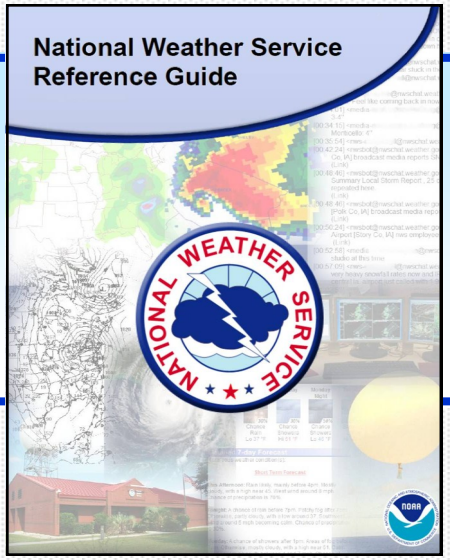

9. Tables and Abbreviations

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9. Tables and Abbreviations

Sky Condition

The "sky condition" describes the average percentage of the sky that is covered by opaque clouds (not transparent to light) at a given time.

Sky Condition (Day)	Sky Condition (Night)	Opaque Cloud Cover
Sunny	Clear	1/8 or less; (0 to 12.5%)
Mostly Sunny	Mostly Clear	1/8 to 3/8; (12.5 to 37.5%)
Partly Sunny	Partly Cloudy	3/8 to 5/8; (37.5 to 62.5%)
Mostly Cloudy	Mostly Cloudy	5/8 to 7/8; (62.5 to 87.5%)
Cloudy	Cloudy	7/8 or more; (87.5 to 100%)

Time Periods

The terms listed below are used in National Weather Service forecasts to delineate time periods.

Time Period	Description (local time)
Today	6:00 a.m. to 6:00 p.m.
Tonight	6:00 p.m. to 6:00 a.m.
This Morning	6:00 a.m. to noon
This Afternoon	Noon to 6:00 p.m.
This Evening	6:00 p.m. to midnight

UTC to Local Time Conversion Table

UTC is Coordinated Universal Time. By international agreement, the local time at the prime meridian, which passes through Greenwich, England. It is also known as "Z time" or "Zulu Time."

Example: To convert 12 UTC to Mountain Standard time, in the table below, the conversion factor is –7.
So: 12-7 = 5. 12 UTC is the same as 5am MST.

Time Zone	Standard Time	Daylight Time
Eastern	-5	-4
Central	-6	-5
Mountain	-7	-6
Pacific	-8	-7
Alaska	-9	-8
Hawaii	-10	-9

Probability of Precipitation

The Probability of Precipitation describes the chance that measurable precipitation (0.01 inch) will occur during a specific period at any given point in a forecasted area.

Probability	Expression of Uncertainty	Areal Coverage
0%	None used	None used
10%	None used	Isolated or Few
20%	Slight chance	Isolated
30%	Chance	Scattered
40%	Chance	Scattered
50%	Chance	Scattered
60%	Likely	Numerous
70%	Likely	Numerous
80%	None used	Occasional/Definite/ “Periods of”
90%	None used	Occasional/Definite/ “Periods of”
100%	None used	Occasional/Definite/ “Periods of”

Hail Size

Typically refers to the diameter of the hailstones. Warnings and reports may report hail size through comparisons with real-world objects that correspond to certain diameters:

Description Diameter (inches)			
Pea	0.25-0.375	Lime	2.00
Small Marble	0.50	Tennis Ball	2.50
Penny	0.75	Baseball	2.75
Nickel	0.88	Large Apple	3.00
Quarter	1.00	Softball	4.00
Half Dollar	1.25	Grapefruit	4.50
Walnut/Ping Pong Ball	1.50	Computer CD	4.75
Golf Ball	1.75		

Source: http://www.spc.noaa.gov/misc/tables/hailsize.htm

Heat Index

An index that combines air temperature and relative humidity in an attempt to determine the human-perceived equivalent temperature—roughly "how hot it feels."

