

Spring And Summer Weather Hazards!



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From hail and heat waves, to thunderstorms and tornadoes, severe weather in Canada takes many different forms in the summer months. It is by knowing what to expect and how to prepare for it, that you will be able to protect yourself, your family and your property from summer weather hazards.

Planning Ahead

Having a storm readiness plan in place saves valuable time if severe weather strikes. Take the opportunity now to choose the best **shelter** in your home and office, and make sure all concerned know where it is. Choose a meeting place to gather after the storm to ensure that everyone is safe and accounted for.

Maintain an emergency pack with a battery-powered flashlight, a radio (with Weatheradio capability preferably), tools for emergency repair, food supplies, a first aid kit, blankets and extra clothing. Keep your car gas tank full, in case gas stations close down after a storm. When a warning is issued, stay calm and follow your plan.

For more information on how to prepare yourself and your family for an emergency situation, visit the [Government of Canada's 72 Hour Campaign](#).

Taking Shelter

When there is a threat of high winds, as in the case of a severe thunderstorm or tornado, your first priority is to take shelter. If it is safe to do so, bring livestock and/or pets indoors, close all windows and doors, and secure loose outdoor objects or move them inside.

Go to the basement or to a small interior room in the centre of the house, such as a closet, bathroom or hallway, on the lowest floor of the building. If this is not an option, take cover under a stairway or sturdy table and use a cushion or mattress to protect your head. Stay away from all windows, doors and exterior walls, in particular those facing the storm, and avoid buildings with large, unsupported roofs such as arenas, supermarkets, and barns. If you are boating or swimming, head for land immediately.

Do not travel. If you are in your car, open the windows slightly and park off the road with your brakes set, away from tall objects and power lines. Do not leave your car if there are downed lines nearby. In the event of a tornado, abandon your vehicle and move at a right angle to the storm's path. If this is not possible, find a low-lying area, such as a ditch, and lie flat. Hang onto a small tree or shrub if you can.

Lightning – When thunder roars, GO INDOORS!

Lightning is an electrical discharge caused by a build up of static electricity between thunderclouds, or between thunderclouds and the ground. It can deliver as much as 100 million volts of electricity and strike a target up to 16 kilometres away, making it an extremely dangerous form of severe weather.

Thunder is the noise created when air suddenly expands from the heat of a lightning discharge. If you count the seconds between a flash of lightning and a thunder clap, you can tell approximately how close the lightning is to you: each second representing about 300 metres.

Lightning Safety

Each year lightning kills approximately 10 Canadians and injures approximately 100 to 150 others. So, how do you keep yourself and your family safe when lightning strikes? Read the tips and information below and stay safe!

The first and most important thing to remember is that if you can hear thunder, you are within striking distance of lightning. Take shelter immediately. If you cannot find a sturdy, fully

enclosed building with wiring and plumbing, get into a metal-roofed vehicle. Stay inside for 30 minutes after the last rumble of thunder.

Once indoors, stay away from electrical appliances and equipment, doors, windows, fireplaces, and anything else that will conduct electricity, such as sinks, tubs and showers. Avoid using a telephone that is connected to a landline.

If you are in your 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, don't 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, but it's still not ideal.

Remember, there is no safe place outdoors during a thunderstorm. Once in a safe location, remain there for 30 minutes after the last rumble of thunder is heard before resuming your outdoor activities.

People who have been struck by lightning do not carry an electrical charge and can be safely handled, but victims may be suffering from burns or shock and should receive medical attention immediately. If you come across someone who has been struck, call for medical assistance immediately and, if breathing has stopped, administer mouth-to-mouth or cardio-pulmonary resuscitation (CPR).

For more information on lightning science and safety visit: [Lightning in Canada](#)

To view up to the minute lightning maps visit [Lightning Detection - Canada](#).

Rain – Long or short duration, it can add up!

Did You Know...

- Both Ontario and the Prairies each experience on average about 20 short-lived severe thunderstorm rain events per year.
- On Aug.19, 2005, up to 175 mm of rain fell over Toronto in less than 2 hours. Total costs from damage associated with the storm exceeded \$500M – the second largest loss event in Canadian history.

