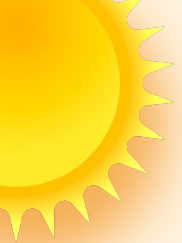



Clear Communication, Safer Communities: Refining Heat Messaging in the Northeast

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Emergency and Risk Communication Testing Laboratory
University at Albany



Study Purpose

Jargon

“Technical or specialized language that relates to a particular context or serves a particular purpose for a homogenous group yet is rarely used (or readily understood) outside of those situations.”

- (Sharon & Baram-Tsabari, 2014)

 **NWS Boston** ✓
@NWSBoston

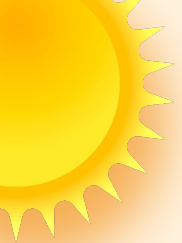
Heat advisories have been issued for a good portion of the region for this afternoon. Highs are expected to reach the low 90s with high humidity causing peak heat index values between 95 -100 between 11 am - 5pm, across areas included in the advisory.

Peak Heat Indices Today (Friday) Weather Forecast Office Boston/Norton, MA



09:00 AM · Jun 24, 2022

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Research Questions

Hazard
Information

1

- How do people interpret NWS heat alerts, descriptions, and impacts?

Vulnerability
Information

2

- How do people interpret NWS vulnerability information?

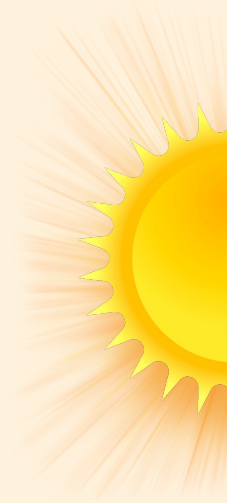
Protective Action
Information

3

- How do people interpret NWS heat protective actions?
-

Focus Group Locations

NWS Region	Cities
West	<ul style="list-style-type: none">• Seattle, WA• Sacramento, CA• Phoenix, AZ• Billings, MT
Central	<ul style="list-style-type: none">• Quad Cities, IA• Milwaukee, WI• St. Louis, MO• Denver, CO
South	<ul style="list-style-type: none">• Houston, TX• Orlando, FL• Nashville, TN• Oklahoma City, OK
East	<ul style="list-style-type: none">• Boston, MA• Philadelphia, PA• Baltimore, MD• Charlotte, NC



Focus Group Questions

1

What are your thoughts about this message?

2

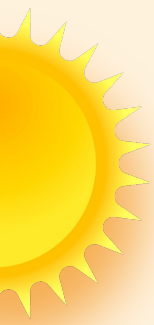
What stands out to you?

3

Is there anything you find difficult or confusing to understand?




Heat Alerts



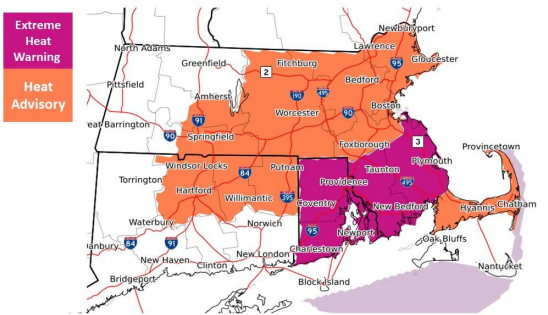
Heat Advisory

1. Be aware (attention vs. action)
2. Don't know what it means
3. Hotter than normal, but not urgent
4. Most relevant to people pre-existing conditions
5. Need specific temperatures to make actionable


 **NWS Boston** @NWSBoston

Friday's forecast will remain hot with Extreme Heat Warnings and Heat Advisories remaining in place across the region. Take all heat safety precautions and please look before you lock!

Heat Advisories Today (Friday) Weather Forecast Office Boston/Norton, MA



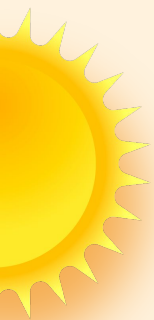
09:00 AM · Jun 24, 2022



“That’s what advising means. We can’t tell you what to do. We can’t tell you how to plan, but we’re advising you that it could be bad”

- 72-Year-Old Female, Houston TX

Heat Alerts



Extreme Heat Warning*

1. Worse and more concerning than advisory
2. But needs to be *extremely* hot (e.g. 100+)
3. More willing to act
4. Could harm anyone
5. Need specific temperatures to make actionable

