

Section 6: What to do in specific emergencies

- Earthquakes
- Tsunami
- Severe weather or storms
- Flooding
- Fire
- Drought
- Volcanic Eruption



Earthquakes

Aotearoa New Zealand sits on the boundary between the Australian and Pacific tectonic plates, which means we get frequent earthquakes.

Part of this boundary is called the Hikurangi Subduction Zone, which sits just off of the coast of Te Ika-a-Māui, the North Island. The Hikurangi Subduction Zone can produce very large earthquakes and tsunamis.

Hawke's Bay also has several smaller faults, including the Poukawa fault which produced the 1931 Napier earthquake.

Animals react in different ways to emergency events such as earthquakes. Your pet may be anxious, fearful, aggressive, clingy, or they may not show signs of stress at all.

Before

1. Practice your DROP, COVER and HOLD

Most injuries and deaths during earthquakes are caused by falling objects rather than buildings collapsing. You need to practice your DROP, COVER and HOLD to help make it your automatic response when the ground starts shaking.

2. Know your tsunami zone

Earthquakes can generate tsunamis. Find out if you live, work or play in a tsunami zone and practice your tsunami evacuation route.

3. Create a household plan

After a large earthquake, you might not be able to use your phone, send an email or use social media. Plan now for when you can't communicate. Agree on a safe meeting place if you and your family are not at home when an earthquake happens. Find out what your child's school's emergency plan is.

4. Quake safe your house.

- You can reduce the impacts of earthquakes by making sure objects that can fall, damage, and hurt are either placed somewhere else, or fixed and fastened.
- Secure heavy and tall furniture, hot water cylinders and free- standing wood burners.
- Check the roof, walls, furniture and foundations are safe.

5. Store Water and feed

After a large earthquake, water isn't going to come out of the tap, so you need to have an emergency water supply. The more you can store, the better. You will need to have enough water to last you and your animals 7 days. Most animals need 60ml/kg/24 hours each to sustain hydration levels. Do not let animals drink contaminated water. Make sure your animals have access to clean water and supplemental feed available.

During

- When an earthquake occurs, DROP, COVER and HOLD to reduce your chance of injury.
- If you are outdoors - move away from buildings, trees, and power lines, then DROP, COVER and HOLD until the shaking stops.
- If you are in a tsunami zone - If you feel an earthquake that is EITHER longer than a minute OR strong enough that it's hard to stand up, evacuate to high ground, out of all tsunami zones as soon as the shaking stops.

After

- Expect more shaking (aftershocks). Each time you feel an earthquake, DROP, COVER and HOLD.
- Check yourself and animals for injuries and get first aid if necessary. add: In an earthquake, animals may panic and flee to escape the situation, taking out any obstacles in their way. Check your animals for wounds - they may just look like a small hole or a tear.
- Unlike people, animals tend to hide their pain making it difficult to detect. If you think your animals have sustained internal or external injuries, contact your veterinarian.
- Containing livestock: If you can stay on your property, check all animals are contained and that fences have not been taken out by power cuts, land slips, or liquefaction.
- Consider opening gates within your property to allow stock easy access to dry ground. Do not open gates onto roadways or cut roadside fences.
- If you need to evacuate, take your animals with you if you can do so safely, or take them to a safe shelter place.
- If you have to leave your animals behind, make sure they're in a secure and sheltered place either inside or outside your home.
- High value stock or vulnerable stock (e.g. stock close to giving birth, young stock) should be moved to areas which will be easily accessible in case they need assistance, supplementary feed or veterinary treatment.
- Stay up to date with information by listening to the radio and following HB Emergency Management on Facebook and Twitter.
- Turn off water, electricity and gas if advised to. If you smell gas or hear a blowing or hissing noise, open a

window, get everyone out quickly and turn off the gas if you can.

- If you see sparks, broken wires or evidence of electrical system damage, turn off the electricity at the main fuse box if it is safe to do so.
- If you can, put on protective clothing that covers your arms and legs, and sturdy footwear. This is to protect yourself from injury by broken objects.
- Use social media or text messages instead of calling to keep phone lines clear for emergency calls. Tip: Consider changing your voicemail to let your friends/family know you are safe.
- Check on your animals and protect them from hazards that may have been caused by the earthquake e.g. damaged fences, power lines.
- Check on your neighbours and anyone who might need your help.
- Head to your local Community Emergency Hub to ask for and offer help to your community.

If your property is damaged:

- Contact your insurance company as soon as possible.
- Take photos of any damage once it is safe to do so. It will help speed up assessments of your claims.



For more information to help you care for your animals affected by earthquake, follow advice from the Ministry for Primary Industries at bit.ly/animals-earthquake



Tsunami

A tsunami is a series of sea waves or surges caused by a sudden event such as an earthquake on or near the ocean floor causing the water column to move and a tsunami to form. Tsunami waves travel rapidly through oceans and they can cause widespread damage onshore with injuries, and loss of life. Tsunami forms a series of waves that can be spread over a 12-hour period, with waves arriving up to an hour apart.

All of the Hawke's Bay's coastline is at risk of Tsunami.

If you are in a tsunami zone and an earthquake is long OR strong, GET GONE!

