

REFERENCE SHEET FOR NWS-NORTON WARNING/ADVISORY THRESHOLDS

(Last Updated: July 1, 2022)

The following are National Weather Service criteria for issuing Watches/Warnings/Advisories:

Watches: 50% confidence of meeting **Warning** criteria (generally within 36-48+ hours).

Advisories and Warnings: 80% confidence in the event occurrence (generally within 24-36 hours).

TYPE OF ISSUANCE

WHEN ISSUED FOR SOUTHERN NEW ENGLAND

WINTER WEATHER ADVISORY

More than one predominant hazard

- Winter weather event having more than one predominant hazard (ie., snow and ice, snow and sleet, or snow, ice & sleet) meeting or exceeding advisory criteria for at least one of the precipitation elements, but remaining below warning criteria.

Snow, Ocean Effect Snow, and/or Sleet

- 3 inches averaged over a forecast zone in 12 hours

Snow and Blowing Snow

- Sustained or frequent gusts of 25 to 34 mph accompanied by falling and blowing snow occasionally reducing visibility to $\leq 1/4$ mile for ≥ 3 hours

Blowing Snow

- Widespread or localized blowing snow reducing visibility to $\leq 1/4$ mile with winds < 35 mph

Freezing Rain or Freezing Drizzle

- Any accretion of freezing rain or freezing drizzle on road surfaces

Black Ice

- A Special Weather Statement will usually be issued when sufficient moisture is expected to cause a thin layer of ice on road surfaces, typically on cloudless nights (“black ice”). At forecaster discretion a formal Winter Weather Advisory may be issued instead.

WIND CHILL ADVISORY

Wind chill index between -15°F and -24°F for at least 3 hours using only the sustained wind

WINTER STORM WARNING

More than one predominant hazard

- Winter weather event having more than one predominant hazard {ie. heavy snow and blowing snow (below blizzard conditions), snow and ice, snow and sleet, sleet and ice, or snow, sleet and ice} meeting or exceeding warning criteria for at least one of the precipitation elements.

Snow, Ocean Effect Snow, or Sleet

- 6 inches averaged over a forecast zone in a *12 hour period*
- 8 inches averaged over a forecast zone in a *24 hour period*

BLIZZARD WARNING	Sustained winds or frequent gusts ≥ 35 mph AND considerable falling and/or blowing snow frequently reducing visibility $< \frac{1}{4}$ mile for ≥ 3 hours (<i>Blizzard conditions need to be the predominant condition over a 3 hour period</i>)
ICE STORM WARNING	$\frac{1}{2}$ inch or greater accretion of freezing rain in any zone
WIND CHILL WARNING	Wind chill index $\leq -25^{\circ}\text{F}$ for at least 3 hours using only sustained wind
WIND ADVISORY	Sustained winds 31-39 mph (27-34 kts) for at least 1 hour; OR any gusts to 46-57 mph (40-49 kts)
HIGH WIND WARNING	Sustained winds ≥ 40 mph (≥ 35 kts) for at least 1 hour; OR any gusts ≥ 58 mph (≥ 50 kts)
TROPICAL STORM WARNING	Sustained winds 39-73 mph (34-63 kts) (no gust criteria) <i>associated with a tropical storm</i> expected to affect a coastal or inland zone within 36 hours
HURRICANE WARNING	Sustained winds ≥ 74 mph (≥ 64 kts) (no gust criteria) <i>associated with a hurricane</i> expected to affect a coastal or inland zone within 36 hours
EXTREME WIND WARNING	Short-fused warning for onset of extreme winds, defined as sustained at 111+ mph (equivalent to a Category 3+ hurricane). This is typically used for the approach of the eyewall of a major landfalling hurricane.
STORM SURGE WARNING	Issued for the danger of life-threatening inundation from rising water moving inland from the shoreline somewhere within the specified area, generally within 36 hours, in association with an ongoing or potential tropical cyclone, a subtropical cyclone, or a post-tropical cyclone. The warning may be issued earlier when other conditions, such as the onset of tropical storm-force winds, are expected to limit the time available to take protective actions for surge (e.g., evacuations). The warning may also be issued for locations not expected to receive life-threatening inundation, but which could potentially be isolated by inundation in adjacent areas.
SMALL CRAFT ADVISORY	Sustained winds or frequent gusts 25-33 kts (> 2 hrs) AND/OR Seas ≥ 5 feet within 24 hours (marine only)
GALE WARNING	Sustained winds or frequent gusts 34-47 kts (> 2 hrs) within 24 hrs <i>from a non-tropical system</i> (marine only)
STORM WARNING	Sustained winds or frequent gusts 48-63 kts (> 2 hrs) within 24 hours <i>from a non-tropical system</i> (marine only)
HURRICANE FORCE WIND WARNING	Sustained winds or frequent gusts ≥ 64 kts (> 2 hrs) within 24 hours <i>from a non-tropical system</i> (marine only)