NWS Boston @NWSBoston

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Heat Advisories Today (Friday) Weather Forecast Office Boston/Norton, MA

Extreme Heat Warning

Heat Advisory

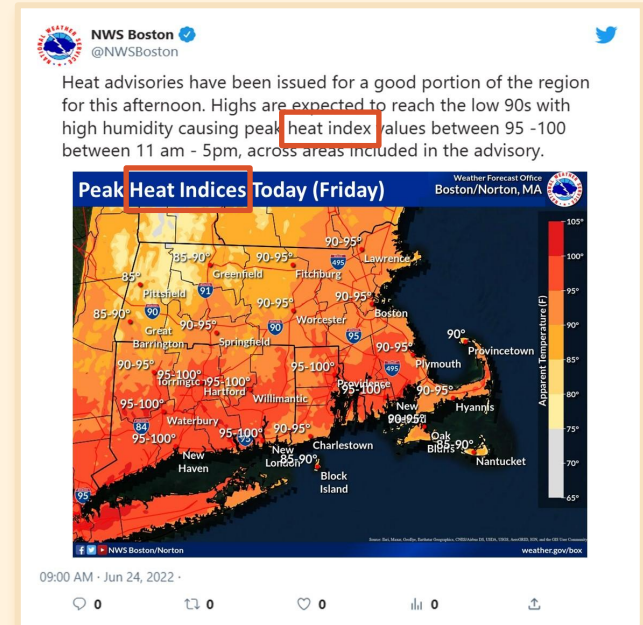
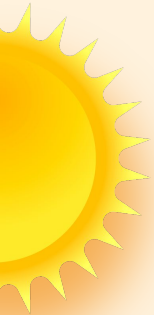
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* NWS changing to “extreme”

Heat Description

Heat Index

1. Mix of knowledge
 - What it feels like vs. don't know
2. Uncertain to the factors which modify the air temperature
 - Correct (humidity) and incorrect (e.g., rain)
3. Unsure why high humidity is dangerous





“I don't know what peak heat index values mean. I think I've heard that referred to as the ‘feels like’ temperature. But I'm truly not sure.”

-46-Year-old Female, Boston

Heat Description

Heat Index

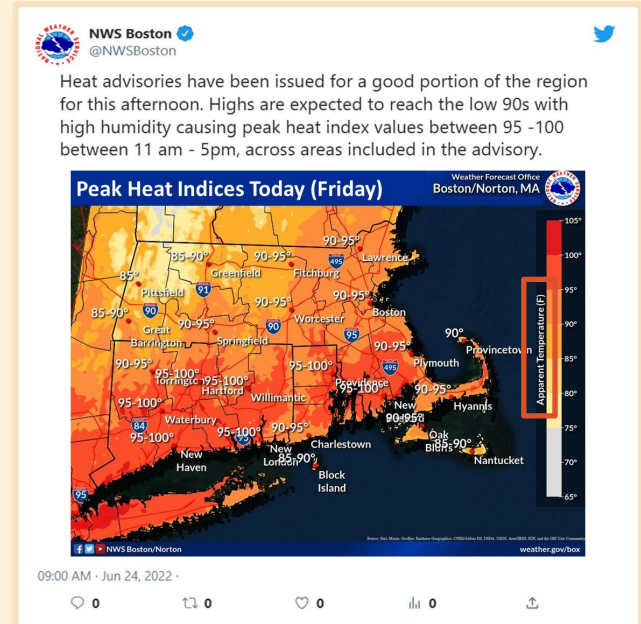
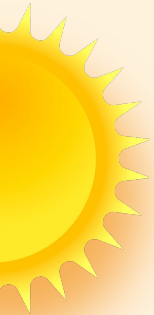
1. Overwhelmingly preferred **“feels like”**
 - Mirror weather apps, broadcasters, websites, etc.
2. Make connection to humidity



Heat Description

Apparent Temperature

1. Unknown and/or “guessing”
2. Actual, approximate, estimated, supposed, predicted
3. Do not like 2 terms for same thing
4. Again, **prefer “feels like”**



Heat Impacts

Heat Illness

1. Typically named heat stroke and heat exhaustion
2. Also included sunburn, depression, and symptoms
3. Many had not seen term before
4. Described as “vague” or “meaningless”
5. Instead, **specific illnesses and symptoms should be listed if possible**