'Long' means longer than one minute and 'Strong' means it is hard to keep standing.

The earthquake is your only warning that there could be a tsunami. Don't wait for further instructions, notifications, or advice. Evacuate immediately inland, uphill or to the fifth floor or higher after the shaking stops.



Before

1. Know and practise your routes to safety

- Where do you need to go? Look at the map and identify places out of the tsunami zones. Tsunami activity can last for up to 24 hours, so think about where you could stay or take shelter if needed.
- What are your routes? Some routes might be faster, while others might be safer because they have fewer dangers (e.g., bridges, bottlenecks, falling debris). Consider these factors when planning your evacuation routes.
- How long does it take? Time yourself and see how long it takes you to get to safety.
- What do you need to take? Keep essential supplies near the door. Have an emergency grab bag, as well as comfortable shoes and warm/waterproof clothes ready. This will help save time if you need to leave quickly.
- Who else needs to know? Get your household, workplace and/or neighbours involved. Make sure everyone knows the routes and meeting point in case you can't communicate.

2. Learn about distant-source tsunami warnings

- If an earthquake occurs in the Pacific Islands or further away, we may not feel it. If there is a tsunami threat to New Zealand, a national warning will be issued. If you receive an Emergency Mobile Alert, follow the advice given and make sure you are safe. Then make sure your friends and family are safe by sharing the information on social media or by text if it does not delay you.

- In addition to Emergency Mobile Alerts, information will be provided on the HB Emergency Management website, Facebook and Twitter pages. Media outlets (radio, TV and websites) will also provide information.

During

1. Leave quickly - if you feel a long OR strong earthquake, the first tsunami wave may arrive in as little as ten minutes. There is no time for an official warning; you must evacuate out of all tsunami zones as soon as the shaking stops. Every step towards a tsunami safe zone counts. Stay out of the tsunami evacuation zones until officials say you can go back in.
2. Evacuate tsunami zones by foot or bicycle, don't drive - roads may be blocked by debris or a traffic jam. For those who can't walk or cycle, trying to drive out is their only option, and you could be preventing them from evacuating safely. If you need help evacuating or know someone that does, have a conversation with your neighbours about how everyone can get out safely.
3. Evacuating to a higher floor - we recommend evacuating out of all tsunami zones rather than staying in your building. However, some people who are in a high-rise building may decide it is safer to stay there. If you do stay, you need to be on the fifth floor or higher. This is called 'vertical evacuation'. There are several factors to consider, and this is something you and your household or workplace will need to discuss and decide.
4. If you are told to evacuate, follow the evacuation advice - Move immediately.

5. Don't go down to the shore.
 - The first wave to arrive may not be the largest.
 - Waves may be separated by an hour or more.
 - Waves may keep coming for many hours.

After

- Stay out of the tsunami zone until you are told by officials it is safe to return home.
- Stay away from coastal areas, tidal estuaries, rivers and streams for at least 24 hours after any tsunami or tsunami warning. Even small waves can create dangerous currents.
- Continue listening to the radio and following HB Emergency Management advice on Facebook and Twitter.
- Help others if you can, and it is safe to do so.

If your property is damaged:

- Do not do anything to put your safety at risk.
- Contact your insurance company as soon as possible.
- If you rent your property, contact your landlord and your contents insurance company.
- Take photos of any damage. It will help speed up assessments of your claims.

Find out if you live, work or play in a tsunami zone.



Find out if you live, work or play in a tsunami zone here:
<https://www.hbemergency.govt.nz/hazards/tsunami/>

Severe weather or storms

Before

If there are warnings of severe weather for your region:

- Be prepared – pay attention to weather forecasts, plan your travel around them and prepare yourself before the storm hits.
- Bring inside, or tie down, anything that can be broken or picked up by strong winds.
- Remove any debris or loose items from around your property. Branches, firewood and light farming equipment could become missiles in strong winds.
- Clear gutters and drains.
- Check trees for weak or diseased branches and remove any branches growing close to powerlines, your house and other buildings.

If you have pets or livestock:

- Bring pets indoors. Many animals are unsettled by storms and it's more comforting and safer for them to be with you.
- Ensure livestock aren't gathered under an isolated tree or anything that presents a risk from a lightning strike. Lightning can be fatal.
- Move stock to higher ground and ensure they have access to shelter and clean stock water, and are in a secure paddock.

During

- Pick a safe place in your home for everyone to gather during a storm, away from windows, skylights, and glass doors. A sturdy building is the safest place to be during a severe thunderstorm.
- Pull curtains and blinds over windows to prevent injury from flying glass, in case the window breaks.
- Close all interior and external doors. Closed doors help prevent damaging winds from entering rooms.
- Unplug appliances and avoid using the phone or any electrical appliances. Lightning follows the wire. Television sets are particularly dangerous at this time. Use a battery-powered radio or television. Leaving electric lights on, however, doesn't increase the chances of your home being struck by lightning.
- Consider protecting any essential appliances and equipment with surge protectors.
- Turn off air conditioners and heat pumps. Power surges from lightning can overload the compressor, resulting in a costly repair job.
- Avoid bathtubs, water taps, and sinks because metal pipes and plumbing can conduct electricity if struck by lightning.