Using RH

Relative Humidity (%)	Temperature (°F)																	
	80	82	84	86	88	90	92	94	96	98	100	102	104	106	108	110	112	114
40	80	81	83	85	88	91	94	97	101	105	109	114	119	124	130	136	142	148
45	80	82	84	87	89	92	96	100	104	109	114	119	124	130	137	143		
50	81	83	85	88	91	95	99	103	108	113	118	124	131	137				
55	81	84	86	89	93	97	101	106	112	117	124	130	137					
60	82	84	88	91	95	100	105	110	116	123	129							
65	82	85	89	93	98	103	108	114	121	128	136							
70	83	86	90	95	100	106	112	119	126									
75	84	88	92	97	103	109	116	124										
80	84	89	94	100	106	113	121											
85	85	90	96	102	110	117												
90	86	91	98	105	113													
95	86	93	100	108														
100	87	95	103															

Blank = Dewpoint > 85 °F

Heat Disorder Risk:

Caution | Extreme Caution | Danger | Extreme Danger

Using Dewpoint

Dew Point (°F)	Temperature (°F)															
	80	82	84	86	88	90	92	94	96	98	100	102	104	106	108	110
60	81	82	84	86	88	90	92	94	96	98	101	103	105	107	110	112
62	81	83	85	87	88	90	93	95	97	99	102	104	106	109	110	114
64	82	84	85	87	89	91	94	96	98	101	103	105	107	110	112	115
66	82	84	86	88	90	92	95	97	99	102	104	107	109	111	114	117
68	83	85	87	89	92	94	96	99	101	104	106	108	110	113	116	118
70	83	86	88	91	93	96	98	100	103	105	108	110	113	116	118	120
72	84	87	90	91	95	97	100	102	105	107	110	112	115	118	120	122
74	85	88	91	94	97	99	102	104	107	109	112	115	117	119	122	125
76	85	89	93	96	99	101	105	107	110	112	114	118	120	123	125	127
78	86	91	94	98	101	105	108	110	113	116	118	121	123	125	128	131
80	87	93	97	101	104	107	111	114	116	118	121	124	127	129	132	134
82		95	100	104	108	111	115	119	120	123	126	128	131	133	135	139

Heat Disorder Risk:

Caution | Extreme Caution | Danger | Extreme Danger

Wind Chill

Increased wind speeds accelerate heat loss from exposed skin, and the wind chill is a measure of this effect. No specific rules exist for determining when wind chill becomes dangerous. As a general rule, the threshold for potentially dangerous wind chill conditions is about -20°F. Wind chill is calculated by wind speed at an average height of five feet, the typical height of an adult human face, based on readings from the national standard height of 33 feet, the typical height of an anemometer. Wind chill incorporates heat transfer theory, heat loss from the body to its surroundings, during cold and breezy/windy days. The calculation assumes no impact from the sun as well as lowering the calm wind threshold to 3 mph.

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

Frostbite Times: 30 Minutes | 10 Minutes | 5 Minutes

Wind

Descriptions used to describe sustained wind speeds throughout NWS products.

Wind Speed	Description
0 to 5 mph	Light, Calm
5 to 20 mph	None used
15 to 25 mph	Breezy, Brisk, Blustery
20 to 30 mph	Windy
30 to 40 mph	Very Windy
40 to 73 mph	High, Strong, Damaging
74 mph or Greater	Hurricane Force

Enhanced Fujita (EF) Tornado Scale

A scale of tornado intensity in which wind speeds are inferred from an analysis of wind damage.

Category	Winds
EF 0	65-85 mph
EF 1	86-110 mph
EF 2	111-135 mph
EF 3	135-165 mph
EF 4	166-200 mph
EF 5	> 200 mph

Saffir-Simpson Hurricane Wind Scale

This scale was developed in an effort to provide examples of the type of damage and impacts associated with the winds of the indicated intensity. The scale of numbers is based on the maximum sustained winds associated with the cyclone. As the hurricane intensifies or weakens, the scale number changes accordingly. The following table shows the scale broken down by maximum sustained wind speed. For more information on the scale see: http://www.nhc.noaa.gov/

Category	Winds	Summary
1	74-95 mph	Very dangerous winds will produce some damage
2	96-110 mph	Extremely dangerous winds will cause extensive damage
3	111-129 mph	Devastating damage will occur
4	130-156 mph	Catastrophic damage will occur
5	>=157 mph	Catastrophic damage will occur

Beaufort Wind Scale

A system used to estimate and report wind speeds when no measuring apparatus is available.

