

What types of products/headlines does the National Weather Service issue related to Wind, Heat, Dense Fog, Frost/Freeze and Fire?

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Meteorologist

National Weather Service

Wind Advisory:

Sustained winds 31-39 mph or gusts 46 to 57 mph expected or occurring

Confidence: >80%



High Wind Watch:

Sustained winds ≥ 40 mph or gusts ≥ 58 mph are possible

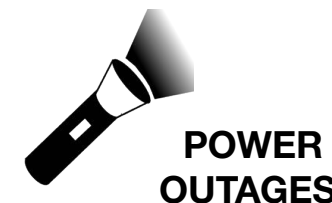
Confidence: >50%



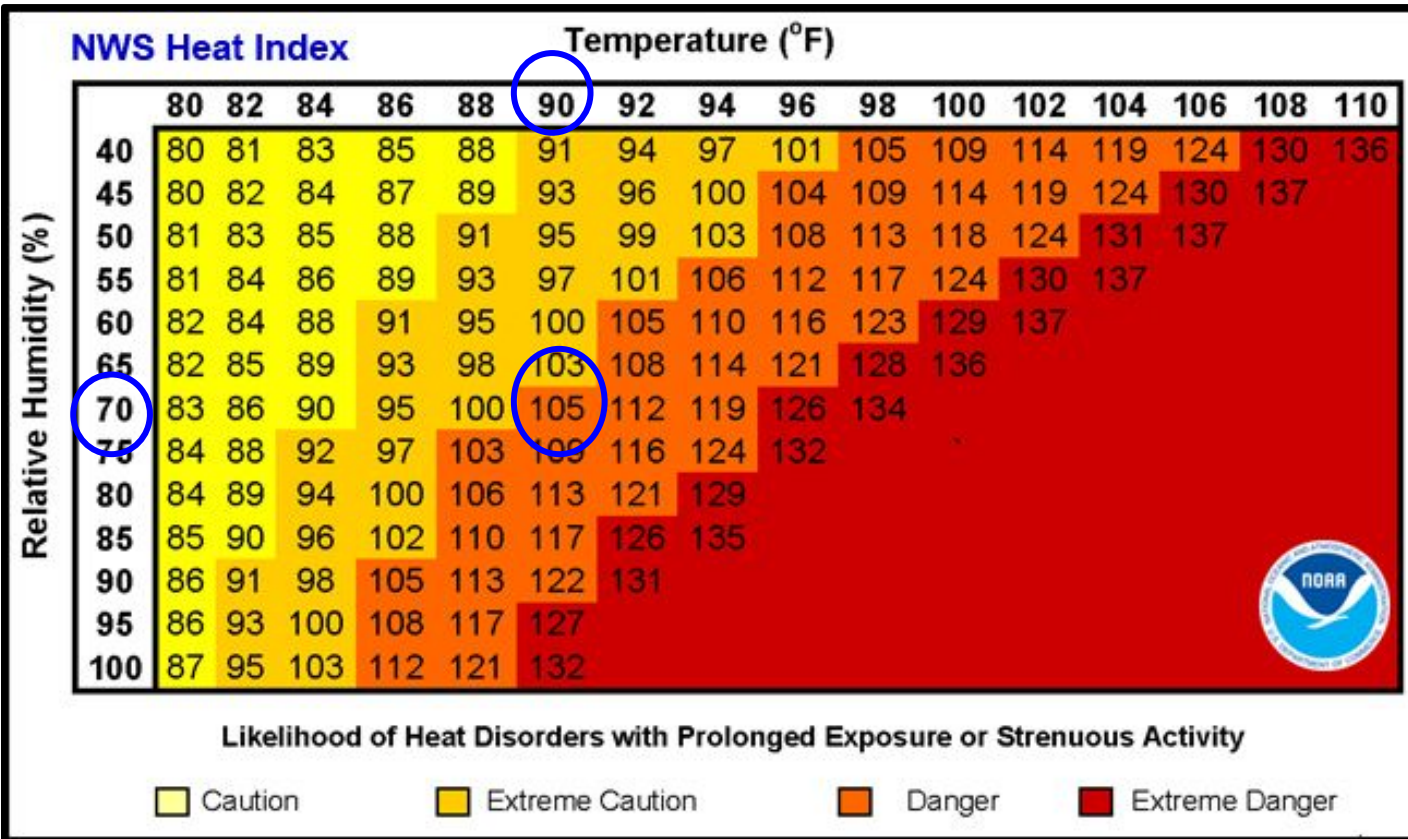
High Wind Warning:

