

## A Coordinated Federal Initiative to Prepare the Nation for Extreme Heat

Morgan Zabow, Community Heat and Health Program Manager NOAA Climate Program Office



The FOX Forecast Center predicts daily record highs to fall through Wednesday.

More than 130 heat daily heat records could be set through Tuesday as prolonged and sweltering

temperatures are expected across parts of the U.S.

#### **Early July Heat Wave**



#### Key Messages for Early July Heat Wave

Updated July 4, 2024 2:00 PM EDT

2-Moderate

4-Extreme

Major to Extreme

impacts from heat

HeatRisk means health

become more likely in

in ANYONE without

cooling, not just

vulnerable to heat.

adequate hydration or

individuals that are most

general, and may occur

Maximum Forecast HeatRisk (Experimental)

Extremely dangerous heat will build in the Western U.S., with heat persisting in the South

Thu-Sat July 4-6

- Significant Heat Expected for the July 4th Holiday Dangerous heat will impact Independence Day activities in the Southern U.S. and Mid-Atlantic, as well as California and southern Nevada. Use caution and check the forecast. Stay hydrated, limit time outdoors, and act quickly if you see signs of heat-related illness.
- Extremely Dangerous Heat Wave in the West Intense and long duration heat building in the West will be extremely dangerous and potentially deadly if not taken seriously. The heat will become more widespread by Friday and Saturday. The multi-day nature of the heat and record warm overnight temperatures will cause heat stress to build in people without adequate cooling. Numerous daily record highs are forecast and some locations, including Las Vegas, NV and Redding, CA, may reach their all-time heat records.
- Western Heat Wave Continues into Next Week Excessive heat should expand northward into the Pacific Northwest and Intermountain West, continuing through much of next week. The prolonged nature of the heat will increase the risk of heat-related illness.
- Extended Heat Wave in the Southern U.S. The focus for hazardous heat will shift from the south-central and interior southern U.S. towards the Mid-Atlantic and Southeast by Friday and Saturday. Heat index values will approach or exceed 110 degrees at times. The most persistent heat will likely extend from the

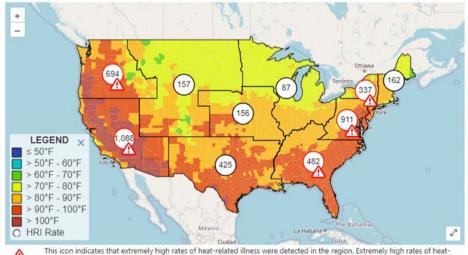


For more information go to: www.wpc.ncep.noaa.gov and www.w

Thu-Wed July 4-10

Weather Prediction Center College Park, MD

#### **Daily Heat-Related Illness**



parane projections

related illness are defined as exceeding the 95th percentile based on data from 2018-2023.

July 6: HHS regions 2 and 3 had extremely high rates of heat-related illness were detected in the region. Extremely high rates of heat-related illness are defined as exceeding the 95th percentile based on data from 2018-2023.

#### Mid-July Heat Wave

#### Key Messages for Mid-July Heat Wave

Updated July 16, 2024

Another day of dangerous heat along much of the East Coast on Wednesday

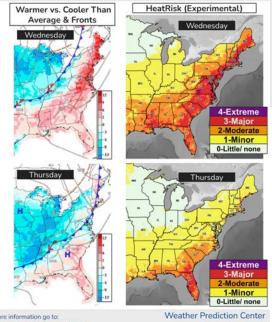
#### Significant Heat Along the East Coast The ongoing heat wave will last into Wednesday along much of the East Coast, including major metro areas in the Interstate 95 corridor. Daily record warm overnight temperatures are likely. This heat will be occurring at the end of a lengthy period of intense heat, and heat has a cumulative effect, so the heat on Wednesday will still be dangerous.

#### Cold Front Brings Relief

A strong cold front will bring relief as it sweeps across most of the Eastern U.S. from Wednesday into Thursday. This front will be accompanied by showers and thunderstorms. Some thunderstorms could be severe, especially in the Northeast.

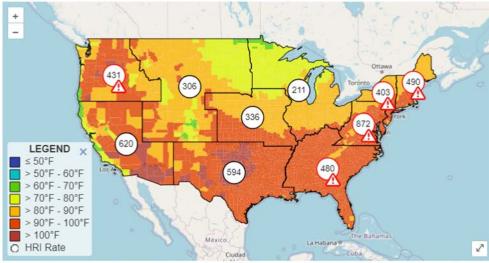
#### Heat Continues in Florida

The heat will continue in Florida for the remainder of the week and into the weekend, as the front will stall to the north. However, this will be the last update for this Key Messages graphic.