- In June 2010, multi-day rains in southeastern Alberta and southwestern Saskatchewan led to a washing out of the TransCanada Highway lasting for days and isolating many communities.
- In Manitoba, late May 2010 saw 59 mm of rain at the Winnipeg Richardson International Airport but up to 108 mm in the southeast section of the city. Many basements were flooded and roads washed out. Overland flooding advisories were issued by the Province of Manitoba.
- Due to the highly localized nature of heavy rains that arrive with many thunderstorms, many events are never recorded.
- The provincial governments are responsible for issuing Flood Forecasts and Warnings.

Two types of summer heavy rains:

1. **Large scale weather systems with long-term rainfall -**
These large weather systems can last several days. Environment Canada issues Rainfall Warnings for this type of event.
2. **Short-lived thunderstorms with significant rainfall -**
Within a short period of time, sometimes only minutes, localized downpours from thunderstorms can produce flash flooding. Environment Canada issues Severe Thunderstorm Warnings for these types of rainfall events.

Heavy Rain Safety:

- Routinely monitor the Environment Canada weather forecasts for watches and warnings of potential heavy rains or severe thunderstorms with local heavy downpours.
- Know potential risks for flooding in your area and plan an escape route to higher ground but keep in mind the threat from lightning which is greater on high ground.
- During heavy rains, avoid roadway underpasses, drainage ditches, low lying areas and water collection areas. They can unexpectedly flood or overflow. **DO NOT TRY TO DRIVE ACROSS A FLOODED ROAD.** You can't tell the condition of the road under the water.
- Stay away from power lines or electrical wires during floods.
- Monitor the provincial government flood forecasts and warnings.



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Photo: Steve Knott

Localized, short term rain event. July 11, 2004. SW Edmonton



© Environment Canada, 2013
Photo: Kevin Wingert - Saskatchewan Watershed Authority

Large area, multi-day rain event. June 19, 2010. AB/SK border

Floods

Most flooding occurs when the volume of water in a river or stream exceeds the capacity of the channel. Flooding also takes place along lake and coastal shorelines, when higher than normal water levels inundate low-lying areas.

Numerous factors affect streamflow, and therefore the potential for flooding. Most important are the amount and type of precipitation, the nature and condition of the drainage basin, and climate.

Flooding is essential to a healthy environment, but can cause human hardship and economic loss.

Over the past 40 years, flood forecasting and warning in Canada has evolved into a [network of forecast systems](#) across the country.

Thunderstorm “Straight-Line” Winds

More common and dangerous than you may realize

Across much of Canada, “straight-line” winds (not tornadoes) cause most thunderstorm wind damage. Straight-line winds are winds that move horizontally along the ground away from thunderstorms, sometimes with tornado-like force. These strong winds may be technically labelled as microbursts, downbursts, squall lines, plough winds or derechos and may cause swirling dust and debris often confused with tornadoes.

Just like with tornadoes, straight-line winds are capable of causing damage such as blowing down trees or buildings. Roofing debris, tree branches, or unsecured construction materials blowing in a storm may become lethal projectiles and can cause significant damage if they hit something. Wind-driven rain or large hail may follow the strong winds and hide potentially dangerous or deadly flying debris. Straight-line winds may produce the same roar like a freight train noise often associated with tornadoes.

Did You Know...

- The Environment Canada wind criteria for a Severe Thunderstorm Warning is: Wind gusts 90 km/h or greater.
- Straight-line winds can be as strong as some tornadoes but usually cover a much larger area.

- Across the Prairies there are on average 45 to 50 thunderstorm-related severe wind events which are not tornadoes. Ontario experiences approximately 40 to 70 severe wind events. Wind events are more common than tornadoes.
- On July 23, 2012, a severe thunderstorm moved across Renfrew and Lanark Counties in eastern Ontario. Straight-line winds of up to 170 km/h downed many tens of thousands of trees, and knocked out power to over 25,000 customers, including the town of Calabogie.
- On July 15, 2008 a severe thunderstorm brought straight-line winds to areas between Taber and Medicine Hat. At some points along the path the damage was 30 km wide with winds possibly in excess of 200 km/h.



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An approaching shelf cloud - a sign that strong wind is imminent! The hanging tendrils may appear to be rotating and extending towards the ground, but are not usually associated with a tornado.