Force	Wind (Knots)	Wind (MPH)	WMO Classification	Appearance of Wind Effects	
				On the Water	On Land
0	Less than 1	Less than 1	Calm	Sea surface smooth and mirror-like	Calm, smoke rises vertically
1	1-3	1-4	Light Air	Scaly ripples, no foam crests	Smoke drift indicates wind direction, still wind vanes
2	4-6	4-7	Light Breeze	Small wavelets, crests glassy, no breaking	Wind felt on face, leaves rustle, vanes begin to move
3	7-10	8-12	Gentle Breeze	Large wavelets, crests begin to break, scattered whitecaps	Leaves and small twigs constantly moving, light flags extended
4	11-16	13-18	Moderate Breeze	Small waves 1-4 ft. becoming longer, numerous whitecaps	Dust, leaves, and loose paper lifted, small tree branches move
5	17-21	19-24	Fresh Breeze	Moderate waves 4-8 ft taking longer form, many whitecaps, some spray	Small trees in leaf begin to sway
6	22-27	25-31	Strong Breeze	Larger waves 8-13 ft, whitecaps common, more spray	Larger tree branches moving, whistling in wires
7	28-33	32-38	Near Gale	Sea heaps up, waves 13-20 ft, white foam streaks off breakers	Whole trees moving, resistance felt walking against wind
8	34-40	39-46	Gale	Moderately high (13-20 ft) waves of greater length, edges of crests begin to break into spindrift, foam blown in streaks	Whole trees in motion, resistance felt walking against wind
9	41-47	47-54	Strong Gale	High waves (20 ft), sea begins to roll, dense streaks of foam, spray may reduce visibility	Slight structural damage occurs, slate blows off roofs
10	48-55	55-63	Storm	Very high waves (20-30 ft) with overhanging crests, sea white with densely blown foam, heavy rolling, lowered visibility	Seldom experienced on land, trees broken or uprooted, "considerable structural damage"
11	56-63	64-72	Violent Storm	Exceptionally high (30-45 ft) waves, foam patches cover sea, visibility more reduced	
12	64+	73+	Hurricane	Air filled with foam, waves over 45 ft, sea completely white with driving spray, visibility greatly reduced	

Common Abbreviations in Forecast Discussions and Products

Below is a list of just a few of the common abbreviations used in forecast discussions and other NWS products. A more extensive list, along with a glossary can be found here: http://www.weather.gov/glossary/

ADVCTN— Advection

ADVY - Advisory

AFD – Area Forecast Discussion

AFTN – Afternoon

AGL – Above Ground Level

ASOS – Automated Surface Observing System

AWIPS – Advanced Weather Interactive Processing System

AWOS – Automated Weather Observation System

BKN – Broken

CAA – Cold Air Advection

CAPE - Convective Available Potential Energy

CONT - Continue

CWA – County Warning Area

DGEX - Downscaled GFS with ETA Extension model

ECMWF - European Center for Medium-Range Weather Forecasts

ELY - Easterly

EWD - Eastward

GFS - Global Forecast System

FCST – Forecast

FROPA – Frontal Passage

IFR – Instrument Flight Rules

KTS - Knots

LGT - Light

LIFR – Low Instrument Flight Rules

MAV – Aviation MOS Guidance

MB – Millibar

MSL - [above] Mean Sea Level

MOS - Model Output Statistics

MVFR – Marginal Visual Flight Rules

NAM - North American Mesoscale Model

NLY – Northerly

NELY - Northeasterly

NWD - Northward

NWLY – Northwesterly

OVC - Overcast

PVA - Positive Vorticity Advection

RFC – River Forecast Center

RH – Relative Humidity

RUC - Rapid Update Cycle model

SAT - Satellite

SCT – Scattered

SFC – Surface

SELY – Southeasterly

SLY – Southerly

SPC – Storm Prediction Center

SREF - Short Range Ensemble Forecast model

SRN – Southern

SWLY - Southwesterly

UTC - Universal Time Coordinated. It is also known as "Zulu Time."

VFR – Visual Flight Rules

VSBY – Visibility

WLY – Westerly

WAA — Warm Air Advection

WND – Wind

WRN – Western

WX - Weather