For more information go to: www.wpc.ncep.noaa.gov and www.weather.gov College Park, MD

#### **Daily Heat-Related Illness**



This icon indicates that extremely high rates of heat-related illness were detected in the region. Extremely high rates of heatrelated illness are defined as exceeding the 95th percentile based on data from 2018-2023.

July 16: HHS regions 1, 2, and 3 had

heat-related illness were detected in the region. Extremely high rates of heat-related illness are defined as exceeding the 95th percentile based on data from 2018-2023.



## Widespread Excessive Heat Over Much of the U.S. into Early August

Issued July 23, 2024

Timing: July 31 - August 6, 2024

A heat wave is forecast for much of the lower 48 late July through at least early August coinciding with the hottest time of the year climatologically.

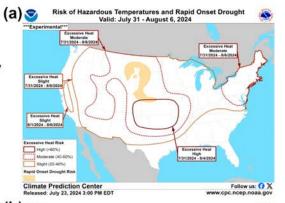
- (a) High risk (60% chance or more) of excessive heat is indicated for parts of the Central and Southern Plains and Middle and Lower Mississippi Valley regions. Moderate risk (40-60% chance) of excessive heat covers much of the central U.S. and Northeast. A broad area of slight risk of excessive heat (20-40% chance) covers much of the lower 48.
- (b) Above normal temperatures are indicated across much of the U.S., with the exception of southern Texas and northwestern Washington. Probabilities of above normal temperatures reach 70 to 80% over the central U.S. and the Northeast.

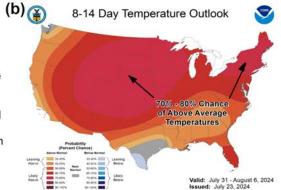
Maximum temperatures are likely to exceed 100 degrees with heat index values of 105-110 or higher within the high risk of excessive heat, with many locations reaching well into the 90s in the broader slight and moderate risk areas.

Drying topsoil along with the likelihood of above-normal temperatures and below-normal precipitation supports rapid onset drought risk for parts of the Northern and Central Plains.

High temperatures can lead to heat-related illness. Stay in a cool place and limit outdoor activities if possible, remember to hydrate, and never leave people or pets in a vehicle. Visit <a href="https://www.heat.gov/">https://www.heat.gov/</a> for safety information during times of excessive heat.

\* For short-term forecasts (prior to July 31), visit <u>www.wpc.ncep.noaa.gov</u> and weather.gov.







## Why Is It So Difficult to Reduce Heat Risk?

Heat has been overlooked for a long time and is not yet reflected in **policies** and **governance** structures at all levels of government.

Heat impacts are

"invisible," delayed, or

poorly quantified due to
lacking impact data &
studies.

Many communities don't have heat action plans or long-term planning in place, or they have not stress-tested those plans.

guidance, evidence, and support to take effective action on heat.

#### The National Integrated Heat Health Information System (NIHHIS)

- Launched in 2015 by NOAA and CDC for a coordinated approach to heat resilience
- Trans-disciplinary work across governmental agencies and non-governmental partners
- Works across timescales to bridge long-term heat mitigation and short-term planning
- Supports and implements the White House Extreme Heat Interagency Working Group



















































## Federal Heat Action is Complex

Coordination

Research, Data, Information

Regulation & Implementation Policy

& Capacity

**Technical** Support





**NATIONAL INTEGRATED HEAT** 











- H.R.4953 **Preventing HEAT Illness and** Deaths Act of 2023
- H.R.4733 Smoke and Heat Ready Communities
- H.R.4256 Jordan McNair Student Athlete Heat Fatality Prevention Act
- H.R.4314 Stay Cool Act
- H.R.4269 Timothy J. Barber











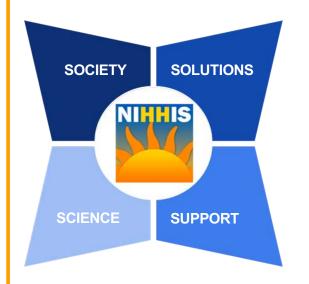






## **NIHHIS Program Coordination**

The NIHHIS Program manages interagency coordination and planning. It is hosted in the Climate Program Office in NOAA Research.







