

Severe storms

Thunderstorms, tornadoes, hail, blizzards, high winds and heavy rain can develop quickly and hit hard - posing a threat to life and property.

If you are like most Canadians you have probably had to clean up after these storms and you know the damage they cause. Some problems cannot be prevented. High winds will topple trees and heavy rains will cause rivers to flood. But some damage can be avoided or at least reduced, if you take a few simple precautions such as knowing the type of storms common to your area and what time of year they are likely to strike.

The purpose of this information is to help you prepare for severe weather by listing a few steps which you can take to protect your family, yourself, and your property when a severe storm hits your area.

Listen for the warnings

Environment Canada monitors the weather 24-hours a day, seven days a week. If a severe storm is on the horizon, the weather service issues watches, advisories and warnings through national, regional and local radio and television stations, and Environment Canada's Weatheradio.

- **Weather watch:**
Conditions are favourable for a severe storm, even though one has not yet developed. This is usually issued early in the day. Keep monitoring weather conditions and listen for updated statements.
- **Weather warning:**
Severe weather is happening or hazardous weather is highly probable.

If a weather warning is issued for a tornado, it means that one or more tornadoes have been observed or are forecast for the specified area. Other warnings include those for a severe thunderstorm, blizzard, high winds, heavy snow, snow squall, heavy rain and significant freezing rain.

Be prepared

Storms such as tornadoes often strike too quickly to allow you to choose a shelter or to pack an emergency kit. You may want to have a plan that outlines where you will go and how you will keep in touch with members of your family if a severe storm hits. Municipal, provincial and territorial emergency measures organizations can provide valuable advice to help you prepare for emergencies.

Choose your shelter area

A basement, storm cellar or a closet beneath the stairs are good places to take shelter in the event of a severe storm. If none of these is available, sit underneath a sturdy piece of furniture on the ground floor in the centre of the building away from the outside walls and windows. Be sure you discuss the shelter area with your family.

Pack an emergency kit

This should include food, clothing, blankets, medication, water purification tablets and first-aid and tool kits as well as flashlights and a battery-powered radio - with extra batteries for both.

Reduce the hazards

Trim dead or rotting branches and cut down dead trees to reduce the danger of these falling on your house. You may also want to consider checking the drainage around the house to reduce the possibility of your basement flooding after a heavy rain.

Chose a place to meet

When a severe storm strikes, members of your household may be at work, school or a friend's place. To avoid unnecessary worry, plan a meeting place or some system of communicating with one another to check that everyone is safe.

When a severe storm is forecast

- Severe weather can occur any time of the year, winter or summer. Make it a habit to listen to the local radio or television stations for severe weather warnings and advice. Make sure you have a battery-powered radio on hand as the electricity frequently fails during a severe storm.
- Secure everything that might be blown around or torn loose - indoors and outdoors. Flying objects such as garbage cans and lawn furniture can injure people and damage property. If hail is forecast, you may want to protect your car by putting it in the garage.
- Never venture out in a boat. If you are on the water and you see bad weather approaching, head for shore immediately. Always check the marine forecast first before leaving for a day of boating and listen to weather reports during your cruise.
- If you are advised by officials to evacuate, do so. Take your emergency kit with you.
- If you are outdoors when a storm hits, take shelter immediately.
- Stay calm. You will be able to cope better with emergencies.

Things to do after the storm

- Listen to your radio for information and follow instructions. Give first aid to people who are injured or trapped. Get help if necessary.
- Unless you are asked to help or are qualified to give assistance, please stay away from damaged areas.
- Do not go near loose or dangling power lines. Report them and any broken sewer and water mains to the authorities.
- Report fires to the fire department. Be alert to prevent fires, as broken water mains may cause a reduction in water pressure. Lightning and downed power lines can cause fires. Know how to fight small fires.

- Water supplies may be contaminated so purify your water by boiling it for 10 minutes, or by adding water purification tablets, or by adding one drop of unscented chlorine bleach to one litre of water (or three drops for cloudy water).
- If you use chlorine bleach to purify the water, stir the bleach in and wait 30 minutes before drinking. The water should have a slight chlorine smell.
- Please leave the telephone lines free for official use. Do not use the telephone, except in real emergencies.
- Drive cautiously and only if necessary. Debris, broken power lines and washed out or icy roads and bridges will make driving dangerous after a severe storm. Please give way to emergency vehicles at all times.
- Finally, if the power has been off for several hours, check the food in the refrigerator and freezer to check if it has spoiled.

Severe storms - Tornadoes

Tornadoes form suddenly, are often preceded by warm humid weather and always produced by thunderstorms - although not every thunderstorm produces a tornado. There are warning signs, including:

- severe thunderstorms with frequent thunder and lightning;
- an extremely dark sky sometimes highlighted by green or yellow clouds;
- a rumbling sound, such as a freight train might make or a whistling sound such as a jet aircraft might make; and
- a funnel cloud at the rear base of a thunder cloud often behind a curtain of heavy rain or hail.

Tornadoes are violent windstorms characterized by a twisting funnel-shaped cloud which forms at the base of cloud banks and points towards the ground. Tornadoes usually move over the ground at anywhere from 20 to 90 km/h and often travel from the southwest to the northeast. They are erratic and can change course suddenly. It is not a good idea to chase tornadoes.

Generally speaking, May to September are prime tornado months. Tornadoes usually hit in the afternoon and early evening but they have been known to strike at night too.

Canada has several high risk areas including Alberta, southern Ontario, southern Quebec and a band of land which stretches from southern Saskatchewan and Manitoba through to Thunder Bay, Ontario. There are also tornado zones in the interior of British Columbia and in western New Brunswick.

Things to do in case of a tornado

- If you live in one of Canada's high-risk areas, you should listen to your radio during severe thunderstorms. As a rule, when Environment Canada issues a tornado warning, radio stations

broadcast it immediately. If you hear that a tornado warning has been issued for your area, take cover immediately.

- If you are at home, go to the basement or take shelter in a small interior ground floor room such as a bathroom, closet or hallway. Failing that, protect yourself by taking shelter under a heavy table or desk. In all cases, stay away from windows and outside walls and doors. If you are at the office or in an apartment building, take shelter in an inner hallway or room, ideally in the basement or the ground floor. Do not use the elevator and stay away from windows. Avoid buildings such as gymnasiums, churches and auditoriums with wide-span roofs. These roofs do not have supports in the middle and may collapse if a tornado hits them. If you are in one of these buildings take cover under a sturdy structure.
- Do not get caught in a car or mobile home. More than 50 per cent of all deaths from tornadoes happen in mobile homes. Take shelter elsewhere - such as a building with a strong foundation. If no shelter is available, then lie down in a ditch away from the automobile or mobile home. However, beware of flooding from downpours and be prepared to move.
- If you are driving and spot a tornado in the distance, try to get to a nearby shelter. If the tornado is close by, get out of your car and take cover in a low-lying area. If a tornado seems to be standing still then it is either travelling away from you or heading right for you.
- In all cases, get as close to the ground as possible, protect your head and watch out for flying debris. Small objects such as sticks and straws can become lethal weapons when driven by a tornado's winds.