If you're out and there's no building in sight, take shelter in a vehicle and keep the windows closed. Stay in the vehicle and turn on the hazard lights until the heavy rain subsides. Never drive through flood waters and always drive to the conditions.

As a last resort, and if no suitable structure or vehicle is available, go to a low-lying, open place away from trees, poles, or metal objects. Make sure the place you pick isn't subject to flooding. Crouch low to the ground on the balls of your feet. Place your hands on your knees and your head between your knees.

For cyclones: Be aware that the 'eye of the storm' is calm and quiet. Stay indoors because the winds will get stronger again.

After

- Listen to advice from Hawke's Bay Emergency Management and emergency services and follow instructions.
- Stay away from damaged areas. Your presence might hamper rescue and other emergency operations and put you at further risk from the residual effects of floods, such as contaminated water, crumbled roads, landslides, mudflows, and other hazards.
- Continue to stay up to date with the latest weather information from MetService.
- Stay alert for extended rainfall and subsequent flooding.

If someone is struck by lightning, medical attention is needed as quickly as possible. Dial 111 and give first aid. People struck by lightning carry no electrical charge that can shock other people and can be attended to safely.





Tornadoes

A tornado is a narrow, violently rotating column of air extending downwards to the ground from the base of a thunderstorm. They can be up to 100 metres wide, have tracks from 2 - 5 kilometres, and are short in duration.

- If you see a tornado funnel nearby, take shelter immediately.
- A basement offers the greatest safety. If underground shelter isn't available, move to an interior room or hallway without windows, on the lowest floor.
- Stay away from windows and exterior doors.
- For added protection, get under something sturdy like a heavy table or workbench. If possible, cover your body with a blanket, mattress or sleeping bag, and protect your head with your hands.
- If you're outdoors, lie down flat in a nearby gully, ditch or low spot on the ground. Protect your head with an object or with your arms.

If you're in a car, stop and get out of your car. Don't try to outrun a tornado in your car. Lie down flat in a nearby gully, ditch, or low spot on the ground.

Flooding

Floods are New Zealand's number one hazard in terms of frequency, losses, and declared Civil Defence Emergency Management emergencies.

They're usually caused by heavy or prolonged rainfall, but can also be triggered by failure of dams, high sea levels at river mouths, coastal storm inundation, and tsunamis.

Floodwaters can damage buildings, land, and infrastructure, including roads, bridges, power lines and phone lines. Crops can be flooded and livestock drowned. Floodwater can contaminate water and land.

Before

Talk to your neighbours about historical flooding on your property and check the Hawke's Bay Regional Council website to see if you're on a flood plain. Make sure baleage, hay bales or any other materials aren't stored in an area which could flood.

If there are flood alerts:

- move valuables off your property or place up high.
- move stock out of paddocks susceptible to flooding
- move equipment out of areas that may flood.



During

Stay out of flood water as it can be contaminated with sewage, farm run-off, faecal matter from animals, household chemicals, petrol, oil, and other hazardous substances. Never try to walk, swim, drive through or play in flood water. If you do come in contact with floodwater, thoroughly clean your hands, clothes and any property touched.

The majority of all flood fatalities are vehicle related. The depth of the flood water isn't always obvious. As little as 30 centimetres of water can cause you to lose control of your vehicle, including SUVs. If your vehicle stalls during a flood, abandon it immediately and climb to higher ground. Many deaths have resulted from attempts to move stalled vehicles.

Flood water may also be electrically charged from underground or downed power lines.

After

If you've been evacuated, it may not be safe to return home even when the floodwaters have receded. Listen to emergency services and Hawke's Bay Emergency Management and don't return home until they tell you it's safe to do so.

When you do return home:

- Throw away all food and drinking water that's come in contact with floodwater, including things stored in containers. It's impossible to know if containers were damaged and the seals compromised.
- Avoid drinking or preparing food with tap water until you're certain it's not contaminated. Follow any boil water notice instructions from your local authorities.

- If your gas meter has been affected by water or debris, contact your gas supplier.
- Take photos and videos of the damage and anything that needs to be thrown away before starting the clean-up, for insurance purposes.

It's important to clean and dry your house and everything in it. Floodwater can make the air in your home unhealthy, because when things are damp for more than two days, they usually get mouldy. There may also be germs and bugs in your home after a flood.

Some useful tips for cleaning your home after a flood:

- Wear a mask, gloves, goggles, long pants and long-sleeved shirts. Cover any open cuts or grazes and wash your hands thoroughly after each clean-up session.
- Use a shovel to remove surface contamination. Place it at the edge of your section, ensuring it doesn't block drainage channels. Natural processes such as sunlight, drying and wind will make your outside areas safer over the short to medium-term. Leave garden surfaces and lawns exposed to the air and sunshine to dry out naturally. Make drainage holes with a fork to aerate.
- If the outside area is heavily contaminated with sewage, use garden lime to disinfect the area. Garden lime can be bought from a garden or hardware store. Follow the instructions on the label.
- Hard surfaces, such as driveways, can be cleaned and disinfected with 1 litre of household chlorine bleach in 10 litres of cold water (a household bucket). Leave the disinfectant on for 30 minutes, then rinse with clean water.

