

2001 WIND CHILL CHART

(Values at Face Level [5 ft] Based on the 10 Meter Wind)

		Temperature (°F)																	
		Calm	40	35	30	25	20	15	10	5	0	-5	-10	-15	-20	-25	-30	-35	-40
10 meter Wind Speed (in mph)	5	36	31	25	19	13	7	1	-5	-11	-16	-22	-28	-34	-40	-46	-52	-57	-63
	10	34	27	21	15	9	3	-4	-10	-16	-22	-28	-35	-41	-47	-53	-59	-66	-72
	15	32	25	19	13	6	0	-7	-13	-19	-26	-32	-39	-45	-51	-58	-64	-71	-77
	20	30	24	17	11	4	-2	-9	-15	-22	-29	-35	-42	-48	-55	-61	-68	-74	-81
	25	29	23	16	9	3	-4	-11	-17	-24	-31	-37	-44	-51	-58	-64	-71	-78	-84
	30	28	22	15	8	1	-5	-12	-19	-26	-33	-39	-46	-53	-60	-67	-73	-80	-87
	35	28	21	14	7	0	-7	-14	-21	-27	-34	-41	-48	-55	-62	-69	-76	-82	-89
	40	27	20	13	6	-1	-8	-15	-22	-29	-36	-43	-50	-57	-64	-71	-78	-84	-91
	45	26	19	12	5	-2	-9	-16	-23	-30	-37	-44	-51	-58	-65	-72	-79	-86	-93
	50	26	19	12	4	-3	-10	-17	-24	-31	-38	-45	-52	-60	-67	-74	-81	-88	-95
	55	25	18	11	4	-3	-11	-18	-25	-32	-39	-46	-54	-61	-68	-75	-82	-89	-97
	60	25	17	10	3	-4	-11	-19	-26	-33	-40	-48	-55	-62	-69	-76	-84	-91	-98
	Times to Frostbite		One Hour or More					10 to 30 Minutes			5 to 10 Minutes		5 Minutes or Less						

$$\text{Wind Chill (°F)} = 35.74 + 0.6215T - 35.75(V^{0.16}) + 0.4275T(V^{0.16})$$

T = Air Temperature (°F) V = 10 meter Wind Speed (mph)

This winter, the National Weather Service and Meteorological Services of Canada will use a new Wind Chill Temperature Index, designed to provide a more accurate reading of how the cold air feels on the human skin.

The wind chill index used in the United States and Canada since 1945 relied on observed winds 33 feet above the ground, and focused on how fast the cold temperatures—combined with winds—made water freeze. The new index accounts for wind effects at face level, and a better calculation of body heat loss. For example, under the old index system, a temperature of 20 degrees, with a 15 mph wind, translated into a reading of five degrees below zero. The new wind chill index under the same conditions is six degrees above zero.

The new index is based on:

- Wind speed at the average height of the human face, about five feet (the human face is most often exposed to the cold).
- Updated heat transfer theory, which factors heat loss from the body to its surroundings during cold, windy days.
- A consistent standard for skin tissue resistance.
- Clear night sky conditions.
- A lowered calm wind threshold from four miles to three miles.



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