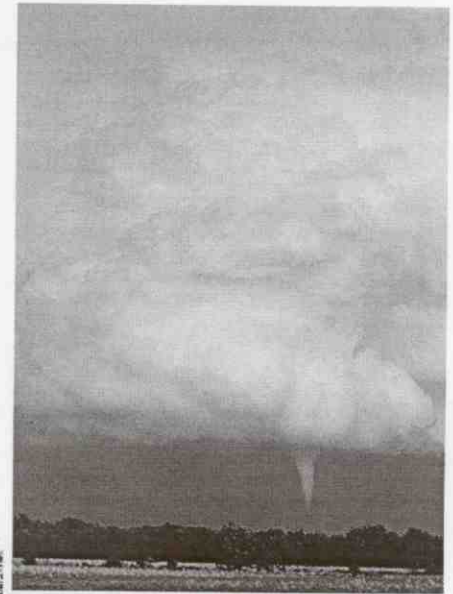


Tornado Basics

A Tornado is a violently rotating column of air that touches the ground.



Tornadoes form in thunderstorms, but only a very small portion of the most violent thunderstorms have tornadoes.

Rotation speeds are very fast, and cause destruction where the tornado touches the ground. The safest places to be are in a basement, or in a ditch.



Tornado strength is given by the Fujita scale.

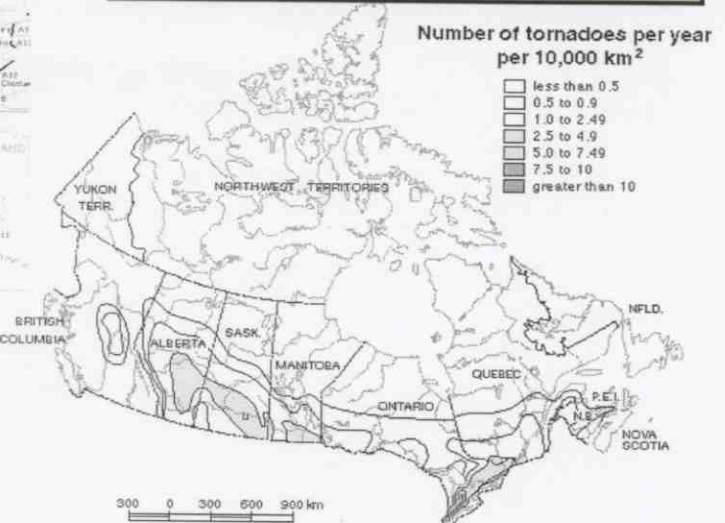
Fujita tornado damage scale.

Scale	Rotation (km/hr)	Damage	% of tornadoes in Canada
F0	65-115	Light or Gale	45%
F1	116-180	Moderate	29%
F2	181-250	Significant	21%
F3	251-330	Severe	4%
F4	331-415	Devastating	1%
F5	416-510	Incredible	almost 0

Tornadoes often move toward the northeast at speeds of about 50 km/hr, leaving damage paths many km long, but often only 100 m or less wide.



In Canada, tornadoes are most frequent in Ontario, and in the southern Prairies, although some are observed in central BC, and few near Vancouver & Victoria.



Tornado Types

The most violent thunderstorms are called supercell storms, where the whole thunderstorm rotates slowly.



From supercell storms come the most violent tornadoes.



The tornado funnel cloud (the cone extending from the base of the thunderstorm) is made of tiny water droplets. A debris cloud of dirt, trees, and cows helps make the bottom of the tornado visible.



Weaker tornadoes over water are called waterspouts.



Similar weak tornadoes over land are called landspouts. Both land- and waterspouts look like hollow cylinders (soda straws), and are simulated with this tornado machine.



Dustdevils and gustnadoes are miniature whirlwinds that often last only a few minutes.



Interested in learning more? Consider courses:

- EOSC 114 Natural Disasters
- ATSC 201 Meteorology of Storms