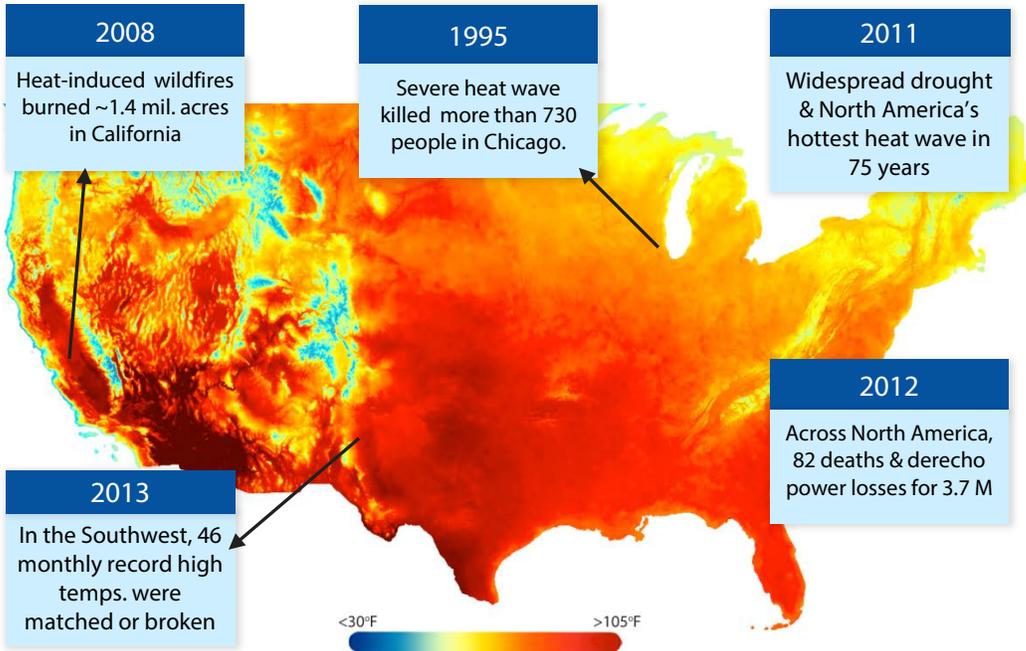




A National Integrated Heat Health Information System

Extreme weather or climate events such as heat waves, drought, or derechos can profoundly affect society and the environment, resulting in loss of life, productivity, property, and natural habitat.

From 1979-2003, **excessive heat exposure caused 8,015 deaths** in the U.S. During that period, more people died from extreme heat than from hurricanes, lightning, tornadoes, floods, and earthquakes combined.



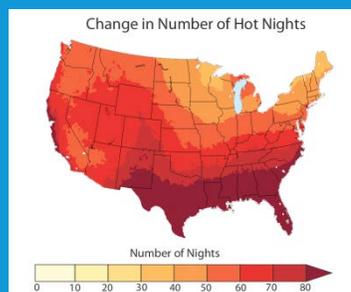
The base map shows projected average maximum temperatures for July 2030 in degrees Fahrenheit under a low emissions scenario (best case scenario). Call out boxes detail devastating effects of past heat waves across the country.

Integrated heat information systems can be **effective tools for reducing illness, death, and loss of productivity** associated with heat waves.



Heat affects urban and rural populations, outdoor workers, pets, the elderly, and events and activities that take place outside.

The latest National Climate Assessment (NCA) found that **extreme heat events will be more frequent, more intense, and longer in duration in the future.** "What now seems like an extremely hot day will become commonplace."



Projected increase in the number of hot nights - when body temperatures would otherwise recover from hot days - for the end of the century (2070-2099) compared to 1971-2000.

Source: CICS-NC RISA, prepared for NCA3

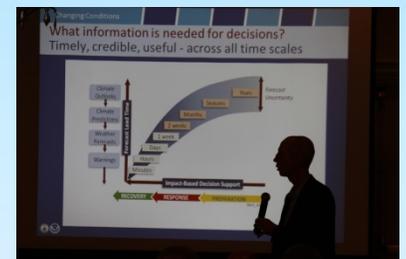
cpo.noaa.gov/NIHHIS



NATIONAL INTEGRATED HEAT HEALTH INFORMATION SYSTEM

A YEAR OF PROGRESS

Launched by **NOAA** and the **CDC** in the summer of 2015, NIHHIS facilitates an **integrated approach to providing a suite of decision support services** that reduce heat-related illness and mitigate other effects of extreme heat.