If you start feeling unwell after exposure to floodwaters, seek medical advice as soon as possible.



Keeping your animals safe

Before

- If you have to leave your animals behind, make sure they're in a secure and sheltered place either inside or outside your home.
- If you have livestock or horses in paddocks near waterways that have the potential to flood (streams, rivers etc.), move them to higher ground. Ensure they're moved to secure paddocks with access to clean drinking water and shelter.
- High value stock or vulnerable stock (stock close to giving birth, young stock etc.) should be moved to easy-access areas in case they need assistance, supplementary feed or veterinary treatment.

The Ministry for Primary Industries or Hawke's Bay Emergency Management may be able to provide advice if you need assistance with evacuating your animals and finding a safe, sheltered place to contain them.

After

- Check all stock are contained and fences haven't been damaged by land slips, flooding or power cuts (in the case of electric fences).
- Move animals out of flooded paddocks as soon as it's safe to do so. If animals are left in contaminated water for long periods, they're at risk of bacterial infections, chemical burns and sloughing of their skin. If they are affected, you can cleanse their skin/coat by hosing them down with non-contaminated water.
- If you come into contact with an animal that's been in flood water, change your clothing and wash your hands thoroughly. If you can, wear protective gear such as overalls, gloves and a mask. Flooding increases the chance of the bacteria leptospirosis contaminating the environment and poses a greater risk of infection through wounds on the skin. If you think you may be at risk of exposure to leptospirosis, contact the Ministry of Health.
- Check your paddocks for contamination by flood water and feed your animals supplementary feed, if necessary.



For more information about animals affected by flooding, follow advice from the Ministry for Primary Industries at bit.ly/animals-flood



"Recovering from flood fact sheet" by Beef + Lamb New Zealand <https://beeflambnz.com/knowledge-hub/PDF/flood-recovery-fact-sheet.pdf>

Fire

Areas that have multiple homes or other structures near forest, bush, scrub or grassland are known as urban/rural interfaces. Properties in these areas are at greater risk of wildfire due to the increased presence of nearby vegetation which can carry a fire. If you're living in a high-risk interface area you need to take this risk seriously and take steps to make your property safe.

Fire seasons and permits

There are three fire seasons in New Zealand. Depending on the season and type of fire you're planning, you might need a fire permit.

Open fire season

You can light a fire without a permit if you do so safely and responsibly. You must also have permission from the landowner.

Restricted fire season

Lighting a fire is riskier than usual, so you'll need a permit for most fire types. You may also need to meet specific conditions to help you light your fire safely and prevent it from getting out of control.

Prohibited fire season - Total Fire Ban

Fires are banned because it's too risky, with any existing fire permits suspended. Hāngī, umu and wood fire pizza ovens are permitted, subject to certain conditions.



Fire and Emergency New Zealand has a dedicated website to explain the current fire season, fire types, and information on how to reduce the risks of a fire getting out of control. Visit [checkitsalright.nz](https://www.checkitsalright.nz)

TIP: Fire season and fire danger information is now available on MetService.com and MetService app when you look up the weather of a location.

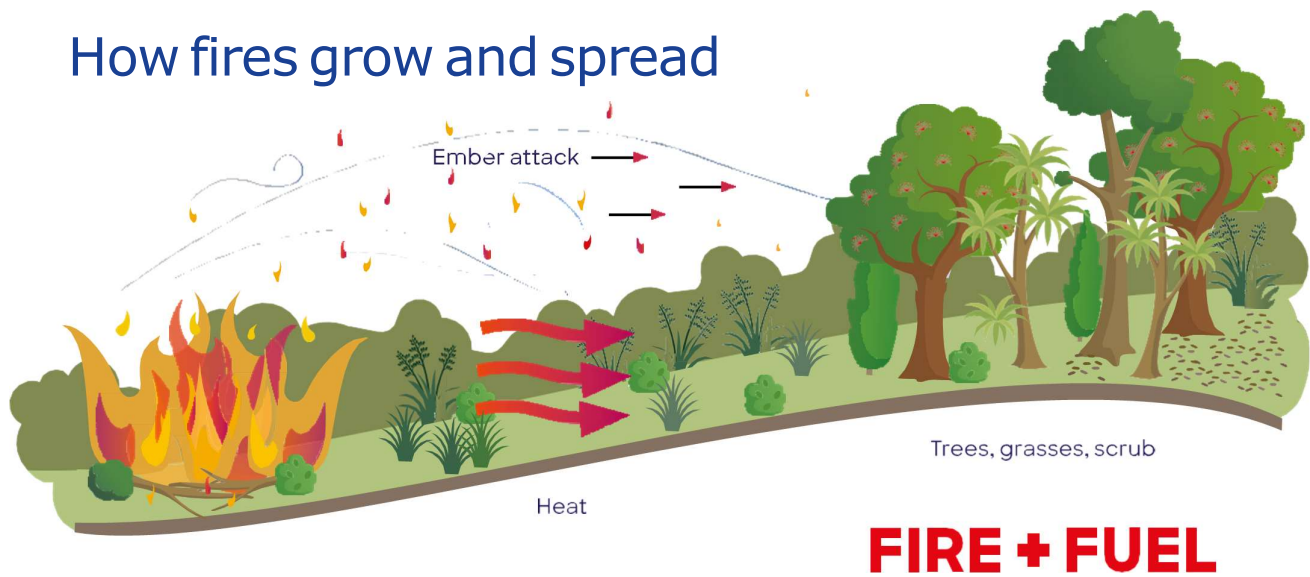
Protecting your home from wildfires

Your home could be at risk of damage or loss due to the spread of wildfire. Homes far away from fire stations could also face a longer response time from firefighters.