Wind Safety:

- Stay alert ... the tendency is to hunch over and look down when facing strong wind, you may not see a wind projectile approaching.
- Listen for Environment Canada warnings of all types.
- Watch for signs of wind in the sky ...
 - swirls of dust on the ground or approaching waves on water
 - shelf clouds beneath thunderstorms are often associated with strong gusty winds.
- Seek shelter, preferably indoors away from outside walls especially large glass surfaces. Avoid large open spans in buildings such as gymnasiums or malls.

Wind

A **strong wind** does not only occur on a large scale from tropical storms or low pressure systems and fronts, but also on a small scale, from thunderstorms, **Chinooks** or the local geography.

Strong winds, and especially gusty winds, can cause property damage or turn any loose item into a dangerous projectile, and create unsafe travelling conditions that affect your ability to safely steer your car.

When there is a **wind warning** for your area, you should expect inland winds to be blowing steadily at 60-65 km/h or more, or winds that are gusting up to 90 km/h or more. Secure or put away loose objects such as outdoor furniture or garbage cans, put your car in the garage, and bring livestock to shelter.

Safety Tips: High wind in combination with heavy rain can increase the risk of tree limb breakage or trees uprooting. After heavy winds, check your property for dead branches and damage. With winds between 60 and 70 km/h, you will have difficulty with balance and walking against the wind. Twigs and small branches could also blow off trees and cause a hazard, so stay inside until it is safe.

Storm Surges

A storm surge is an abnormal rise in water level that occurs when a high and forceful dome of wind-driven ocean water sweeps along the coastline near where the eye of a tropical or non-tropical storm makes landfall, or passes close to the coast.

Often accompanied by high waves, storm surges can cross the normal high-water mark defined by the tide, and cause damage to infrastructure along coastal areas. They can also cause coastal flooding as far inland as several kilometres.

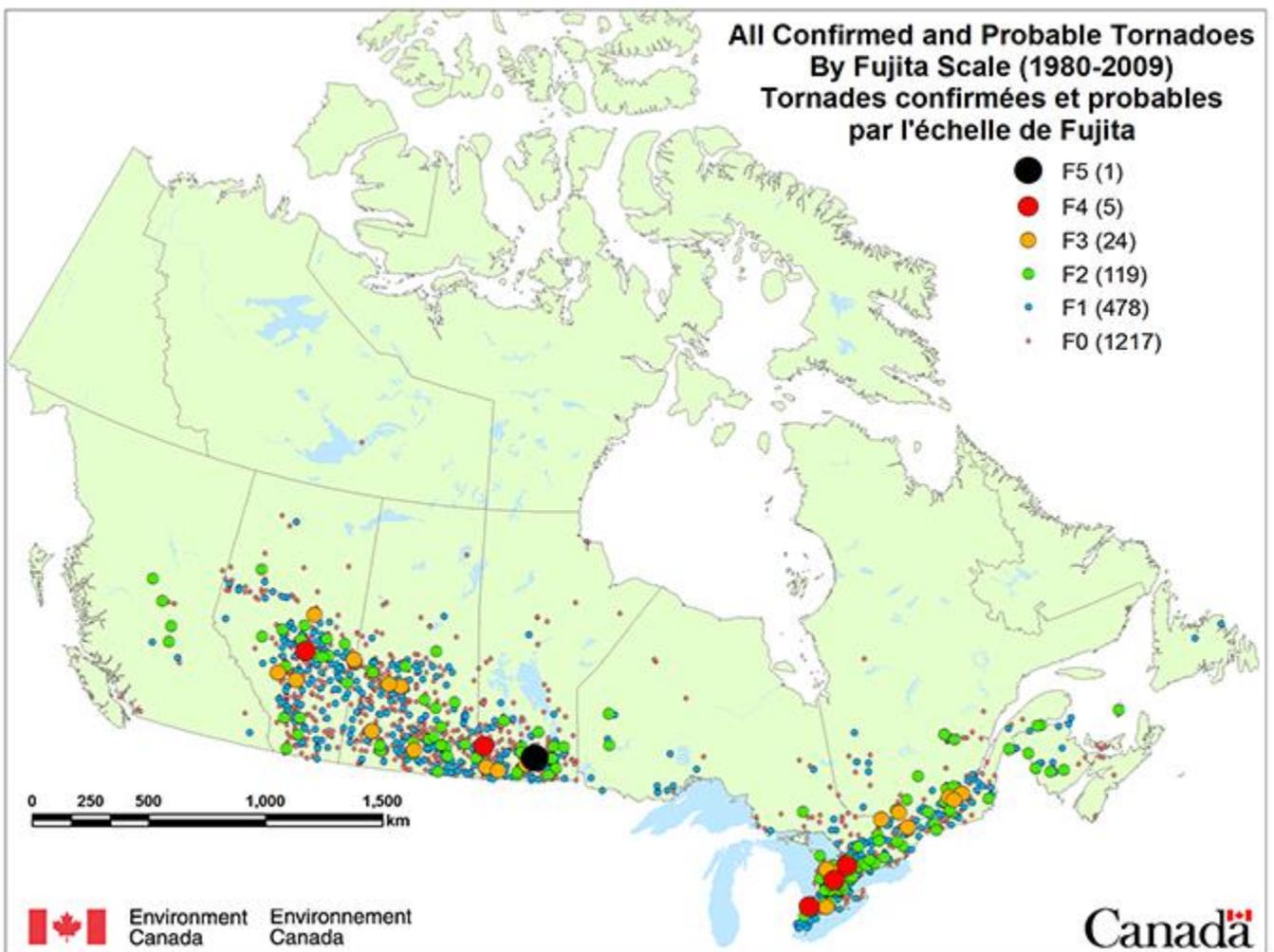
In the event of a **storm surge**, avoid coastal areas, particularly those prone to flooding, and seek higher ground.

