

NWS Tools to Assess Heat



Overview

The NWS has three tools in addition to air temperature to assess hazardous heat events: **Heat Index, Wet Bulb Globe Temperature, and experimental HeatRisk**. There are unique benefits and important considerations for each tool.

Heat Index

A measure of how hot it feels to the human body when relative humidity and air temperature are combined. It is calculated for shady areas with light winds.

Benefits & Considerations

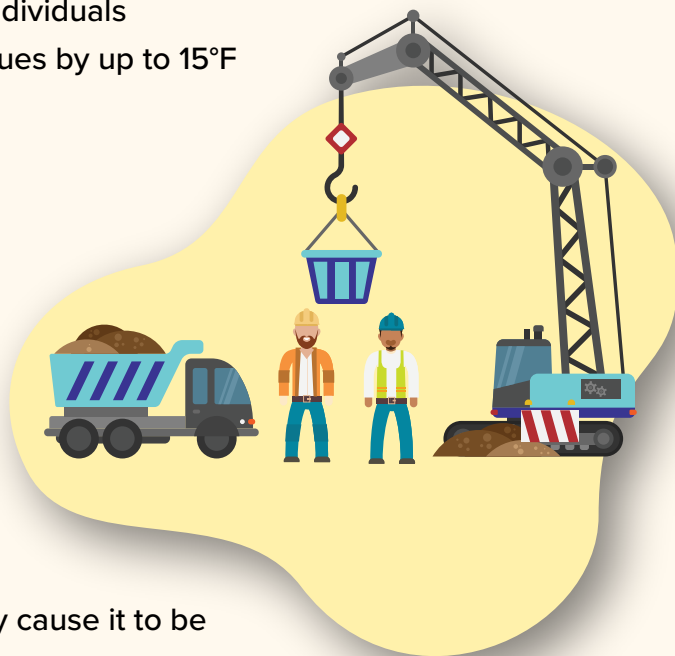
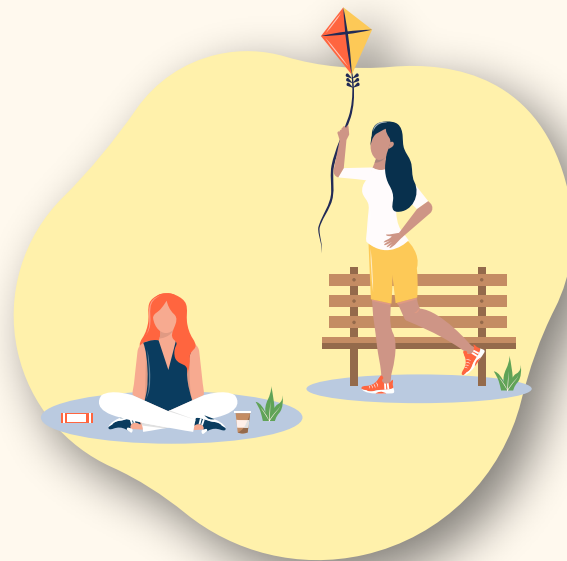
- Familiar to most and generally easy to understand
- Not the best indicator of heat impacts in areas with low humidity
- Not an accurate measure of heat impacts on active individuals
- Exposure to full sunshine can increase heat index values by up to 15°F

Wet Bulb Globe Temperature (WBGT)

A measure of heat stress on the body in direct sunlight, taking into account factors such as temperature, dewpoint, wind and sky cover.

Benefits & Considerations

- Useful for those who work, exercise, or recreate outdoors
- Can help inform activity modifications
- Values are typically lower than Heat Index, which may cause it to be perceived as a lower risk
- Use WBGT with local guidance for the specific activities

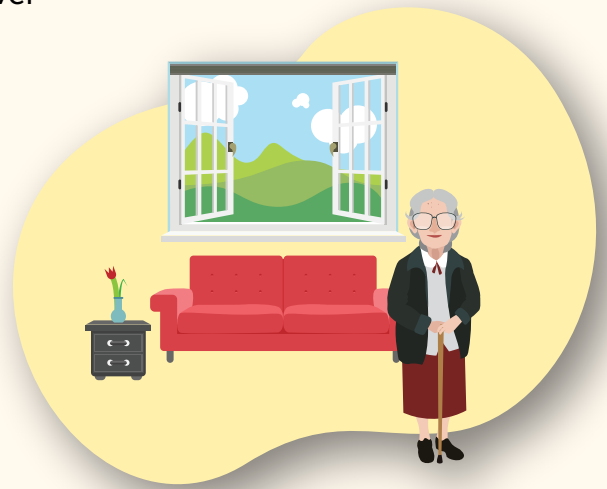


HeatRisk

Provides a forecast risk of heat-related impacts to occur over a 24-hour period using temperature data and CDC heat-health thresholds.

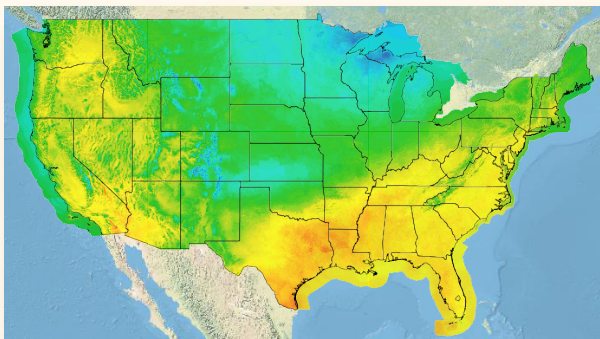
Benefits & Considerations

- Includes potential health impacts due to heat for the public
- Accounts for variations in climatology and human acclimation
- Indirectly accounts for humidity
- Provides guidance for decision-makers, heat-sensitive populations, and the public



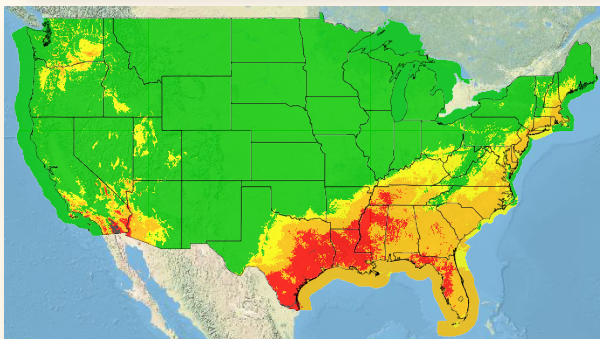
Heat Tool Examples

For more information visit: <https://www.weather.gov/safety/heat-tools>



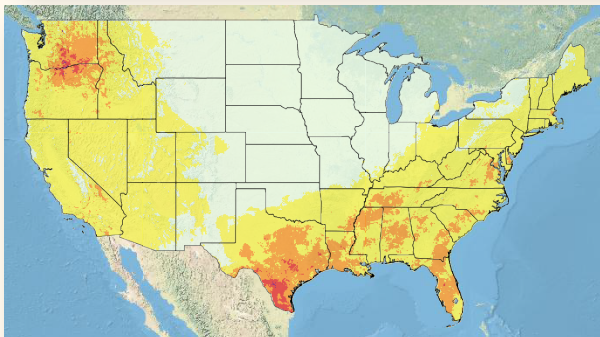
Heat Index

Uses a standard Fahrenheit temperature scale often displayed with a cool-to-warm color scheme.



Wet Bulb Globe Temperature

Uses a five-color, numeric index with categories that include “low, elevated, moderate, high, and extreme.”



HeatRisk

Uses a five-color, numeric index with categories that include “little/none, minor, moderate, major, and extreme.”