It's important to understand how fires grow and spread so you can take steps to reduce the risks around your home.

Embers can travel more than two kilometres from a wildfire. Your greatest risk is that these embers reach your home and ignite a fire. Wildfire travels faster uphill, and homes on a steep slope or at the crest of a hill are at greater risk.

How fires grow and spread



Although every property has specific risks, and you'll need to consider your own situation, there are simple steps you can take to greatly reduce the risk of fire to your home.

Create a 10-metre safety zone around your house and other structures on your property by:

- clearing combustible materials and vegetation (e.g. leaves, dead branches and stacks of firewood).
- keeping your lawns short.
- regularly clearing material from gutters, spouting and areas around decks. Consider screening with mesh.
- planting low flammability plants and trees.

Low flammability plants aren't fireproof, but they don't readily ignite and have the following characteristics:

- moist supple leaves
- little accumulation of dead wood and dry dead material within the plant
- watery sap that doesn't have a strong odour
- low levels of sap or resin

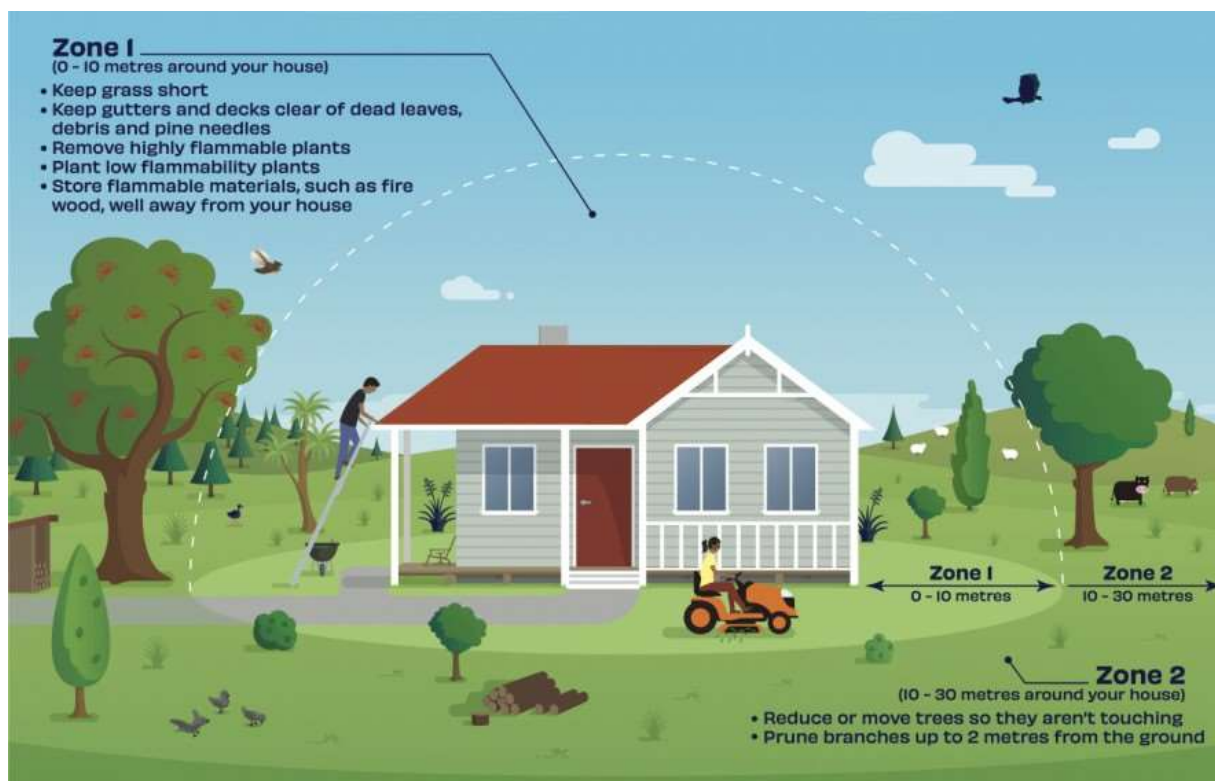


For more information about what to plant, visit the Fire and Emergency New Zealand website at bit.ly/plant-flammability



Complete the FENZ Rural Home Fire Safety Checklist: <https://fireandemergency.nz/home-fire-safety/fire-safety-checklists/rural-home-fire-safety-checklist/>

TIP: If your property is close to Department of Conservation (DoC) or Council land, check with them on what you can do before removing any vegetation, as DoC and councils have rules around the removal of vegetation.



