NDFD Element Definitions

APPARENT TEMPERATURE is the perceived temperature in degrees Fahrenheit derived from either a combination of temperature and wind (Wind Chill) or temperature and humidity (Heat Index) for the indicated hour. When the temperature at a particular grid point falls to 50°F or less, wind chill will be used for that point for the Apparent Temperature. When the temperature at a grid point rises above 80°F, the heat index will be used for Apparent Temperature. Between 51 and 80°F, the Apparent Temperature will be the ambient air temperature.

CATEGORICAL CONVECTIVE HAZARD OUTLOOK is a categorical forecast (slight, moderate, or high risk) that specifies the perceived level of threat of thunderstorms, severe thunderstorms, hail, damaging winds, and tornadoes.

DEW POINT is the expected dew point temperature in degrees Fahrenheit for the indicated hour. Dew point temperature is a measure of atmospheric moisture. It is the temperature to which air must be cooled in order to reach saturation (assuming air pressure and moisture content are constant).

HAZARDS are weather or hydrologic hazardous events issued for the protection of life and property and the enhancement of the national economy. For a specific list of hazards available through NDFD, see the Product Description Document entitled "Experimental Hazard Grids in the National Digital Forecast Database", Appendix A.

MAXIMUM/MINIMUM TEMPERATURE is the daytime maximum or the overnight minimum temperature in degrees Fahrenheit.

ONE-MONTH AVERAGE TEMPERATURE ABOVE NORMAL is the probability, expressed as a percent, of above normal (median) categories of one-month mean temperature at a lead-time of ½-month.

ONE-MONTH AVERAGE TEMPERATURE BELOW NORMAL is the probability, expressed as a percent, of below normal (median) categories of one-month mean temperature at a lead-time of ½-month.

ONE-MONTH TOTAL PRECIPITATION ABOVE NORMAL is the probability, expressed as a percent, of above normal (median) categories of one-month total precipitation at a lead-time of ½-month.

ONE-MONTH TOTAL PRECIPITATION BELOW NORMAL is the probability, expressed as a percent, of below normal (median) categories of one-month total precipitation at a lead-time of ½-month.

PROBABILISTIC TROPICAL CYCLONE SURFACE WIND SPEED (CUMULATIVE) is the probability (in percent) of sustained surface wind speed greater than 34-, 50- and 64-knots (3 separate elements) sometime during the specified cumulative forecast period (0 – 6 hours, 0-12, 0-18, etc.) at each specific point. NOTE: This element is provided for coastal and inland points as well as offshore locations (e.g., buoys).

PROBABILISTIC TROPICAL CYCLONE SURFACE WIND SPEED (INCREMENTAL) is the probability (in percent) of sustained surface wind speed greater than 34-, 50-, and 64-knots (3 separate elements) sometime during the specified forecast period (0 - 6 hours, 6 -12, 12 -18, etc.) at each specific point. These values are incremental since they can increase in value by accounting for the possibility the event might start in an earlier period and still be occurring in the specified period. NOTE: This element is provided for coastal and inland points as well as offshore locations (e.g., buoys).

PROBABILITY OF DAMAGING THUNDERSTORM WINDS is the probability (in percent) of winds greater than 58 miles per hour occurring within 25 miles of any point during the outlook period. The higher the probability, the higher the threat of severe thunderstorm winds occurring.

PROBABILITY OF EXTREME HAIL is the probability (in percent) of hail greater than 2 inches in diameter within 25 miles of any point during the outlook period. The higher the probability, the higher the threat of extreme hail occurring.

PROBABILITY OF EXTREME THUNDERSTORM WINDS is the probability (in percent) of winds greater than 75 miles per hour occurring within 25 miles of any point during the outlook period. The higher the probability, the higher the threat of extreme thunderstorm winds occurring.