Tornado – Nature’s dangerous wonder:

A tornado is a violently rotating column of air extending between a cloud base and the surface (when over water, it is called a waterspout). While often depicted as a funnel with the narrow end on the bottom, there is no typical tornado. Tornadoes exhibit a high degree of variability in their appearance, strength, speed, direction of movement, and duration.

Most tornadoes develop in the late afternoon and early evening but may occur outside of this timeframe, including overnight.

While wide, damaging, straight-line thunderstorm winds are often confused with tornadoes, tornadoes can produce some of the highest wind speeds on the planet. The majority of Canadian tornadoes have maximum wind speeds under 180 km/h, but a small percentage can be considerably stronger with devastating impacts. Although Doppler radar is a major aid to weather forecasters in the prediction of larger tornadoes, many smaller ones are very difficult to forecast.



Map of all verified tornadoes in Canada between 1980 and 2009, coloured by F-scale. From Sills, D. (Environment Canada) et. al (2012). Click for more details

Tornado Safety:

- Monitor Environment Canada watches and warnings and keep an eye on the sky – tornadoes can develop very rapidly.
- When a tornado threatens, take shelter immediately – preferably in the lower level of a sturdy building. Mobile home residents should go to their shelter area.
- Flying glass and other debris pose the greatest danger to human safety.
- If caught outdoors with no shelter available, lie flat in a ditch, ravine or other low lying area and shield your head with your arms.
- Recent research has shown that tornado winds finding their way into a building through open doors and windows can lead to large internal pressures and greater damage. When a watch is issued, that is the time to ensure that all doors and windows are closed.

Did You Know...