Sustained winds ≥ 40 mph or gusts ≥ 58 mph expected or occurring

Confidence: >80%



Wind is described by the direction from which the wind originates.
North wind blows from the north to the south.



The Heat Index, or the "Apparent Temperature" is a measure of **how hot it feels like** when relative humidity is factored with the actual air temperature.

Example, if the air temperature is 90°F and the Relative Humidity is 70%, the Heat Index is 105°F.

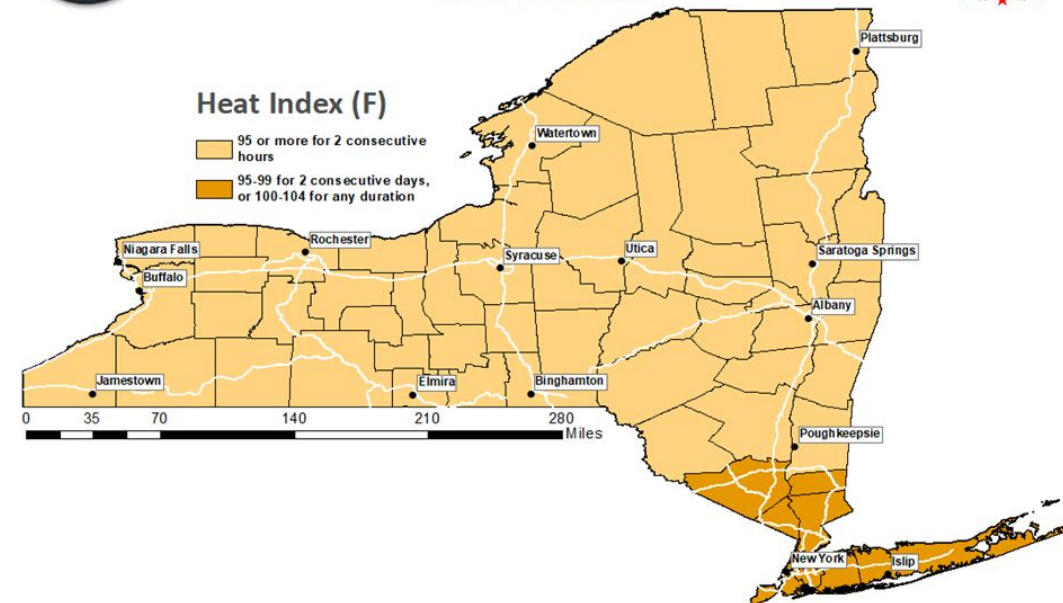
This index was devised for shady, light wind conditions. Exposure to full sunshine can increase Heat Index values by up to 15°F.

Heat Advisory:

- Heat Indices of 95 degrees or more for 2 consecutive hours New York State excluding the Lower Hudson Valley, New York City and Long Island
- Heat Indices 95-99 degrees for 2 consecutive days or 100-104 degrees for any duration Lower Hudson Valley New York City Long Island



National Weather Service Heat Advisory Criteria New York State



Note: Special Weather Statement - issued when heat Indices (“feels like temperatures”) are around heat advisory levels for one hour

Dangerous Heat Conditions

- Heat indices of 105+ degrees for at least 2 consecutive hours

Excessive Heat Watch:

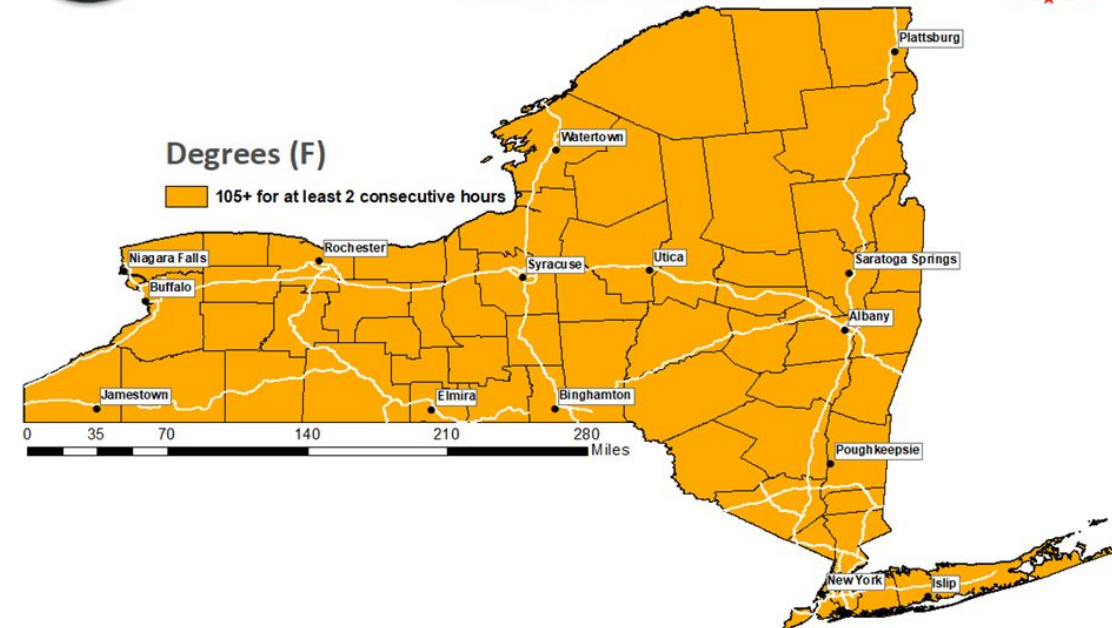
- Issued when extremely dangerous heat conditions are possible

Excessive Heat Warning:

- Issued when extremely dangerous heat conditions are expected



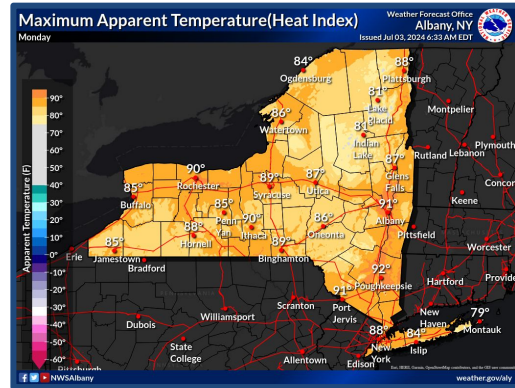
National Weather Service Excessive Heat Watch/Warning Criteria New York State



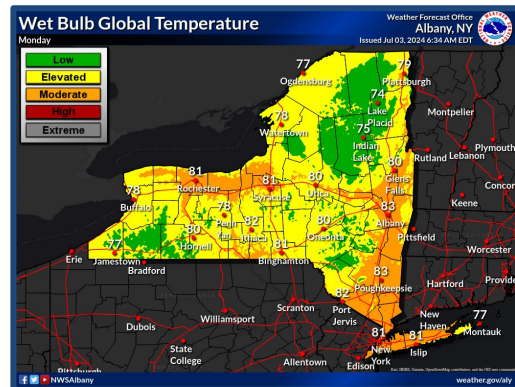
NWS Tools to Assess Heat



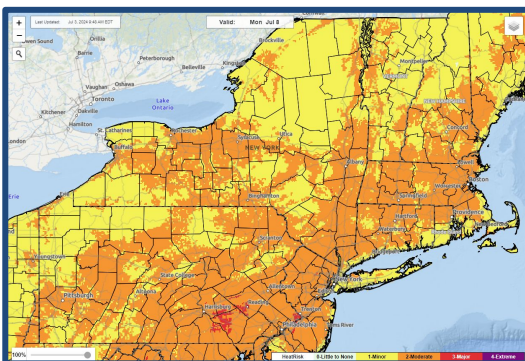
Albany, NY
WEATHER FORECAST OFFICE



Heat Index: Measure of what the temperature feels like to the human body when relative humidity is combined with the air temperature. Heat Index is calculated for shaded areas. Exposure to full sunshine can increase heat index values by up to 15°F. This is the NWS's flagship heat stress indicator and is the main driver for heat headlines (advisories, watches and warnings).



