

# THE WINDS OF MINNESOTA

Bruce F. Watson

Winds have names in various parts of the world. Many are familiar with the Chinook, which is a warm, dry west wind blowing on the lee side of the Black Hills and the Rockies, and the Santa Ana, a hot, dry wind blowing down the Santa Ana Valley of California. France has wind names numbering in the dozens; Italy and the five German nations have almost as many. Winds usually derive their names from whence they come, such as the Santa Ana, or from some other special feature. In keeping with such tradition, the names of winds affecting Minnesota are identified here.

Bear in mind that most winds are air spiraling into a place of less air, called a low pressure center. Surface winds are usually part of a whirlpool that is moving eastward at speeds of usually 10 to 40 miles per hour. A slow moving whirlpool is able to bring air to Minnesota from as far south as the Gulf of Mexico, while a fast moving whirlpool can bring air into Minnesota from only as far as Iowa. Since these whirlpools always spin counter-clockwise, air from the south preceeds the passing of the center over Minnesota or at our longitude. On the backside of the whirlpool, cold, dense air is pulled from as far away as Siberia, although most of the time air flows in from various parts of Canada.

Some winds are the result of cold, dense air flowing down slopes. These are night winds, and occur when there is not much change in air pressure across Minnesota. They are strongest when we are between whirlpools of air, i. e., under a ridge of high pressure.

A northerly wind is a wind from between north and east that has a component from the north, an easterly wind is a wind from between north and south that has a component from the east. Similar logic is used to define a southerly wind and a westerly wind. Northeasterly wind blows from between north and east, a southeasterly from between east and south, a southwesterly from between south and west, and a northwesterly from between west and north.

**LARGE SCALE WINDS** -- These are associated with the whirlpools migrating from west to east:

**THE CANADIAN MOUNTIE** - A cold northwesterly wind bringing in air from the Yukon. It usually blows from early September to late May. Reduces crime.

**THE DAKOTA DOCTOR** - A westerly wind bringing relief in the form of mild, dry air from the Pacific Ocean. In winter it brings a thaw, in summer relief from hot, humid, tropical air.

**THE BUFFALO** - A dry southwesterly from the central high plains that is further warmed by descent down Buffalo Ridge of southwest Minnesota. In summer, it can bring temperatures in the 100's to the upper Minnesota River Valley.

**THE CORNHUSKER** - A southwesterly bringing air that originated in Canada. The air it brings moves across the high plains, but then recurves across Nebraska and thence moves into Minnesota. Occurs behind intense lows from September to June. It brings in cool air, but not really cold air.

**THE SIROCCO** - A hot, humid southerly wind with air from the Gulf of Mexico. Occurs ahead of slowly moving low pressure centers. Marked by heavy haze. Severe weather usually follows. Term borrowed from Italy, where air comes off Mediterranean Sea after leaving Africa. Blows only May to September.

**THE JAYHAWKER** - A south to southwest wind that brings warm and somewhat moist air from Kansas and or the states bordering it. Occurs year-round.

**THE THREE EYER** - A southeasterly wind that brings air from Iowa, Illinois, or Indiana. Brings only a small warmup. Occurs year-round; common.

**THE WOLVERINE** - An east to northeast wind bringing air from Michigan. Temperate with cloudy skies.

**THE BADGER** - A northeast wind bringing cold air from northeast Wisconsin. Brings a surprise snow instead of rain often. Occurs October to May.

**THE ATLANTICER** - A northeasterly bringing warm air from the Atlantic Ocean. Rare, November to April.

**THE ONTARIO** - A north to northeast wind bringing low clouds, cold, sometimes showers. Year round.

**THE SIBERIAN** - A northerly bringing air from Siberia. Bitter cold. Occurs November to March; rare.

**LOCAL WINDS** -- Topography and air density play parts in these winds:

**THE EMBARRASER** - A gentle flow of air down the slopes surrounding the Embarrass Valley in St. Louis County. Brings frost in July and sometimes -50F or colder in winter.

**THE CARLTON CLIPPER** - A northeast gale blowing up the lower St. Louis River Valley with a low pressure center to the southwest. The wind is enhanced by temperature contrasts between Lake Superior and land air, and by the orientation of the valley. Occurs mainly March-April and October-November.

**THE NORTH SHORE BORA** - A northwesterly along the North Shore in the cold season enhanced by the contrast between cold land and warm water of Lake Superior. Occurs October through March.

**THE SAVAGE** - A light southwesterly at Fort Snelling from air flowing down the lower Minnesota River Valley. With high barometer, occurs year round.

**THE RED COOLER** - A violent north wind blowing up the Red River Valley. Topographic and year round.

**THE RED WARMER** - A violent south wind blowing down the Red River Valley. Topographic and year round.

**RECURRENT WINDS** -- Watch for every year:

**SUMMER SPOILER** - First northerly in late summer that unleashes the first buildup of cold air from the Canadian north. Occurs late August to early Sept.

**FIRST FROSTER** - First northerly that brings frost to the area. Occurs late August to early November.

**FIRST FLAKER** - First northerly to bring snow. Occurs mid-September to sometime in November.

**FIRST FOULER** - First northerly to pile up snow, fouling traffic. Late September to December.

**FAIRYWIND** - Southerly wind in odd season coating landscape with rime. Occurs Christmas to Easter.

**BASKETBALL TOURNAMENT EASTERLY** - The east wind that usually brings snow to the tournament.

**JOSEPH'S TREAT** - The southerly wind bringing a rapid melt of snow around St. Joseph's Day, March 19.

**THE MAYWIND** - The fair weather northeasterly bringing air from Hudson Bay in May -- salubrious.