- Each year on average, about 43 tornadoes occur across the Prairies and about 17 occur across Ontario and Quebec. The peak of the season is June through August.
- Just as the Richter scale measures the intensity of earthquakes, the Fujita or F-scale measures the severity of an event by estimating the wind speed, whether tornadic or straight-line, based on the damage caused. The F-scale goes from weak F0 to incredible F5.
- On April 1, 2013, Environment Canada began to use an improved version of the F-scale known as the [Enhanced Fujita or EF-scale](#). While the levels of intensity, ranging from EF0 to EF5, have the same relationship to damage as the original F-scale, the associated wind speeds have been made more accurate. All events from April 2013 forward will be rated using the EF-scale.
- There is only one documented F5 in Canadian history, at Elie, MB June 22, 2007. Fortunately, there were no injuries. This tornado was nearly stationary!
- Three of the four deadliest tornadoes in Canada have occurred in the Prairies: Regina, SK June 30, 1912 (F4, 28 fatalities in Regina, two more south of the City), Edmonton, AB July 31, 1987 (F4, 27 fatalities), and Green Acres Campground, Pine Lake, AB July 14, 2000 (F3, 12 fatalities).
- The most deadly Ontario tornado was the June 17, 1946 Windsor F4 event, which caused 17 fatalities. The largest tornado outbreak in the province occurred on August 20, 2009, when 19 tornadoes developed over southern Ontario.
- There is not a strong correlation between the physical size of tornado and its maximum wind speed. All tornadoes regardless of appearance are potentially lethal threats.
- A tornado usually moves along a narrow path from the southwest, west or northwest but may suddenly change direction. Groundspeed can vary from nearly stationary to 90 km/h, the path can be more than 20 km long and 400 m wide, and its duration can be up to one hour. In very rare events, tornadoes can be 1 to 2 km wide and travel more than 100 km.
- If you see a tornado, and it does not appear to be moving, it is likely either moving straight away from you or straight towards you!
- The roaring or freight train sound often attributed to tornadoes is not strictly a tornadic effect. It is caused by strong winds moving around and past obstacles such as trees and buildings. In open country, tornadoes may only emit a whine or whistle-like noise.

Hail – Don't let it put a dent in your plans!

Hail is formed when updrafts in thunderclouds carry raindrops upward into extremely cold areas of the atmosphere, where they freeze and merge into lumps of ice. When the lumps become too heavy to be supported by the updraft, they fall to the ground at speeds of up to 100 km/h or more.

Hailstones as large as grapefruit have been reported in Canada, but even smaller hail can be dangerous and can cause extensive damage in a matter of minutes.

The Prairies are especially vulnerable to hail, receiving more severe hail events and more damage to crops and personal property than from all other summer severe weather events combined including tornadoes, severe thunderstorm winds and heavy rains. Ontario is the other hail-prone area of Canada with over one quarter of the summer severe weather events due to hail.



© Environment Canada, 2013 Photo: Bill McMurtry

Partially melted hail stones. July 12, 2010 record Calgary hailstorm.



© Environment Canada, 2013 Photo: Tim Osborne

What a hailstone can do! August 3, 2009 Sundre, AB.

Hail Safety:

- Routinely monitor the Environment Canada weather forecasts, watches and warnings for thunderstorms (which may include hail).
- When hail or thunderstorms threaten, seek shelter in a solid building and stay away from windows, glass doors or skylights.
- If you are in a vehicle, find a place to safely pull off roadways and protect yourself from possible shattered glass.
- If caught outdoors and there is no available shelter, crouch down, face away from the wind and protect your head and neck with your hands.
- Look out for flooded areas. Excessive hail (when combined with heavy rain) can plug storm drains and suddenly create local flooding.
- Remember the danger of lightning. When outside stay away from tall objects such as large trees, towers, metal fences or poles

Did You Know...

- Severe Thunderstorm Warnings are issued for anticipated severe hail events.
- Severe Thunderstorm Warning criteria for hail is:
 - Hail 20 mm in diameter or greater (nickel-sized or larger)
- Canada's "Hail Alley" resides in Alberta and is an area from just south of Calgary to just north of Red Deer and west of Highway #2 into the foothills.
- On average, the Prairies receive approximately 130 severe hail events per year. Ontario receives between 25-30 severe hail events.
- Two-thirds of Canada's major documented hail storms have occurred in Alberta*. Eight of Canada's 18 largest hail insurance claims have involved the City of Calgary*. (*data courtesy of Public Safety Canada Disaster Database)
- On average, July is the most active month of the year for hail. However, one of the costliest hailstorms in Canadian history occurred in Alberta in the month of September.
- Record-sized hailstones are named after the individual who finds and preserves them.
- The largest hailstone recorded in Canada was the *Gawel* stone (290 g) near *Cedoux, SK August 1973* (*Charlton 1997, 1987 Edmonton Tornado Atlas, University of Alberta*).
- A thunderstorm on July 2, 2012 in northwestern Ontario produced extremely large hail in the Sioux Lookout area. One hailstone was measured with a diameter of about 9 cm – some of the largest hail the province has seen in years.

