Extreme Cold Safety Tips

How should I dress?

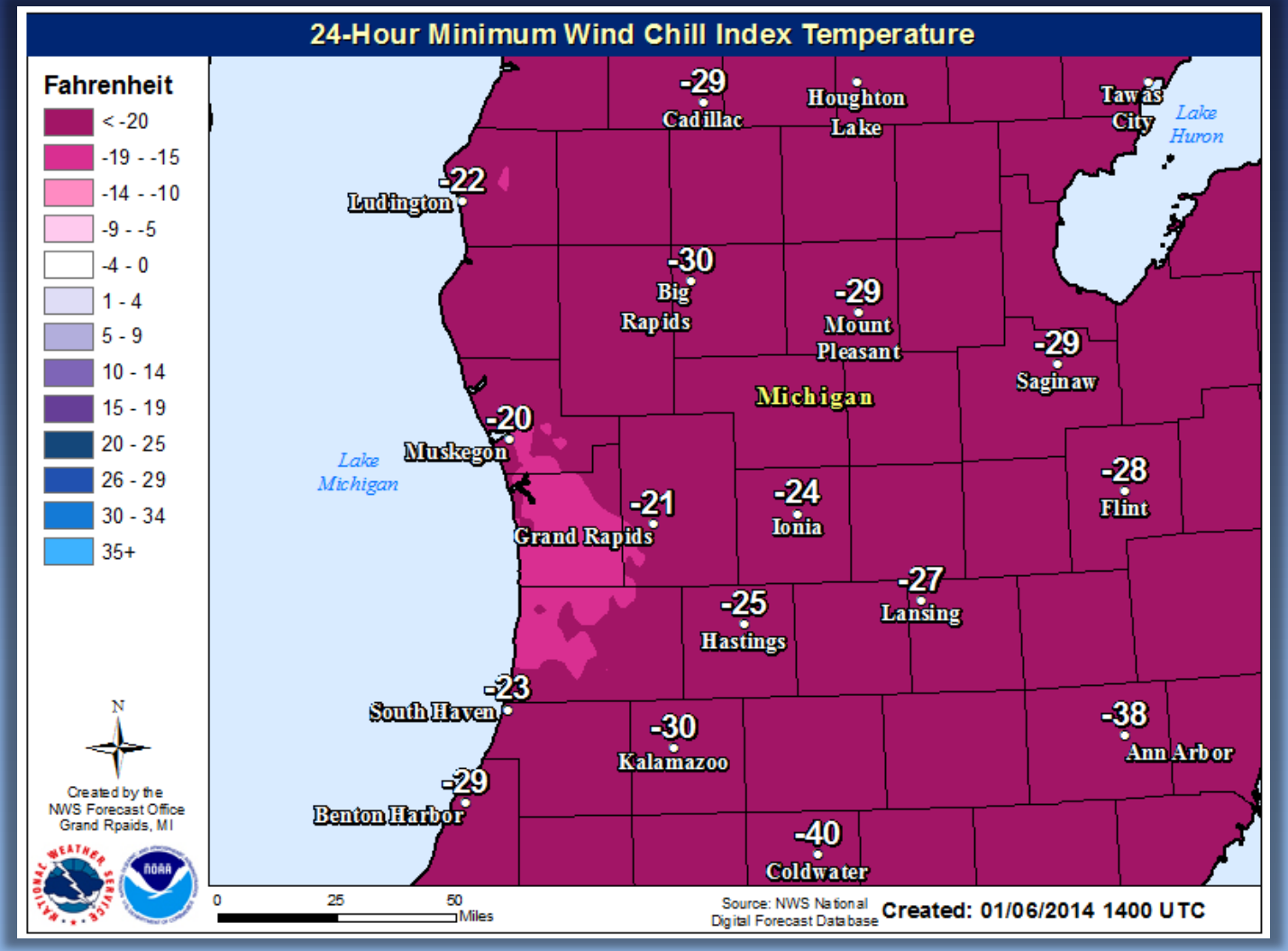
- Wear layers of loose-fitting, lightweight, warm clothing. Trapped air between the layers will insulate you. Outer garments should be tightly woven, water repellent, and hooded.
- Wear a hat, because 40% of your body heat can be lost from your head.
- Cover your mouth to protect your lungs from extreme cold.
- Mittens, snug at the wrist, are better than gloves.
- Try to stay dry and out of the wind.

General Info

- Minimize travel
- Stay indoors during the worst part of the storm/extreme cold
- Keep a winter survival kit in your vehicle if you must travel
- Check tire pressure, antifreeze levels, heater/defroster, etc.
- Drive and walk slowly and carefully on snow and ice
- Keep adequate clothing and blankets on hand to stay warm
- Sufficient heating fuel should regular fuel sources be cut off
- Avoid overexertion when shoveling snow

For more detailed information on what to do before, during, and after winter storms and extreme cold, click the following link: http://www.ready.gov/winter-weather

Dangerously Cold Wind Chills



NWS Grand Rapids
www.weather.gov/grr

National Weather Service
Grand Rapids

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What is wind chill?

NWS Windchill Chart

Wind (mph)	Temperature (°F)																	
Calm	40	35	30	25	20	15	10	5	0	-5	-10	-15	-20	-25	-30	-35	-40	-45
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

Frostbite Times: 30 minutes, 10 minutes, 5 minutes

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

Where, T= Air Temperature (°F) V= Wind Speed (mph)

Effective 11/01/01

- The temperature it "feels like" outside
- Based on a human face model
- Incorporates the rate of heat loss from exposed skin caused by wind and cold
- As wind increases, the body is cooled at a faster rate causing the skin temperature to drop
- Does not affect inanimate objects like cars or exposed water pipes