Wet Bulb Globe Temperature: Measures heat stress on the body in direct sunlight taking into account: temperature, dewpoint (humidity), wind and sky cover. It's designed for acclimatized, active, outdoor communities such as outdoor workers.



NWS HeatRisk: A color-numeric based index that provides a forecast risk of heat-related impacts to occur over a 24-hour period. Better accounts for the variation in climatology that exists across most regions of the United States and human acclimation for those living in the area. It provides heat risk guidance for decision-makers and heat-sensitive populations who may need to take action below NWS heat headline levels.

Dense Fog:

- Visibilities frequently drop to 1/4 of a mile or less making travel difficult

Dense Fog Advisory:

- Issued when widespread dense fog develops.

A dark-themed poster from weather.gov. The background is a foggy road with a white dashed line. In the top left, the words "DENSE FOG" are written in a stylized, white, blocky font with a black outline. In the top right, the text "Small Decisions can have a BIG IMPACT." is displayed, with "BIG IMPACT." in large, bold, white letters. Below this, there are three bullet points in white text: "• Slow down when visibility is reduced", "• Don't use cruise control", and "• Delay travel until conditions improve". At the bottom left is the NOAA logo and the text "weather.gov". At the bottom right, the text "Don't let a bad decision be your last." is written in white.

DENSE FOG

Small Decisions can have a **BIG IMPACT.**

- Slow down when visibility is reduced
- Don't use cruise control
- Delay travel until conditions improve

Don't let a bad decision be your last.

NOAA weather.gov



Freeze Warning

Temperatures of 32°F or colder for several hours over a widespread area during growing season. A **hard freeze** is when temperatures are below 28°F.

Plants left outdoors may be killed.

Frost Advisory

Temperatures of 33 to 36°F with clear skies and light winds over a widespread area during growing season, which would promote the development of frost.