Heat and Humidity

Humidity is the amount of water vapour in the air. In forecasting, [relative humidity](#) describes the percentage of moisture in the air in comparison to how much there is when the air is saturated. The higher the reading, the greater the likelihood of precipitation, dew and fog. Relative humidity is normally highest at dawn, when the temperature is at its lowest point of the day.

High humidity makes people feel hotter than they would on a drier day. That's because the perspiration that occurs to cool us down cannot evaporate as readily in moist, saturated air. To better describe how hot it feels in such circumstances, Canadian meteorologists developed the [humidex](#), a parameter that combines temperature and humidity in order to reflect the perceived temperature.

Heat and Humidity Safety

It is important to stay safe during such extreme temperatures. Avoid working or exercising intensely if it is very hot or humid outside, and head for cooler conditions if your body becomes overheated. If working outdoors is an absolute necessity, drink plenty of liquids and take frequent rest breaks. Be sure to maintain salt levels in your body and avoid high-protein foods. Also ensure that pets are protected from the heat and have plenty of water to drink. Watch for signs of serious medical conditions, such as heat exhaustion and [heat stroke](#).

Relative humidity

Relative humidity is the amount of moisture that the air contains compared to how much it could hold at a given temperature. A figure of 100 per cent relative humidity would mean that the air has become saturated. At this point mist, fog, dew and precipitation are likely.

Relative humidity is normally at its maximum when the temperature is at its lowest point of the day, usually at dawn. Even though the absolute humidity may remain the same throughout the day, the changing temperature causes the ratio to fluctuate.

Humidex

The humidex is a Canadian innovation, that was first used in 1965. It describes how hot, humid weather feels to the average person. The humidex combines the temperature and humidity into one number to reflect the perceived temperature. Because it takes into account the two most important factors that affect summer comfort, it can be a better measure of how stifling the air feels than either temperature or humidity alone.

The humidex is widely used in Canada. However, extremely high readings are rare except in the southern regions of Ontario, Manitoba and Quebec. Generally, the humidex decreases as latitude increases. Of all Canadian cities, Windsor, Ontario has had the highest recorded humidex measurement: 52.1 on June 20, 1953. The hot, humid air masses which cause such uncomfortable weather usually originate in the Gulf of Mexico or the Caribbean.

Guide to summer comfort

Range of humidex: Degree of comfort

- Less than 29: No discomfort
- 30 to 39: Some discomfort
- 40 to 45: Great discomfort; avoid exertion
- Above 45: Dangerous; Heat stroke possible

An extremely high humidex reading can be defined as one that is over 40. In such conditions, all unnecessary activity should be curtailed. If the reading is in the mid to high 30s, then certain types of outdoor exercise should be toned down or modified, depending on the age and health of the individual, physical shape, the type of clothes worn and other weather conditions.

If working outdoors is an absolute necessity, drink plenty of liquids and take frequent rest breaks. In hot, humid conditions, there is a considerable risk of heat stroke and sun stroke.

During the dog days of summer, remember that animals also feels the heat. When the humidex is high, take special care to ensure that your pet is well-protected from the heat and has plenty of water to drink. Also remember to never leave pets in hot vehicles, even with the window down. On extremely hot days, the inside temperature of a car can be several degrees warmer than the air outside and it is therefore never safe to leave pets or children – even for a few minutes.

Humidex table

Reference Legend

Humidex and Degree of Comfort - Legend

Humidex	Degree of Comfort
20 - 29	No discomfort
30 - 39	Some discomfort
40 - 45	Great discomfort; avoid exertion
46 and over	Dangerous; possible heat stroke

Humidex Temperature and Relative Humidity

Humidex for Relative Humidity from 100% to 65%.

Refer to legend above.

