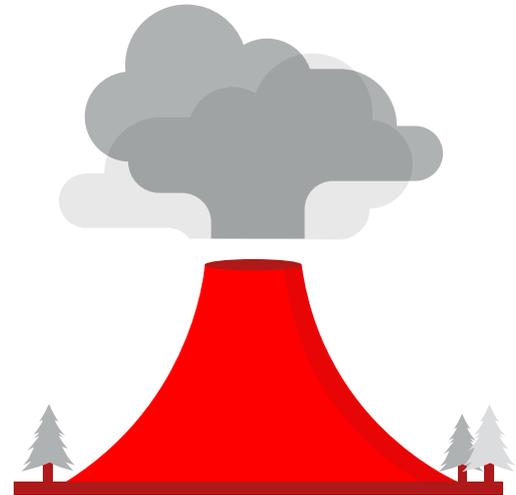


Volcanic Eruptions

Exploding the myths around 'it'll never happen here!'

While it's often the stuff of movies and special effects, volcanic events do happen – and more frequently than you might expect. They're essentially the result of molten rock within the earth erupting at the surface, and they can cause catastrophic damage. Here in New Zealand, we have a high density of active volcanoes and a surprisingly high number of eruptions.



What are the main hazards?

Large explosive eruptions can affect people close to the vent, but also many kilometres away and can include:

- Widespread ashfall – sand and dust-sized pieces of fractured rock and glass
- Pyroclastic flows – very fast flowing mixtures of hot gases and volcanic rock
- Extensive lahars or volcanic mud flows – fast flowing mixtures of muddy water and volcanic rock

Hazards from 'quiet' lava flows (which can move fast, or creep slowly along) include fires, building and other structural collapse and acidic gas clouds. The nearer to the vent you are the more likely you are to encounter things like pyroclastic flows, ashfall, lava flows, lahars debris landslides and poisonous gases. Further away, it's mostly ash fall and lahars that become a serious issue.

Other natural hazards, including earthquakes, wildfires, and even tsunamis can also result from volcanic eruptions.

Preparing for a volcanic eruption

Naturally, there are limited options to control or reduce the effects of a volcanic eruption. But these are some of the things you can consider to help reduce the damage and loss.

- **Evacuation** is critical if the authorities instruct it. Early warnings are either very short or non-existent, so ensure you respond with utmost urgency and follow the directions of authorities.

Hot foot it to your emergency plan

If your property or business is located in an area of volcanic activity you should plan ahead. First and foremost, have an emergency plan for you and your staff to follow in the event of a volcanic eruption. This should also include action to take if an eruption is likely, and maybe even a civil defence cabinet containing essential food and emergency equipment.

Stay aware

In New Zealand a system of volcanic alert levels is used to define the current status of each volcano. When there is a change in volcanic activity GNS Science will issue a 'Scientific Alert Bulletin' and may change the volcanic alert level. They're also posted on the GeoNet website at www.geonet.org.nz

Hot tips if the worst happens

- Have a business continuity plan, including an up to date asset register.
- Avoid data loss, have an offsite data back-up plan in an area not likely to be affected by the volcano or its effects.
- Minimise ash in your building by closing and/or blocking all exterior windows, doors, chimneys and vents. Place damp towels at door thresholds and other sources of draughts. Tape draughty windows.
- Make sure your building is sound, including roofs and walls, and able to withstand the weight of ash.
- Clear ash from the roof if it's safe to do so.
- Cover items inside such as furniture, appliances and sensitive electronic equipment. If possible, bring machinery and vehicles inside to protect from volcanic ash and cover with a large tarpaulin until the area is ash-free.
- Design or install filters for air intakes to prevent ash being sucked into machinery and equipment if they need outside air to operate.
- Disconnect drainpipes from gutters to stop drains clogging and to allow ash and water to empty from gutters onto the ground.
- Disconnect rainwater tanks from gutters and collection areas prior to ash falling, if possible.
- Bring animals and livestock into closed shelters to protect them from breathing volcanic gases and cover any stock feed. Sheep fleeces can become contaminated with ash and weigh them down, increasing their stress.
- Evacuate livestock early to paddocks that are ideally elevated and up wind from the volcano. Ensure they have clean food and water.
- Volcanic ash is much more destructive than ordinary dust as it has a jagged structure that will scratch glass, metal and other materials. Use water from a hose to remove it. Interior ash should be removed with a vacuum cleaner.

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