NWS Boston @NWSBoston

A historic heat wave will continue to grip the Northeast. Everyone is at risk from the danger of extreme heat, such as heat illness, but these groups are more vulnerable than most. Ensure that your loved ones and neighbors are safe from the heat and remain #WeatherReady

Heat Impacts: Vulnerable Populations

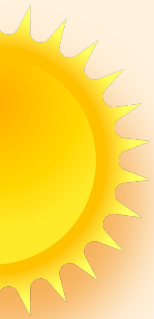
PREGNANT	NEWBORNS	CHILDREN	ELDERLY	CHRONIC ILLNESS
Extreme heat events have been associated with adverse birth outcomes such as low birth weight, preterm birth, infant mortality, and congenital cataracts.	Newborns are extra sensitive to heat because their ability to regulate body temperature is limited.	Young children and infants are particularly vulnerable to heat, as their bodies are less able to adapt to heat than adults. Those under four are especially vulnerable.	Older adults, especially those who have preexisting diseases, take certain medications, live alone or have limited mobility are at higher risk for heat illness.	People with chronic medical conditions are more likely to have a serious health problem during a heat wave.

Source: The Impacts of Climate Change on Human Health in the United States. A Scientific Assessment (U.S. Global Change Research Program)

weather.gov

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Heat Vulnerabilities



Vulnerable

1. Many defined as demographics that will be more impacted
 - However, factors outside the individual also make people at risk
2. Not offensive
3. CDC says “people who are at increased/higher risk”

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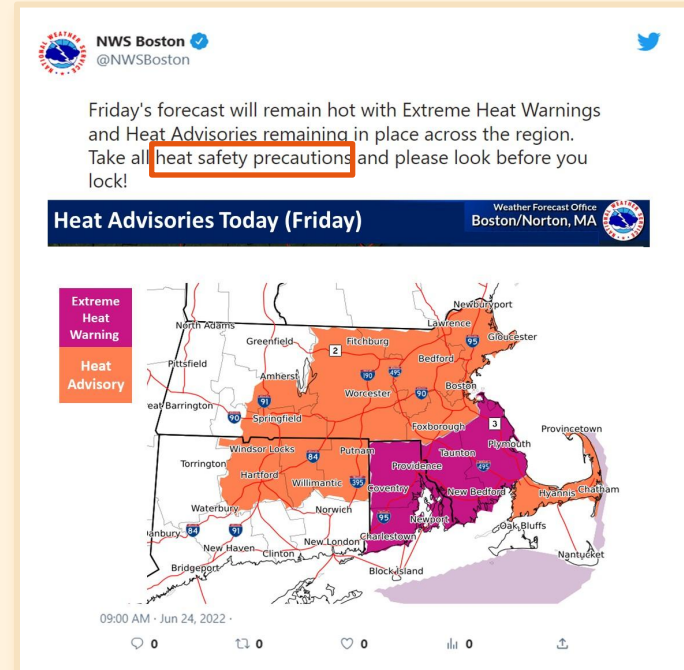
Protective Actions

"Heat Safety Precautions"

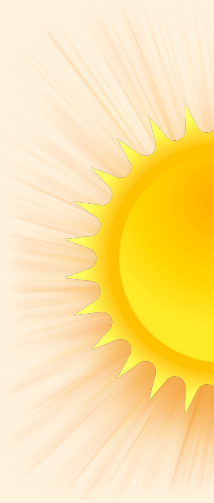
1. People don't know what to do because no specific actions are provided
2. Could cause people to do something ineffective

"Look Before you Lock" & "Beat The Heat"

1. These phrases are unknown to most.
2. Require a preexisting education campaign to understand.
3. Spell out what actions people should take.



Summary & Recommendations



Current Language	Recommended Messaging
Heat watch, warning, advisory	<ul style="list-style-type: none">• Specific temperature(s)• Time conditions expected
Heat Index and Apparent Temperature	<ul style="list-style-type: none">• “Feels like” and why
Heat Illness	<ul style="list-style-type: none">• Specific illnesses and symptoms
Vulnerable	<ul style="list-style-type: none">• “People at increased/higher risk”
Elderly	<ul style="list-style-type: none">• “People age [numeric age group]”
Look before you lock, beat the heat, stay cool, check on your neighbors, etc.	<ul style="list-style-type: none">• Specific actions and steps (if applicable)

Looking for Work!



Bruce Pollock

Graduating 2025!



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CV!

