

Protecting your Home Against Severe Winds



Severe winds challenge Canadian homes throughout the year. Whether it's straight-line winds or tornadoes, these powerful weather events can cause a trail of damage and chaos.

With the right preparations, proactive homeowners can fortify their homes and minimize potential damage and disruption, regardless of the forecast.

Straight-line Winds vs. Tornadoes

Severe straight-line winds develop from intense weather systems such as thunderstorms, hurricanes, or pressure gradients.

Environment and Climate Change Canada (ECCC) defines “severe wind” based on regional criteria, but generally, a wind warning is issued when sustained winds reach 70 km/h or higher or when wind gusts exceed 90 km/h.

While straight-line winds push outward from a storm, tornadoes create rotating columns of air that pull inwards, leading to more concentrated and intense damage. Some tornadoes carve a direct path, while others touch down sporadically, creating scattered impacts.

How common are tornadoes in Canada?

Canada ranks second only to the United States in the number of tornadoes it experiences. Southwestern Ontario and parts of the southern Prairies are particularly prone to tornado activity due to their unique combination of warm, moist air, wind patterns, frequent thunderstorms, and open landscapes.

Tornado season typically runs from April to September, peaking in June and July, though tornadoes can occur year-round. In 2024, Canada recorded its longest tornado season on record, with 129 confirmed tornadoes over 240 days.

Most tornadoes in Canada have wind speeds below 170 km/h, classifying them as F-0 or F-1 on the Fujita scale, which measures tornado intensity. Here’s a breakdown of tornado occurrences in Canada based on historical data¹:

- **45% are F-0** (64–116 km/h)—Light damage
- **29% are F-1** (117–180 km/h)—Moderate damage
- **21% are F-2** (181–253 km/h)—Considerable damage
- **4% are F-3** (254–331 km/h)—Severe damage
- **1% are F-4** (332–418 km/h)—Devastating damage
- **F-5** (419–512 km/h)—Massive devastation—only one recorded in Canada in [Elie, MB \(2007\)](#)

With population growth and development increasing in at-risk areas across the country, it is more important than ever for homeowners to be prepared for severe winds.

Proactive Protection Against Wind Damage

Understanding a home’s vulnerabilities is the first step toward making it more resilient. Many resources, including advisories from the Government of Canada, local municipalities, building inspectors, and insurance providers offer guidance on home protection. Here are some key steps outlined by the **Institute for Catastrophic Loss Reduction (ICLR)** to reinforce homes against severe winds:

¹Public Safety Canada: <https://www.publicsafety.gc.ca/cnt/mrgnc-mngmnt/ntrl-hzrds/trnd-en.aspx>





Strengthen the roof

The roof is one of the most exposed parts of a home during a windstorm. Ensure the shingles and roofing materials are rated for high winds, and that proper bracing supports the roof's structural integrity, preventing uplift during strong winds. Learn more about protecting your roof [here](#).

Secure doors and windows

Entry doors should be impact-resistant and pressure-rated, with strong hinges and deadbolts. Double doors benefit from heavy-duty bolts or slide locks. Windows and sliding glass doors are best protected with storm shutters or impact-resistant glass, reducing the risk of breakage from flying debris. Learn about how to reinforce doors and windows [here](#).

Reinforce porches and overhangs

Porches, overhangs, and similar structures should be securely fastened to the main structure of the house. Reinforcing these elements prevents them from detaching and becoming dangerous airborne debris in high winds.

Anchor outdoor structures and accessories

Outdoor items such as HVAC condenser fans, utility sheds, and patio furniture should be properly anchored to prevent them from becoming airborne. Garage doors should also be pressure-rated and reinforced to ensure they do not buckle or detach in high winds and allow wind, water, and debris into the home.

By taking these proactive steps, homeowners can significantly reduce the risk of wind-related damage and disruption. While we can't control the weather, we can prepare for it. A little preparation today can help keep homes secure and families safe, ensuring calm prevails after the storm

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