This diagram shows how to manage vegetation and fuel sources in Zone 2 (10-30m) around your house and other structures.

Evacuation

Fire moves extremely fast – have a plan to ensure you and your family know what to do in a fire and how to get out safely.

- Know your neighbours and talk to your community about what you'll do in the case of a fire or emergency, and make sure you look after people who may not be able to look after themselves.
- Dial **111** immediately if there's a fire. Leaving early is always your safest option and make sure you know how to get away and where you'll go.
- Don't rely on an official warning to leave. Wildfires can start quickly and threaten lives and homes within minutes.
- If you have evacuated, don't return home until you're advised that it's safe.



Home Fire Safety

Most house fires Fire and Emergency New Zealand attend are started by **unattended cooking or unmaintained or overloaded electrical appliances.**

- Don't leave the room while cooking and switch off before you walk off. Keep any flammable items well away from cooking and don't drink and fry.
- Keep your electrical appliances well maintained and don't overload power boards.
- **You're four times more likely to survive a house fire if you have working smoke alarms.** Working smoke alarms alert you early or wake you up when sleeping, giving you and others the best chance of escaping alive. Install and maintain long life photoelectric smoke alarms in the living area, hallway and every bedroom of your home, but don't install them in your kitchen, bathroom, laundry or garage. Smoke alarms in these areas are prone to false alarm, so get heat alarms in those areas instead. Never assume your smoke alarm is working. Press the button to check regularly and replace after 10 years, or as required.
- Fire and Emergency New Zealand offers **free Home Fire Safety Visits** to discuss fire safety in your home, escape routes and install a free smoke alarm should you require one. To request a Home Fire Safety Visit, go to <https://fireandemergency.nz/hfsv/> or call **0800 693 473**.



A house fire can kill in three minutes. It's terrifying to safely get everyone out of a burning house when it's hot, dark and smoky. That's why it's essential to have an escape plan in place, to practise it regularly, and to know how to get to safety quickly. You can easily create your own 3-Step-Escape plan at escapemyhouse.co.nz

Machinery safety

Fires can start from the smallest spark, so take care using machinery and equipment like mowers and chainsaws when conditions are hot, dry and/or windy. When you're driving through stubble or long grass, exhaust heat or sparks from your mower or vehicle can cause a fire. Mowers and scrub cutters can also start fires by hitting rocks in dry grass.

Try to avoid using machinery when the local fire danger is high, very high or extreme and keep an eye on what's happening around you. If the work is unavoidable, wet down your work area and have firefighting equipment on hand.

Check that your machinery has no mechanical defects that could start a fire. Birds like to make nests in larger machinery so regularly check for any nests around motors throughout the day, especially after taking breaks, and clear them away before starting any work.



For more tips on maintaining your machinery to reduce fire danger, go to checkitsalright.nz/reduce-your-risk/mowers-chainsaws



Also use checkitsalright.nz to check whether the activity you're planning is a good idea or not on that particular day.

Hot work

Hot work is any job that involves using tools that could start a fire. On rural properties, this might include welding, grinding or cutting.

- Don't do hot work outdoors during prohibited fire seasons unless you have a special permit.
- Where possible, perform hot work indoors at a designated safe location, like a welding bay. If this isn't possible, make sure you move any fire hazards or flammable materials out of the area before starting.
- Thirty minutes after you've finished the hot work, do a final check for any hot spots that might cause a fire.
- Always have firefighting equipment (e.g. a garden hose) on hand, and know how to use it, in case a fire starts.



Fire Blankets and Fire Extinguishers

If you have fire blankets or a fire extinguisher in your home, workshop and/or sheds, you'll be better prepared to put out small fires before they become big ones.

Fire blankets are useful for covering cooking related fires, and for wrapping around a person to smother a clothing fire.

Fire blankets are made of fabrics that are fire resistant and can be purchased at most hardware stores.

Store fire blankets in a location close to your kitchen.

Fire extinguishers are useful for fires caused by cooking oils or fat in the kitchen.

Familiarise yourself with how to operate your fire extinguisher and only use when it's safe to do so.

Remember, life is more important than property. Always make sure you have your escape planned before tackling any fire and don't put yourself or others at risk.

Access and water supplies for fighting fire

For firefighters to safely enter a home to check for missing people, fight a fire and protect nearby buildings from the effects of fire, they must have 4m x 4m clearance to access your property and access to water. See page 41 for information on Property Access for Emergency Vehicles.



Water tanks/ponds must be accessible and preferably have vehicle access so fire trucks can get close enough to get to the water. Ideally, tanks should have a connection that's compatible with those used by firefighters. You can find out more about this and information about water for firefighting by visiting fireandemergency.nz

Keeping your animals safe

During prohibited fire seasons

- Don't oil fences, posts and rails. It may stop horses from chewing them, but it's fuel for a fire.
- On a total fire ban day or extreme fire danger day, turn off electric fences to reduce risk of igniting a fire.
- Make sure farm buildings have no gaps (walls/floors/ceilings) so embers are prevented from entering. Metal fly wire keeps embers out from under buildings while still allowing airflow.
- Damp or incorrectly cured hay can spontaneously combust. Don't store it next to animals or farm equipment.
- Protect your assets by keeping flammable materials away from farm buildings.
- Keep grass away from buildings and lay gravel so there's nothing to burn.
- On high-risk fire days, remove any flammable gear, such as rugs, harnesses, halters and fly veils, and anything that contains metal (in the case of horses). Most rugs are a polyester/cotton blend, so if they catch fire, they'll melt onto the animal's skin.
- If you need to move your animals, ask your neighbours if they're able to contain them on their property.



