



National Weather Service

Missoula Montana

Spotter Network Reporting Procedures



When you observe or hear of weather conditions that meet or exceed the criteria listed below, telephone your report immediately to the National Weather Service office in Missoula. Our toll-free number is:

1-800-676-6975*

- **High Wind:** 40 mph or more sustained or gusts. (Please use table below to estimate wind speeds.)
- **Heavy Snow:** Snowfall rates of one inch or more per hour. 6 inches in 12 hours or 8 inches in 24 hours.
- **Dangerous Wind Chills:** Minus 10 degrees or colder (Please use table below to estimate wind chills)
- **Freezing Rain:** Falls as rain, freezes on contact
- **Visibility:** less than ¼ mile for any reason (e.g. dense fog, smoke)
- **Heavy Rain:** ½ of an inch or more per hour
- **Flooding:** any kind (e.g. rivers/streams abnormally high, water over roads, debris flows, ice jams)
- **Damage, Injuries and/or Death** that were weather related
- **Hail:** Any size (Please use table below to estimate hail size)
- **Tornado** (cloud to ground), **Funnel Cloud** (not touching the ground) or **Waterspout** (over water)
- **Unforecasted Weather**

When calling in your report, please tell us briefly:

- **Who you are and where you are calling from**
- **What you have seen** (hail, high winds, heavy snow, etc.)
- **Where you saw it** (i.e. 4 miles West of Missoula)
- **When you saw it** (the time of your observation)
- **What it was doing** (movement, damage observed, trend – i.e. snowfall is becoming heavier, etc.)

* Unlisted number, **ONLY** for weather reporting

Wind Speed Estimates

(MPH)

- 25-31** Large branches in motion
- 32-38** Whole trees in motion
- 39-46** Twigs break off tree; wind impedes walking
- 47-54** Slight structural damage; branches break
- 55-63** Trees uprooted; severe structural damage
- 64-74** Widespread damage
- 75+** Devastation



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
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

Hail Size Estimates

(Inches)

- Pea.....1/4
- Penny.....3/4
- Nickel.....7/8
- Quarter.....1
- Half Dollar.....1 ¼
- Ping Pong.....1 ½
- Golf Ball.....1 ¾
- Egg.....2
- Tennis Ball.....2 ½
- Baseball.....2 ¾
- Tea Cup.....3
- Softball.....4 ½