

# Severe storms

## Heavy rains and thunderstorms

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### Overview

Thunderstorms, hail, blizzards, ice storms, high winds and heavy rain can develop quickly and threaten life and property. Severe storms occur across Alberta in all seasons.

### Heavy rains

There are two types of summer heavy rains:

- Large scale weather systems with long-term rainfall. These large weather systems can last several days.
- Short-lived thunderstorms with significant rainfall. Within a short period of time, localized downpours from thunderstorms can produce flash flooding.
- Heavy rainfall can result in flooding. This is particularly true when the ground is still frozen or already saturated from previous storms.
- During heavy rains, avoid roadway underpasses, drainage ditches, low lying areas and water collection areas. They can unexpectedly flood or overflow.
- Stay away from power lines or electrical wires during floods.
- Consider checking the drainage around the house to reduce the possibility of basement flooding after a heavy rain.

### Thunderstorms

All thunderstorms are potentially deadly electrical storms, whether or not they are accompanied by severe weather.

- A severe thunderstorm brings potentially damaging conditions such as high winds, hail, lightning, heavy rain and tornadoes.
- Straight-line winds can be as strong as some tornadoes but usually cover a much larger area.
- Thunderstorms are usually over within an hour, although a series of thunderstorms can last for several hours.
- Before any thunderstorm, unplug radios and televisions; listen for weather updates on your battery-powered or crank radio.
- During thunderstorms, you should also stay away from items that conduct electricity, such as corded telephones, appliances, sinks, bathtubs, radiators and metal pipes.

### Stay informed

- Download the [Alberta Emergency Alert app](#).
- Keep a battery-powered, crank radio or Weatheradio on hand as there can be power outages during severe storms.
- Monitor the [provincial government](#) flood forecasts and warnings.

## Lightning

Lightning occurs when the air becomes charged with electricity during a thunderstorm.

- Bolts can deliver as much as 100 million volts of electricity and can strike a target up to 16 kilometers away.
  - On average, lightning causes more fatalities in Canada annually than hail, rain, flooding, wind, tornados and hurricanes combined.
  - Lightning causes thunder. If you can hear thunder, you are within striking distance of lightning.
  - Rubber footwear does not offer any significant protection from lightning.
  - Rubber tires do not offer any significant protection from lightning.
  - Safe shelter includes a sturdy, fully enclosed building with wiring and plumbing. If this is not available, get into a metal-roofed vehicle with the windows up and do not touch any electrical devices or switches connected to the vehicle.
  - Once indoors, stay away from electrical appliances and equipment. Avoid using a telephone that is connected to a landline. Stay away from doors, windows, fireplaces, and objects that will conduct electricity. This includes sinks, tubs and showers.
  - If you are in a car during lightning, do not park under tall objects that could topple, and do not get out if there are downed power lines nearby.
  - If you are caught outside, do not stand near tall objects or anything made of metal, and avoid open water. Take shelter in a low lying area.
- If caught on the water in a small boat with no cabin during thunder and lightning, quickly get to shore. Boats with cabins offer a safer environment.
  - Wait 30 minutes after the last thunder heard from any storm before venturing outside again. Be aware that local noise may mask hard to hear faint thunder.
  - Most lightning fatalities come from thunderstorms that are not intense enough to be described as being “severe” storms.

### Tip:

When thunder roars, go indoors.

### For more information

- For more information on lightning science and safety, visit [Lightning in Canada](#).
- Contact your municipality’s Director of Emergency Management or the Alberta Emergency Management Agency at 780-422-9000, or dial 310-0000 for toll-free access outside Edmonton.