"Animals affected by fire. Advice for livestock, lifestyle block, horse and pet owners" from MPI bit.ly/animals-fire



"Protecting your home and livestock" from Fire and Emergency checkitsalright.nz/reduce-your-risk/protecting-your-property

After a fire

- Animals may panic and flee to escape the smoke and heat, taking out any obstacles in their way. Check your animals, including their hooves, pads, feet, or udders for wounds and injuries.
- While external burns to the skin may be easy to see, your animals could also be suffering from internal burns, particularly to the lungs due to smoke inhalation. Seek veterinary advice.
- Make sure all animals have access to clean water. If the water isn't safe for you to drink, it isn't safe for your animals.
- Check water tanks supplied by roof collection and clean the roof and gutters for any ash.
- Check if irrigation lines to the water trough have melted in the fire. Remove any ash and debris from stock water.
- Pasture and stored feed may be contaminated by fire or ash. Make sure you have supplementary feed available for your animals.





Drought

Drought or dry conditions are likely to become more common with climate change. Check MetService long range weather forecasts and make sure you're prepared for extended periods with no or little rain.

Make a plan

Include steps to ensure you:

- have enough water for you and your whānau's use.
- have adequate water for your animals.
- have sufficient supplementary feed for your animals. Purchase supplementary feed early as it might not be available when you need it urgently.
- can reduce the number of animals on your property if necessary. This could include arrangements to graze stock elsewhere or even selling your animals. Use feed budgeting tools to ensure you have the right stock for your land.
- have the necessary financial arrangements in place to cover the cost of purchasing water and supplementary feed.

Refer to Section 3: Managing water on and off your property, for information about managing water tanks.

Look after your animals

- Contain livestock in paddocks where there's adequate shade for every animal. Don't contain livestock in confined spaces such as sheds or yards with little shade or air flow.
- **When it's very dry and hot, your animals could consume three times as much water as usual.** Make sure you have a reliable source of stored water with a reticulated system. Your rivers or ponds may no longer be able to sustain your livestock's water needs.
- Check the water supply is still drinkable. Low dams or ponds might be surrounded by mud or sludge. Fencing off these areas will prevent animals from potentially becoming stuck.
- During dry times and drought, pasture quality is often poor and limited. Ration feed and try to maintain ground cover. You might need to bring in supplementary feed or move animals off the property.
- Animals will need more feed depending on growth, stage



Supplementary feed

If you need supplementary feed, such as hay or grain, place an order with a feed supplier as soon as possible. Animals need to be gradually introduced to supplementary food so they can adapt to it and to prevent digestive problems.

Talk to your vet or feed supplier to get advice on the best feed for your animals and situation.



Follow advice from the Ministry for Primary Industries on animals affected by drought at: bit.ly/animals-drought

TIP: Consider planting fodder trees to assist in times of drought. They can also provide shade and shelter from the wind.



Reducing stock numbers

Your stocking rate needs to be compatible to the amount of feed you have available, or else you risk animal welfare issues associated with underfeeding stock. Pasture growth and quality changes throughout the seasons, along with seasonal change such as sunlight, temperature and rain. Feed planning is an essential tool when caring for livestock.

Overstocking means animals don't get the nutrition they need and can cause animal welfare problems.

It's usually more cost-effective to sell animals than to buy feed in. If you wait too long, your stock may become unsaleable. You could try selling through a stock agent, farmer, or through online sites.

Alternatively, you could contact your local processing plant or agent. Make sure you contact them as early as possible to check what their protocols and current wait times are. Some meat processors will allow you to bring your own stock by trailer, but others may only accept them via commercial transport operators. There could also be longer wait times if you have a small number of stock, or don't already have a relationship with the meat company.

Try working with your neighbours to develop workable solutions, like combining stock numbers from several properties and utilising their relationships with meat companies.

For more information about strategies to reduce the effects of drought, go to:



"Strategies used by farmers in drought" by Beef + Lamb New Zealand <https://beeflambnz.com/sites/default/files/factsheets/pdfs/fact-sheet-160-strategies-used-by-farmers-in-drought.pdf>



"Drought guide" from Farmlands - farmlands.co.nz/Documents/Guides/Farmlands-Drought-Guide.pdf

Volcanic eruption

Eruptions of 0.1-1.0 km³ of volcanic ash from Ruapehu, Tongariro/Ngauruhoe, Egmont, or the Taupo and Okataina volcanic centres would significantly affect the Hawke's Bay region. Ash particles are very abrasive, they can irritate the eyes and cause lung irritation if inhaled. Ash can also damage machinery and injure animals that eat ash coated food.