National Heat Strategy Heat.gov Heat Beat Newsletter, X: @Heatgov Interagency Working Groups, Funding Priorities, Forums, Communications

## **New Interagency Heat Actions**







**FEMA Streamlines BCA for Resilience Grants** 

OSHA Heat Rule & National Emphasis Program HUD Extreme Heat

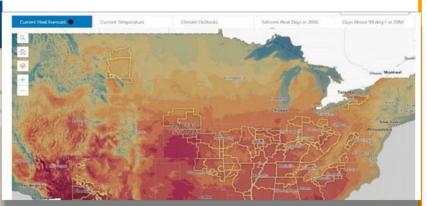
Quick Guide

### **HEAT.GOV**



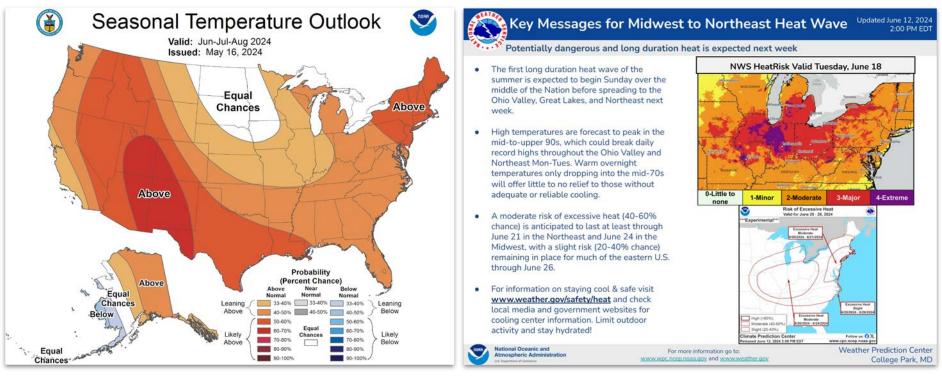






## Seasonal Temperature Outlook & Key Messages

CPC Seasonal temperature outlooks and Key Messages available on heat.gov



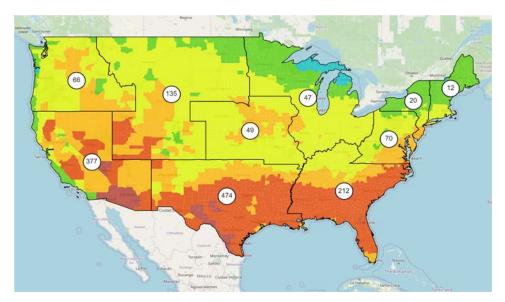
Areas favored for warmer than normal conditions this summer - June-July-August

Focus on Days 1-7 and Week 2

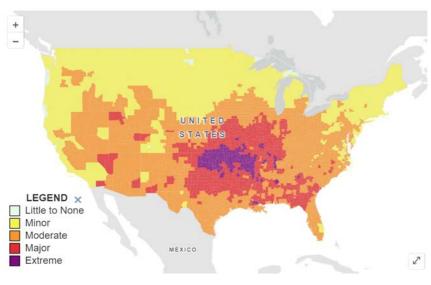
## **CDC/NWS Heat & Health Resources**

#### **Heat & Health Tracker**

#### **Heat Risk**



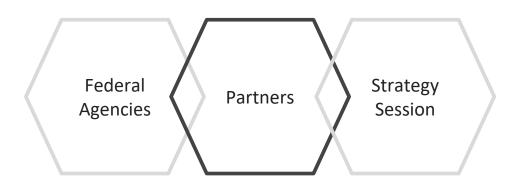
Rate of ED visits associated with heat-related illness per 100,000 ED visits by region

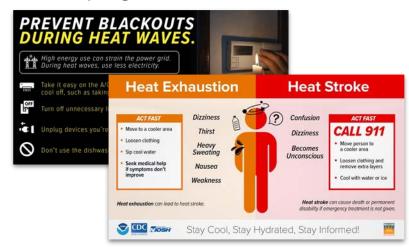


Heat Risk for Tuesday, June 25

#### Federal Heat Communications Plan

A whole-of-government plan informed by government agencies to raise public awareness on dangers of heat through community engagement, infographics, webinars and workshops, social media campaigns, and more







## Social Media Campaigns

- Early-Season Campaign 4/29 5/3
- Mid-Season Campaign
   7/15-8/16
- Late-Season Campaign 9/23 9/27



# **Building Awareness and Critical Heat**Datasets with Citizen Science



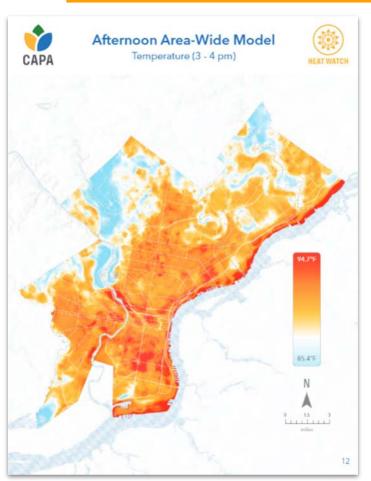
80+ community-led **urban heat island mapping campaigns** that build upon local partnerships to learn how heat is distributed.