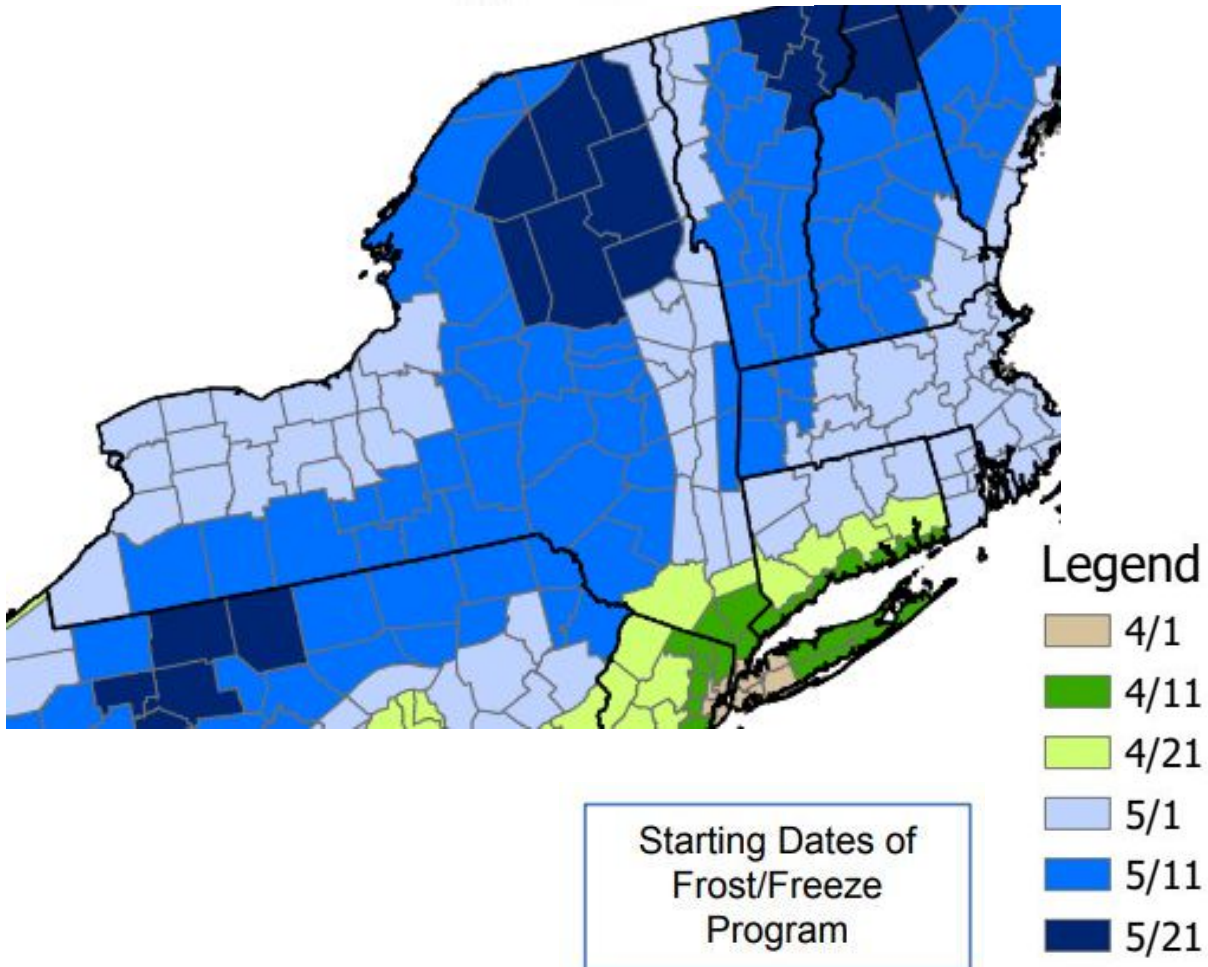
Plants left outdoors may be damaged.

- Designed to alert gardeners and growers that actions may be needed to protect tender vegetation from potentially harmful cold temperatures.
- Actions in the spring can help protect young vegetation that is just in its early stages with actions in the fall possibly helping to prolong the season.