SPECIAL MARINE WARNING	Brief/sudden occurrence of sustained wind or frequent gusts ≥ 34 kts, usually associated with thunderstorms, AND/OR hail $\geq \frac{3}{4}$ " in diameter; also issued for waterspouts
SEVERE THUNDERSTORM WARNING	Thunderstorms with wind gusts ≥ 58 mph (≥ 50 kts) AND/OR hail ≥ 1 " (quarter size) in diameter
TORNADO WARNING	Likelihood of a tornado within the given area based on radar or actual sighting; usually accompanied by conditions indicated above for "Severe Thunderstorm Warning"
FLOOD ADVISORY	Expected inundation by water of some low lying and poor drainage areas, resulting in a nuisance to the public but not a threat to life and property.
FLASH FLOOD WARNING	Rapid and extreme flow of high water into a normally dry area, or a rapid water level rise in a stream or creek above a predetermined flood level, beginning within a short timeframe from the onset of heavy rain. A dam or levee failure, or water released from an ice jam is also considered.
FLOOD WARNING	Expected overflow or inundation by water which causes or will cause damage and/or a threat to life.
RIVER FLOOD WARNING	Water level at a River Forecast point along a main stem river (such as the Merrimack, Nashua or Charles) is expected to reach or exceed flood stage.
COASTAL FLOOD ADVISORY	(from non-tropical systems): Minor coastal flooding expected. Examples include: splashover that causes a few roads to be briefly impassable, standing water in parking lots, etc.
COASTAL FLOOD WARNING	(from non-tropical systems): Widespread serious (moderate or major) coastal flooding is expected to damage property AND/OR pose a threat to life.
EXCESSIVE HEAT WARNING	Daytime Heat Index $\geq 105^{\circ}\text{F}$ for 2 consecutive hours
HEAT ADVISORY	Daytime Heat Index 95°F - 99°F for 2 consecutive days OR anytime the Daytime Heat Index 100°F - 104°F for 1 day.
HEAT WAVE	Issued for non-criteria warning/advisory heat. A heat wave is defined as 3 or more days of $\geq 90^{\circ}\text{F}$ temperatures.
DENSE FOG ADVISORY	Widespread visibility $\leq 1/4$ mile for at least 3 hours
FREEZING FOG ADVISORY	Very light ice accumulation from predominantly fog at or below freezing temperatures
FROST ADVISORY	Issued under clear, light wind conditions with forecast minimum shelter temperature 33 - 36°F during growing season

FREEZE WARNING

When minimum shelter temperature drops to $< 32^{\circ}\text{F}$ during growing season

HIGH SURF ADVISORY

(from non-tropical systems): When high surf poses a danger to life in the form of rip currents or breaking seas. Generally issued when 7+ foot incoming seas reported at the buoys from Memorial Day through September.

RED FLAG WARNING

High degree of confidence that dry fuels and weather conditions support extreme fire danger within 24 hours using the following criteria as a guide:

- Winds sustained or with frequent gusts ≥ 25 mph
- Relative Humidity at or below 30% anytime during the day
- Rainfall amounts for the previous 5 days less than 0.25 inches (except 3 days in pre-greenup)
- Lightning after an extended dry period
- Significant dry frontal passage
- Dry thunderstorms
- Keetch-Byram Drought Index values of 300 or greater (summer only)