PROBABILITY OF EXTREME TORNADOES is the probability (in percent) of Enhanced Fujita scale 2 (EF2) tornadoes occurring within 25 miles of any point during the outlook period. The higher the probability, the higher the threat of extreme tornadoes.

PROBABILITY OF HAIL is the probability (in percent) of hail greater than three-quarters of an inch in diameter (size of a penny) occurring within 25 miles of any point during the outlook period. The higher the probability, the higher the threat of severe hail.

PROBABILITY OF TORNADOES is the probability (in percent) of a tornado occurring within 25 miles of any point during the outlook period. The higher the probability, the higher the threat of tornadoes occurring.

QUANTITATIVE PRECIPITATION FORECAST (QPF) is the expected amount of liquid precipitation (in hundredths of inches) accumulated over a six hourly

period. A QPF will be specified when a measurable (1/100th of an inch or more) precipitation type is forecast for any hour during a QPF valid period. NDFD valid periods for QPF are 6 hours long beginning and ending at 0000, 0600, 1200 and 1800 UTC.

RELATIVE HUMIDITY is a ratio, expressed as a percent, of the amount of atmospheric moisture present relative to the amount that would be present if the air were saturated. Since the latter amount is dependent on temperature, relative humidity is a function of both moisture content and temperature.

SIGNIFICANT WAVE HEIGHT is the average height in feet (from trough to crest) of the one-third highest waves for the indicated 12-hour period. The 12-hour periods begin and end at 0000 and 1200 UTC.

SKY COVER is the expected amount of opaque clouds (in percent) covering the sky valid for the indicated hour.

SNOW AMOUNT is the expected total accumulation of new snow (in inches) during a 6 hour period. A snow accumulation grid will be specified whenever a measurable snowfall is forecast for any hour during a valid period. Valid periods for the NDFD begin and end at 0600, 1200, 1800, and 0000 UTC.

TEMPERATURE is the expected temperature in degrees Fahrenheit valid for the indicated hour.

THREE-MONTH AVERAGE TEMPERATURE ABOVE NORMAL is the probability, expressed as a percent, of above normal categories of 3-month mean temperature at lead-times ranging from ½-month to 12-1/2 months.

THREE-MONTH AVERAGE TEMPERATURE BELOW NORMAL is the probability, expressed as a percent, of below normal categories of 3-month mean temperature at lead-times ranging from ½-month to 12-1/2 months).

THREE-MONTH TOTAL PRECIPITATION ABOVE NORMAL is the probability, expressed as a percent, of above normal categories of 3-month total precipitation at lead-times ranging from ½-month to 12-1/2 months.

THREE-MONTH TOTAL PRECIPITATION BELOW NORMAL is the probability, expressed as a percent, of below normal categories of 3-month total precipitation at lead-times ranging from ½-month to 12-1/2 months.

TOTAL PROBABILITY OF EXTREME SEVERE THUNDERSTORMS is the probability in percent of EF2 (Enhanced Fujita scale 2) tornadoes, damaging winds with speeds greater than 75 miles per hour, or large hail two inches or greater in diameter occurring within 25 miles of any point during the outlook period.

TOTAL PROBABILITY OF SEVERE THUNDERSTORMS is the probability in percent of tornadoes, damaging winds with speeds greater than 58 miles per hour, or large hail three quarters of an inch in diameter (penny-size) occurring within 25 miles of any point during the outlook period.

WEATHER is the expected weather (precipitating or non-precipitating) valid at the indicated hour. Precipitating weather includes type, probability, and intensity information. In cases of convective weather, coverage may be substituted for probability.

WIND DIRECTION is the expected sustained 10-meter wind direction for the indicated hour, using 36 points of a compass. Click here for information on interpreting wind barbs.

WIND GUST is the maximum 3-second wind speed (in knots) forecast to occur within a 2-minute interval at a height of 10 meters. Wind gust forecasts are valid at the top of the indicated hour.

WIND SPEED is the expected sustained 10-meter sustained wind speed (in knots) for the indicated hour.