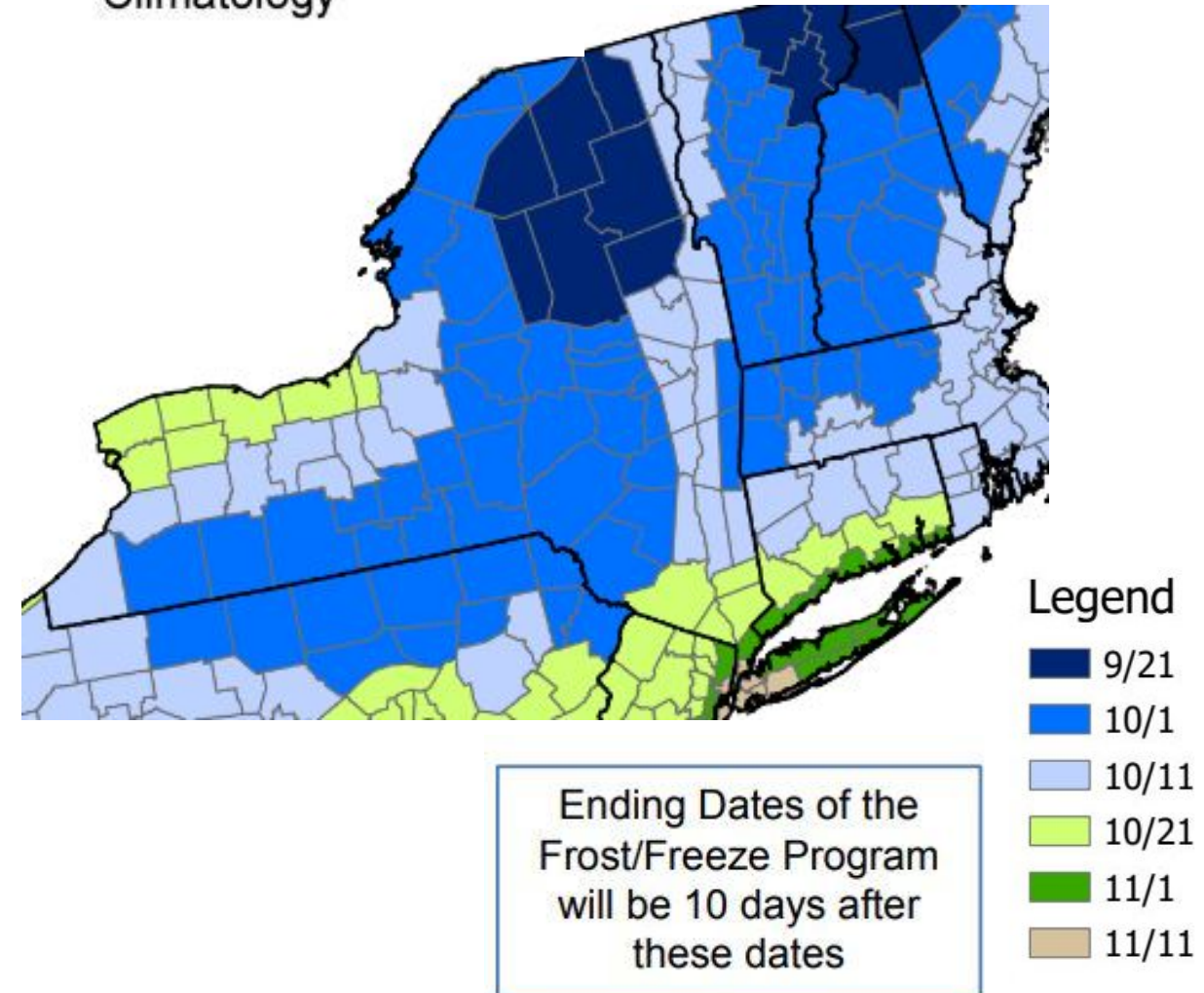
- Freeze Watch is issued when temperatures of 32°F or colder are possible.
- Freeze Warning is issued when temperatures of 32°F or colder are expected.
- Frost can occur when the temperatures fall to the mid 30s, in rural areas. It is a localized phenomena and frost occurrence can vary greatly across a small area. Frost becomes more widespread when the temperature falls below 32°F with a freeze possible.

Growing Season is defined as the period between the average (median) date of the last Spring Freeze and the average date of the first Fall Freeze.

Median Date of the Last
Spring Freeze Based on 1991-2020
Climatology



Median Date of the First
Fall Freeze Based on 1991-2020
Climatology



Fire Weather Watches and Red Flag Warnings are used to convey the likelihood of severe fire weather to fire control agencies. Meeting criteria is considered rare.

RED FLAG CRITERIA is unified for all of New York State (must meet all):

During vegetation stage I or II (cured/transition - spring/fall)

- Winds sustained or frequently gusting above 25 mph for at least two hours
- Relative Humidity less than 30% for at least two hours
- Partner confirmation of dry/receptive fuels

During vegetation stage III (green - summer)

- Winds sustained or frequently gusting above 25 mph for at least two hours
- Relative Humidity less than 30% for at least two hours
- Rainfall less than 1/4 of an inch during the previous 8 or more days
- [Keetch Byram Drought Index](#) above 300 and partner confirmation of dry/receptive fuels

Red Flag events normally require the combination of very dry fuels as confirmed by land agencies, and critical weather conditions (significantly increased winds and wind shifts, thunderstorm activity containing little or no rain, and significantly decreased humidity).

Fire Weather Watch:

- Issued when Red Flag criteria conditions are expected in greater than 24 hours

Red Flag Warning:

- Issued when Red Flag criteria conditions are expected in 24 hours or less

Special Weather Statement:

- Issued in coordination with state fire weather contact when conditions support enhanced fire weather behavior, but at levels below Red Flag criteria
- Can also be issued to raise elevated fire awareness amongst the fire weather community and general public