Past campaigns have successfully informed city sustainability plans, public health practices, urban forestry plans, and research projects.

#### **UHI Cities in the NE**

#### Cities in the Eastern Region

- Boston, Mystic River
   Watershed, Framingham,
   and Brockton, MA
- Scranton and Philadelphia, PA
- NYC
- Baltimore and Montgomery County, MD
- Burlington, VT
- Jersey City, Newark, and Elizabeth, NJ
- Wilmington, DE
- Washington, DC



Philadelphia, 2022

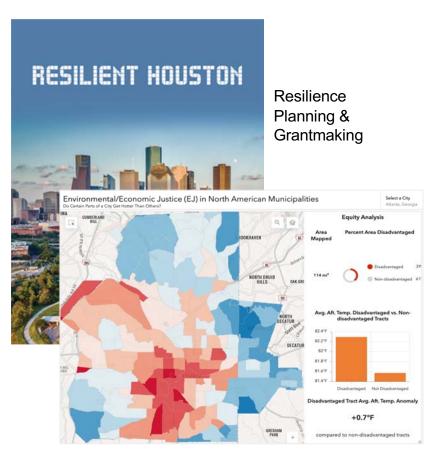
## **Outcomes from Heat Mapping**



Awareness and Advocacy



Community Engagement



**Datasets for Evidence** 

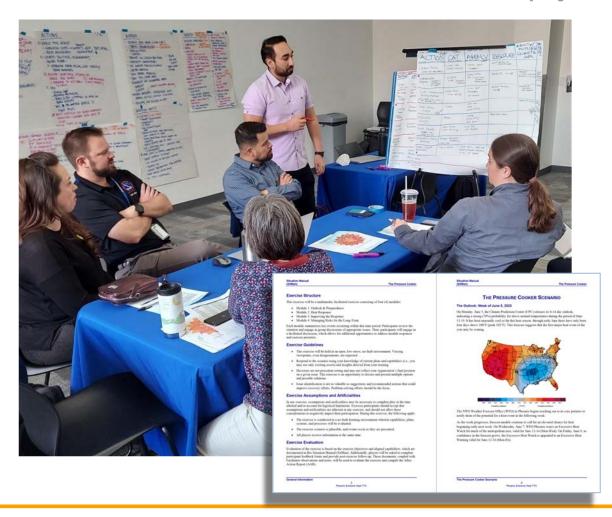


Shade & Smart Surfaces



**Urban Greening** 

#### **NOAA Climate and Equity Pilots**



# NOAA Climate & Equity Roundtable Pilots: Heat

NOAA Regional Coordination Teams, RCSDs & NIHHIS piloted heat tabletop exercises in:

- Las Vegas, NV
- Phoenix, AZ
- Charleston, SC
- Miami, FL

The tabletops span timescales including resilience; they are planned with community-based organizations that serve at-risk groups.

Ex Action: shaded bus stops

# Supporting Local Heat Action Planning, Heat Governance, and Tabletop Exercises

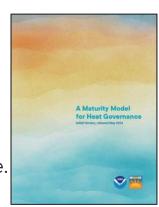


**PARTNERSHIPS & NETWORKS** (SEE FIGURE 3) · Coordination INSTITUTIONS **ASSETS (SEE FIGURE 4)**  Inclusivity (SEE FIGURE 2) · Physical Infrastructure · Event Preparedness and Response · Authority · Natural Infrastructure · Public Communication · Funding · Application of Technical Knowledge · Event Preparedness and Response · Evaluation and Accountability

Heat **tabletop exercises** simulate extreme heat events and inform improvements to preparedness, response and long-term resilience.



The maturity model for heat governance allows leaders and decision-makers to evaluate institutional posture and improve heat governance.





# Center for Collaborative Heat Monitoring



Supports **community science** data collection on extreme heat so communities can observe, monitor and evaluate factors influencing heat risk at a local scale

## Center for Heat Resilient Communities



Determines **best strategies** for mitigating and managing local heat, leveraging federal investments to reduce heat risk, and developing data-driven solutions



## **Stay Connected with NIHHIS**



- Website: HEAT.GOV
- Email: nihhis@noaa.gov
- Newsletter:
  - bit.ly/HeatBeatNewsletter
- **X/Twitter:** @HeatGov