

## Tornado facts

A tornado is nature's most violent form of storm activity. It can produce upwardly spiraling winds of between 120 to 450 kilometres per hour and cause devastating damage along a path 50 to 300 meters in width. The forward motion of the tornado funnel may be quite erratic as it zigzags along a southwest to north-easterly direction (usually) at a forward speed of 50 to 70 km per hour.

Tornadoes occur in many parts of Canada between the months of May and September. In an average year, 80 tornadoes cause two deaths, 20 injuries, and tens of millions of dollars in property damage. Although we can't do anything to prevent a tornado, we can certainly be prepared.

### Understanding tornado watches and warnings

A severe thunderstorm is the driving force behind a tornado. Hot, humid weather combined with a cold front could be a sign that a tornado is brewing. A funnel cloud hanging from a dark cloud may be visible before the tornado actually occurs. A tornado may be accompanied by lightning, high winds, and hail.

The weather office issues watches and warnings. Radio and television stations communicate that information to the public. Stay tuned to your local TV and radio stations for updated storm information especially when weather conditions exist for generating a tornado.

- A tornado watch is an advisory only. It means that all the conditions that make a tornado are present. Nothing may happen, but a watch could develop into a warning. Stay alert. Listen to your radio.
- A tornado warning means that the event is imminent or a tornado has touched down. Take immediate precautions and listen to your radio.

When Environment Canada has reliable evidence that a tornado has been detected or is imminent, a tornado warning is issued for a specific area through the media or through Alberta Emergency Alert.

### Tornado myths

Contrary to popular belief:

- Areas near rivers, lakes, and mountains are not safe from tornadoes
- The low pressure caused by a tornado does not cause buildings to explode as the tornado passes overhead
- Open windows do not equalize pressure and minimize damage
- You're not safer if you're downtown
- You are not safer sheltering beneath an underpass

### What can I do to protect my family?

A tornado will contact the ground with very little warning. The wisest action is to be prepared in advance for all major emergencies and disasters. Develop your own family emergency plan and emergency kit.

For more information on hazards in Alberta, contact your municipality's Director of Emergency Management or the Alberta Emergency Management Agency at 780-422-9000 (Dial 310-0000 for toll-free access outside Edmonton) or visit [www.aema.alberta.ca](http://www.aema.alberta.ca)

# Planning for tornadoes and severe weather

A tornado touches down and makes contact with the ground with very little advance warning and can be devastating. The wisest action is to be prepared in advance for all major emergencies and disasters. Develop your own family emergency plan and emergency kit.

## Planning ahead

- Select a shelter area in the basement that would offer protection. Underneath a stairway that leads to the basement and is secured to the main floor is preferred. The shelter area must be easily accessible and able to offer protection from flying glass, debris and furniture.
- Decide on shelter options in advance for your home, place of employment and school. If forced to take shelter away from home, avoid large halls, auditorium, cafeterias, arenas and or any large building with large span roofs. Seek out an inner hallway, washroom, closet, etc.
- In high-rise buildings, an inner room, closet or washroom away, from flying glass or debris, offers protection. An inner stairwell that has no windows would be the best exit to the basement level if there is time to evacuate the upper floors.
- When a severe storm (tornado) strikes, you may be separated from family members. Avoid unnecessary worry and travel by determining, in advance how your family will stay in contact. Pick two meeting places, including a location at a safe distance and a place outside your neighbourhood in case you cannot return home.
- Ask a relative or friend who lives outside your municipality, to act as a central “point-of contact” for everyone to call after the storm has passed.
- Your municipality has plans in place to set up a Registration and Inquiry service following a major emergency or disaster event, and will publicize telephone numbers for citizens to call to register, and to inquire about missing family members.

## Stay mobile

Keep a fairly full tank of gasoline in the family vehicles, since local service stations in a disaster area may not be open. In a major disaster area, downed electrical services, ruptured gas lines and broken water mains constitute a driving hazard. The need to be mobile must be weighed against these hazards.

## When a severe tornado storm threatens

- During heavy storm activity, have a wind-up or battery powered radio to provide you with warning information or advice.
- Check access to the designated shelter area and your emergency kit
- Stay away from windows.
- Avoid traveling so that you will not be caught out in the open.
- If the storm is severe, go to your designated shelter area.
- If caught outdoors and you cannot reach your designated shelter, lie flat in a ditch, excavation or culvert. If possible, lie flat holding onto the base of a small tree, bush or shrubbery to avoid being lifted or blown away.
- If caught while driving, drive away from the funnel at a right angle or to its direction of travel. If you cannot escape the path of the funnel, get out of your vehicle immediately and seek shelter in a ditch or ravine, keeping its slope between you and the funnel.
- If caught away from home in a built up area, seek shelter in a sturdy building. Go to an interior hallway or washroom on the lower floor. Avoid buildings with large span roofs such as malls or supermarkets.

## Special precautions for mobile home owners

Mobile home owners must take special precautions to protect themselves. Mobile home residents are the exception to the “stay indoors” rule.

- Severe storms usually travel from a south-westerly direction. Mobile homes facing these directions present a smaller profile to an approaching storm.
- Mobile homes are vulnerable to being overturned, lifted, and then hurtled to the ground. They may be protected somewhat by being anchored to the ground. This is done using heavy cable or chain which is secured to the mainframe and embedded into solid concrete set deeply into the ground. The manufacturer should be consulted about tie down measures.

## When the storm has passed

The dangers associated with a disaster are not over once the tornado has touched down. Take steps to protect yourself, your family, and others in your community.

- Listen to your radio for information and follow instructions.
- Don't visit the disaster area. You may hinder rescue efforts.
- Avoid using the telephone except for emergencies.
- Monitor local media reports and municipal web pages for information on when it is safe to return to your home. They can also provide other post-incident advice and assistance.
- Drive carefully and watch for debris, dangling or broken wires and damaged bridges and roads. Report problems to police or fire departments.
- Wait until you are advised that it is safe to enter buildings. They may be structurally damaged.
- Use only battery-powered lanterns or flashlights to examine your home for damage as there may be flammable items. Do not use candles or matches.
- Check for leaking gas pipes in your home. If you smell gas:
  - Immediately open windows and doors
  - Turn off the main gas valve
  - Leave the house
  - Notify the gas, as well as the police and fire department
  - Do not re-enter the house unless you are told it is safe to do so
- If electrical appliances are wet (and you are not wet or standing in water) turn off the main power switch. Then unplug the wet appliances and have a qualified technician inspect them. When all the wet appliances are unplugged, turn on the main power switch. If any fuses blow when power is restored, turn off the main power switch again and have your home checked by a qualified electrician or call your utility company.
- Follow the instructions of your local health unit.
- Check to see that sewage lines are intact before flushing toilets.
- Report damaged water, sewage, and gas lines to the proper authorities.
- Notify your insurance agent or broker if your property was damaged.
- The emotional impacts of disasters on those affected are well known. Pay attention to your feelings and those of your family members. Alberta Health Services can provide assistance in coping with trauma resulting from a disaster.

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