

Ash abrades and jams machinery. It contaminates and clogs ventilation, water supplies and drains. Ash also causes electrical short circuits — in transmission lines (especially when wet), in computers, and in microelectronic devices. Power often goes out during and after ashfall. Long-term exposure to wet ash can corrode metal.

Ash accumulates like heavy snowfall, but doesn't melt. The weight of ash can cause roofs to collapse. A one-inch layer of ash weighs 5-10 pounds per square foot when dry, but 10-15 pounds per square foot when wet. Wet ash is slippery. Ash resuspended by wind, and human activity can disrupt lives for months after an eruption.

## ■ What to do in case of an ashfall

### GENERAL PRINCIPLES

- Know in advance what to expect and how to deal with it; that will make it manageable.
- In ashy areas, use dust masks and eye protection. If you don't have a dust mask, use a wet handkerchief.
- As much as possible, keep ash out of buildings, machinery, air and water supplies, downspouts, stormdrains, etc.
- Stay indoors to minimize exposure — especially if you have respiratory ailments.
- Minimize travel — driving in ash is hazardous to you and your car.
- Don't tie up phone line with non-emergency calls.
- Use your radio for information on the ashfall.

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## ■ What to do during the clean up period

- Minimize driving and other activities that resuspend ash.
- Remove as much ash as you can from frequently used areas. Clean from the top down. Wear a dust mask.
- Prior to sweeping, dampen ash to ease removal. Be careful to not wash ash into drainpipes, sewers, storm drains, etc.
- Use water sparingly. Widespread use of water for clean-up may deplete public water supply.
- Maintain protection for dust-sensitive items (e.g., computers, machinery) until the environment is really ash-free.
- Seek advice from public officials regarding disposal of volcanic ash in your community.
- Wet ash can be slippery. Use caution when climbing on ladders and roofs.
- Establish childcare to assist parents involved in cleanup.

For more information, call:

**Washington State Emergency**

**Management Division** at (800) 562-6108, or visit our web site at: [www.wa.gov/wsem](http://www.wa.gov/wsem)

**US Geological Survey** at (360) 993-8900, or visit our web site at: [vulcan.wr.usgs.gov](http://vulcan.wr.usgs.gov)

**Or call your local Emergency Management Office**



**Washington Military Department  
Emergency Management Division**  
Camp Murray  
Washington 98430-5122



**US Geological Survey**  
Cascades Volcano Observatory  
Vancouver, Washington



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# VOLCANIC ASHFALL



how to be  
prepared for  
an ashfall

# How to protect your home, car, children and pets



## ■ What to do before an ashfall

Whether in a car, at home, at work or play, you should always be prepared. Intermittent ashfall and resuspension of ash on the ground may continue for years.

### YOUR HOME

Keep these items in your home in case of any natural hazards emergency:

- Extra dust masks.
- Enough non-perishable food for at least three days.
- Enough drinking water for at least three days (one gallon per person per day).
- Plastic wrap (to keep ash out of electronics).
- First aid kit and regular medications.
- Battery-operated radio with extra batteries.
- Lanterns or flashlights with extra batteries.
- Extra wood, if you have a fireplace or wood stove.
- Extra blankets and warm clothing.
- Cleaning supplies (broom, vacuum, shovels, etc.).
- Small amount of extra cash (ATM machines may not be working).

### YOUR CHILDREN

- Explain what a volcano is and what they should expect and do if ash falls.
- Know your school's emergency plan.
- Have quiet games and activities available.

### YOUR PETS

- Store extra food and drinking water.
- Keep extra medicine on hand.
- Keep your animals under cover, if possible.

### YOUR CAR

Any vehicle can be considered a movable, second home. Always carry a few items in your vehicle in case of delays, emergencies or mechanical failures.

- Dust masks and eye protection.
- Blankets and extra clothing.
- Emergency food and drinking water.
- General emergency supplies: first aid kit, flashlight, fire extinguisher, tool kit, flares, matches, survival manual, etc.
- Waterproof tarp, heavy tow rope.
- Extra air and oil filters, extra oil, windshield wiper blades and windshield washer fluid.
- Cell phone with extra battery.

## ■ What to do during and after an ashfall

### YOUR HOME

- Close doors, windows and dampers. Place damp towels at door thresholds and other draft sources; tape drafty windows.
- Dampen ash in yard and streets to reduce resuspension.
- Put stoppers in the tops of your drainpipes (at the gutters).
- Protect dust sensitive electronics.
- Since most roofs cannot support more than four inches of wet ash, keep roofs free of thick accumulation. Once ashfall stops, sweep or shovel ash from roofs and gutters. Wear your dust mask and use precaution on ladders and roofs.
- Remove outdoor clothing before entering a building. Brush, shake and pre-soak ashy clothing before washing.
- If there is ash in your water, let it settle and then use the clear water. In rare cases where there is a lot of ash in the water supply, do not use your dishwasher or washing machine.
- You may eat vegetables from the garden, but wash them first.
- Dust often using vacuum attachments rather than dust cloths, which may become abrasive.
- Use battery operated radio to receive information.

### YOUR CHILDREN

- Follow school's directions for care of children at school.
- Keep children indoors: discourage active play in dusty settings. Dust masks do not fit well on small children.

### YOUR PETS

- Keep pets indoors. If pets go out, brush or vacuum them before letting them indoors.
- Make sure livestock have clean food and water.
- Discourage active play in dusty settings.

### YOUR CAR

- If possible, do not drive: ash is harmful to vehicles.
- If you must drive, drive slowly, use headlights, and use ample windshield washer fluid.
- Change oil, oil filters, and air filters frequently (every 50 to 100 miles in heavy dust, i.e., less than 50 feet visibility; every 500 to 1,000 miles in light dust).
- Do not drive without an air filter. If you cannot change the air filter, clean it by blowing air through from the inside out.
- If car stalls or brakes fail, push car to the side of the road to avoid collisions. Stay with your car.