

# Hurricanes



*Don't be scared, be prepared.*

Hurricane season officially runs from June through November when the waters in the Atlantic Ocean, Gulf of Mexico, and Caribbean Sea are warm enough to produce tropical cyclone weather systems (a category of weather that includes tropical depressions, tropical storms and hurricanes). Hurricanes typically start to become a concern in Canada later in the season (August – October). In the GTA we typically experience the “remnant activities” of a hurricane, or in other words, we get the wind and rain from the outside edges of the storm. In most cases, hurricanes have been downgraded to a less severe storm type by the time they reach the GTA. Even though we’re not in the eye of the storm, we may still experience significant rainfall which could lead to major flooding. The threat of a hurricane reaching the GTA is real, and it has happened before so we must be prepared for it to happen again.

## Hurricane Facts

- A hurricane is a tropical storm whose winds revolve around a center of low pressure.
- The center of the storm is called the eye. In the eye of a hurricane there is a calm area of blue sky.
- Around the eye there are very strong winds – a minimum speed of 120 kilometres per hour – accompanied by torrential rains.
- Hurricanes that hit eastern North America form in the Atlantic basin (Atlantic Ocean, Gulf of Mexico and Caribbean Sea).



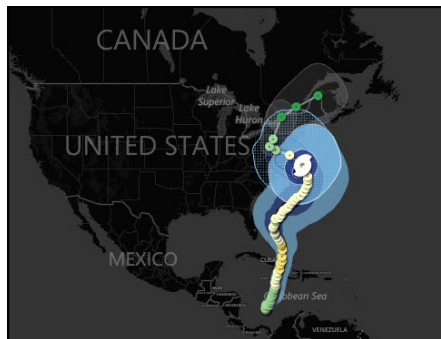
## Latest & Greatest

Super Storm Sandy (2012)

Wind speeds up to 100 km/h and up to 40 mm of rain in Toronto

Hurricane Hazel (1954)

Wind speeds of up to 110 km/h and 285 mm of rain in 48 hours in Toronto



Storm track of Hurricane Sandy 2012 (later downgraded to a super storm)

Wind Speed	Typical Impacts
70-90 km/h	Small branches break, loose objects blown about, possible power outages
90-100 km/h	Some tree limbs break, occasional trees topple, some poorly constructed signage damaged, power outages
100-120 km/h	Prevalent tree branch break, some trees topple, some shingles and siding damage to homes, power outages
120-140 km/h	Many trees toppled/uprooted, many signs damaged/destroyed, glass in high-rise buildings can break, widespread power outages possible
140 km/h +	Widespread forest blow-downs, prevalent cladding and roofing damage, some roofs blown off/heavily damaged, widespread power outages possible

## Be Prepared

- In Canada alone, tropical cyclone weather systems have claimed more than 600 lives since 1900.
- Hurricanes are tracked by the Canadian Hurricane Centre and messages are issued by Environment Canada.
- Preparation is the best protection against the dangers of a hurricane.
- Stock up on supplies before the storm strikes!

## Tornadoes

- In addition to thunderstorms hurricanes can also create tornadoes. Hurricanes cause wind shear that can create swirling air or rolls. These vortices may then be flipped vertically by thunderstorm updrafts causing tornadoes.
- See our factsheet on summer storms for more information.

# Warnings, Watches, Statements?

## Environment Canada Weather Messages

**Special Weather Statements** are the least urgent type of alert and are issued to let people know that conditions are unusual and could cause concern.

**Watches** alert you about weather conditions that are favourable for a storm or severe weather, which could cause safety concerns.

As certainty increases about the path and strength of a storm system, a watch may be upgraded to a **Warning**, which is an urgent message that severe weather is either occurring or will occur.



Sign up for EC Alert Me to receive Environment Canada alerts straight to your email or mobile phone.

[ecalertme.weather.gc.ca](http://ecalertme.weather.gc.ca)

## TRCA Flood Messages

**Watershed Conditions Statements** are the least urgent type of alert. They consist of **Water Safety Statements** which are issued to let people know that high flows, unsafe banks, melting ice, or other factors could be dangerous for recreational users, and **Flood Outlook Statements** which provide early notice of the potential for flooding based on weather forecasts calling for heavy rain, snow melt, high wind, or other conditions that could lead to high runoff.

**Flood Watches** alert you that flooding is possible in specific watercourses and municipalities, those in flood prone areas should prepare.

As certainty increases about the path and strength of a storm system, a watch may be upgraded to a **Flood Warning**, which is an urgent message that flooding is either occurring or will occur. Some severe weather can occur rapidly, with less than a half hour's notice.

Normal

Flood  
Watch



Watershed  
Conditions  
Statement

Flood  
Warning



## IS YOUR FAMILY PREPARED?

In the event of a disaster, you need to be able to provide for your family for **72 hours** (3 days). Emergency responders will be helping the most needy (those trapped by fallen buildings, in burning homes, crushed cars, etc.) first. In order to meet that goal they need to be able to count on all those who are not in imminent danger to fend for themselves. Your well-prepared family could help save the lives of others, not just yourselves. For more information on how to create your emergency plan and stock your emergency kit, visit [www.getprepared.gc.ca](http://www.getprepared.gc.ca)



Know the risks



Make a plan



Get a kit



## Driving in Flood Waters

- DON'T DRIVE THROUGH FLOOD WATER. Find another route.
- When approaching a flooded area, you can't be sure of the depth of the water or the condition of the road beneath it, which may be broken up or washed away. There may be no road left under the water.
- 15 cm (6 inches) of standing water – sometimes less – can be enough to cause engine stalling.
- In 30 cm (1 foot) of water, a typical car can begin to float and, as traction is lost, so is steering control. If the water is moving, your vehicle could literally float away.
- At 60 cm (two feet) of water, larger vehicles such as pickup trucks and SUVs are in danger of floating away.
- NEVER try driving through fast-moving water, such as an overflowing river—your vehicle could be swept away!