If there is volcanic activity, follow official advice provided by Hawke's Bay Emergency Management and the emergency services.



If there's been a volcanic eruption in New Zealand, GeoNet will provide ash fall forecasts at [geonet.org.nz/volcano](https://www.geonet.org.nz/volcano). These will also be communicated in the media.



Before

- If possible, get home before ash fall starts to avoid exposure to, and driving, during ash fall.
- If you have respiratory or heart conditions, keep your relief medication handy and use as prescribed. If you have any concerns, call your doctor.
- Take steps to keep ash out of your house by closing all doors and windows, turning off all heat pumps and air conditioning units and setting up a single entry/exit point for your house.
- Move vehicles and machinery under cover if possible, or cover them to avoid ash causing corrosion damage.
- Cover spa pools and swimming pools as ash can clog filters.
- Disconnect downpipes from gutters to allow ash and water to empty from gutters onto the ground.
- Disconnect roof catchment rainwater storage tanks from downpipes to prevent contamination.
- Seal any openings in water storage tanks (e.g. poorly-fitted covers), to prevent the entry of ash.
- Cover any open gully traps or drains with a sheet of plywood or similar, to prevent ash from entering the wastewater or stormwater systems.
- Cover vegetable gardens with tarpaulins, to prevent ash contamination.
- Check on friends and neighbours who may need assistance.

During

Volcanic ash is made up of fragments of rock, minerals, and volcanic glass. It's highly abrasive.

Dos	Don'ts
<p>Stay indoors. If you must go outside use protective gear such as masks and goggles and keep as much of your skin covered as possible. Wear eyeglasses, not contact lenses, as these can cause corneal abrasions.</p> <p>If outside at the time of eruption, seek shelter in a car or a building. If you're caught in volcanic ashfalls, wear a dust mask or use a handkerchief or cloth over your nose and mouth.</p> <p>Listen to the radio for updates and check Hawke's Bay Emergency Management's website, Facebook and Twitter. Follow any instructions from emergency services, local authorities and Hawke's Bay Emergency Management.</p>	<p>Don't attempt to clear ash from your roof while ash is falling.</p> <p>Don't undertake non-essential driving. If you have to drive, drive slowly, maintain a safe following distance behind other traffic, use headlights on low beam, and avoid using wipers as ash can scratch windcreens.</p>

After volcanic activity

Dos	Don'ts
<p>Look after your family, friends and neighbours.</p> <p>Continue to follow official advice provided by Hawke's Bay Emergency Management, local authorities, and emergency services.</p> <p>When it's safe to go outside, safely clear rooves of ash fall using protective gear.</p> <p>Listen to advice regarding your water supply.</p> <p>You can eat vegetables from the garden but wash them first.</p>	<p>If you've been evacuated, don't return home until told it's safe to do so.</p> <p>Don't remove ash by using water. Ash is very heavy and can cause buildings to collapse, especially if dampened by rain.</p> <p>Avoid driving in heavy ash fall. Driving will stir up volcanic ash that can clog engines and stall vehicles. Abrasion can cause damage to moving parts, including bearings, brakes and transmissions.</p> <p>Don't go into designated restricted zones.</p> <p>Don't let animals near ash fall and possible hot spots.</p>



For information about how to protect yourself and clean up ash during volcanic eruptions, check out the Beef + Lamb New Zealand Fact Sheet <https://beeflambnz.com/knowledge-hub/PDF/volcanic-eruption.pdf>

Keeping your animals safe

Before

- Move all animals indoors, where possible. Airborne ash can cause eye and skin irritation and can accumulate in sheep fleece.
- Ensure animals have supplementary feed. If feed is stored outside, make sure it's covered to avoid ash contamination.
- Ensure livestock have access to clean drinking water. Cover open water troughs with a sheet of plywood or similar, to avoid contamination by ash fall.



After

- Check all stock are contained and fences haven't been damaged or affected by power cuts (in the case of electric fences).
- Move animals out of paddocks that could be affected by volcanic debris as soon as it's safe to do so. The most common scenario is ash fall. Contamination can still occur long after the initial eruption, so you may need to feed your animals supplementary feed until the pastures are safe.
- If animals have ash on their coat or in their eyes, remove it immediately by washing with water. The ash is highly abrasive and can cause damage to the eyes and create excess warmth and bacterial infections if not removed.
- Provide water and feed to your animals as soon as possible. Winds and rain may distribute contaminants making pastures unsafe for animals to eat. Give your pets bottled or boiled water.
- Check machinery such as water pumps as they may be affected by ash.
- Soil and pasture growth can be severely affected by volcanic ash and acidic rain. Toxic chemicals may significantly change soil characteristics such as pH balances. This can cause pastures and plants to either die or be contaminated. The rehabilitation length of soil and plants is dependent on the amount of ash and rain deposited. Soil testing and trusted pasture advice is highly recommended.
- Make sure water tanks supplied by roof collection, and troughs are all free from ash. Don't allow animals access to water unless you're sure it's safe.



For more information to help you care for your animals affected by a volcanic eruption, follow advice from the Ministry for Primary Industries at: bit.ly/animals-volcanic-eruption