Relative Humidity (%) Temperature (°C)	100%	95%	90%	85%	80%	75%	70%	65%
21 °C	29	29	28	27	27	26	26	24
22 °C	31	29	29	28	28	27	26	26
23 °C	33	32	32	31	30	29	28	27
24 °C	35	34	33	33	32	31	30	29
25 °C	37	36	35	34	33	33	32	31
26 °C	39	38	37	36	35	34	33	32
27 °C	41	40	39	38	37	36	35	34
28 °C	43	42	41	41	39	38	37	36
29 °C	46	45	44	43	42	41	39	38
30 °C	48	47	46	44	43	42	41	40
31 °C	50	49	48	46	45	44	43	41
32 °C	52	51	50	49	47	46	45	43
33 °C	55	54	52	51	50	48	47	46
34 °C	58	57	55	53	52	51	49	48
35 °C		58	57	56	54	52	51	49
36 °C			58	57	56	54	53	51
37 °C				58	57	55	53	
38 °C						57	56	

Humidex for Relative Humidity from 60% to 20%

Humidex for Relative Humidity from 60% to 20%.

Refer to legend above

Relative Humidity (%) Temperature (°C)	60%	55%	50%	45%	40%	35%	30%	25%	20%
21 °C	24	23	23	22					
22 °C	24	24	23	23					
23 °C	27	26	25	24	23				
24 °C	28	28	27	26	26	25			
25 °C	30	29	28	27	27	26			
26 °C	31	31	29	28	28	27			
27 °C	33	32	31	30	29	28	28		
28 °C	35	34	33	32	31	29	28		
29 °C	37	36	34	33	32	31	30		
30 °C	38	37	36	35	34	33	31	31	
31 °C	40	39	38	36	35	34	33	31	
32 °C	42	41	39	38	37	36	34	33	
33 °C	44	43	42	40	38	37	36	34	
34 °C	47	45	43	42	41	39	37	36	
35 °C	48	47	45	43	42	41	38	37	
36 °C	50	48	47	45	43	42	40	38	
37 °C	51	50	49	47	45	43	42	40	
38 °C	54	52	51	49	47	46	43	42	40
39 °C	56	54	53	51	49	47	45	43	41
40 °C		57	54	52	51	49	47	44	43
41 °C			56	54	52	50	48	46	44
42 °C				56	54	52	50	48	46
43 °C					56	54	51	49	47

UV index

Ultraviolet (UV) rays are the sun's rays that can cause sunburn. Long-term exposure to UV rays has been associated with skin aging, eye cataracts, weakening of the immune system, and skin cancer.

The amount of UV that you receive depends on both the strength of the sun's rays (measured by the UV index) and the amount of time you spend in the sun. The higher the UV Index number, (the UV Index is a 0 - 11+ scale) the stronger the sun's rays, and the greater the need to take sun safety precautions.

Sun protection tips:

- Reducing your time in the sun (particularly between 11:00 a.m. and 4:00 p.m., from April to September), and seek shade when outdoors.
- Cover up by wearing a broad-rimmed hat, a shirt with long sleeves, and wrap-around sunglasses.
- Use "broad spectrum" sunscreen (with both UVA and UVB protection) with a sun protection factor (SPF) of 15 or higher.
- Listen for Environment Canada's UV Index which is included in your local weather forecast (when it is forecast to reach 3 or higher (moderate) during the day).
- Learn more about recommended [sun protection actions](#) for different values of the UV Index.

Air Quality Health Index

The Air Quality Health Index measures the air quality in relation to your health on a scale from 1 to 10. The higher the number, the greater the health risk associated with the air quality. When the amount of air pollution is very high, the number will be reported as 10+. It provides a local air quality forecasts for today and tomorrow with associated health advice.

You can refer to the [Air Quality Health Index](#) to check the quality of outdoor air in your community before heading off to work or play. You can also use its forecasts to plan your activities ahead of time.

Seniors, parents of children with asthma, and people suffering from diabetes, heart or lung disease, can use the index to assess the risk air pollution poses to their health and take steps to lessen that risk.

Fog

Fog occurs when tiny water droplets suspended in the air reduce visibility to less than one kilometre. It is different from cloud only because fog touches the earth's surface.

Driving any vehicle in low visibilities due to fog can be hazardous, therefore speeds should be reduced accordingly.

Frost

Frost is atmospheric moisture that crystallizes directly on the ground and on exposed objects, such as rooftops, when temperatures are below freezing. Frost forms under conditions that would normally create dew if the temperature were above freezing at the point of formation. Although it looks very pretty, frost can cause serious harm to flowers and plants if it occurs during the growing season. As such, care should be taken to protect frost-sensitive plants when such conditions are forecast.