In July 2015 a kick-off workshop in Chicago strengthened collaboration between domestic and international partners – to understand the **future risk** of extreme heat, **current capabilities** for addressing this risk, and **opportunities to improve preparedness.**

Additional activities spurred learning networks and partnerships with countries such as **India** and **Germany**, NGOs such as the **National Healthcare Coalition** and the **Natural Resources Defense Council**, and interagency partners such as **OSHA** and the **State Department.**

A National Integrated Heat Health Information System

Working together, NOAA and the CDC deliver information to help the nation understand, anticipate, and respond to increased heat waves and heat-related events.

Define Demand

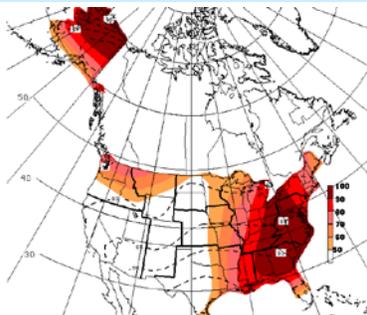


NOAA and the CDC sustain continuous engagement between climate and health communities to **identify needs, develop and evaluate solutions, and inform decisions.**

LINKS AND RESOURCES

- **RISA and Heat Health**
In New York City: www.CCRUN.org
In the Great Lakes: www.GLISA.umich.edu
In Arizona: www.CLIMAS.arizona.edu
- **CDC Climate and Health Program:**
www.CDC.gov/climateandhealth
- **NWS Early Warning Coordination Meteorologists:**
www.stormready.noaa.gov/contact.htm

Enhance Forecasts



6-10 day forecast from NCEP

NOAA works to **enhance current heat forecasts** based on user need and epidemiological requirements to extend heat projections from weeks to months and beyond.

LINKS AND RESOURCES

- **Local Temperature Forecasts:** www.weather.gov
- **Modeling, Analysis, Predictions, & Projections Program (MAPP):** bit.ly/MAPPprojects
- **Madden-Julian Oscillation:** bit.ly/MJOandTemp
- **Climate Prediction Center Temperature Outlooks:**
www.CPC.NCEP.NOAA.gov

Observe & Monitor



NOAA and the CDC work to sustain Earth observations and biosurveillance that support **improved understanding of the role of climate on extreme heat** and enhance operational efforts.

LINKS AND RESOURCES

- **Climate Observations and Monitoring (COM):** bit.ly/ClimateObs
- **Climate Variability & Predictability Program (CVP):** bit.ly/AboutCVP
- **CDC National Environmental Public Health Tracking Program:**
bit.ly/CDC-NEHTP

Understand & Communicate



NOAA and the CDC **enhance understanding** and impact of extreme heat events across time scales, **builds capacity** across climate and public health communities, and develops timely and accessible communication tools **to inform preparedness and adaptation.**

LINKS AND RESOURCES

- **U.S. Climate Resilience Toolkit - Human Health:**
toolkit.climate.gov/topics/human-health
- **Regional Integrated Sciences and Assessment (RISA):** bit.ly/CPORISA
- **Coastal and Ocean Climate Applications Program (COCA):** bit.ly/CPO-COCA
- **Summer Weather Safety Campaigns:**
www.weather.gov/heat
- **Global Framework for Climate Services:**
gfcs.wmo.int/health

NIHHIS Pilots and Network



The domestic NIHHIS pilots (orange) and international network (red) aim to facilitate shared learning and consistent approaches to managing heat extremes. One or more of the following outcomes are anticipated from each pilot system:

Heat Action Plans detailing responsibilities and processes

Improved early warning & surveillance products customized for regional risks

Sectoral decision-making calendars and improved long-term heat outlooks

Communications strategies for and analysis of all vulnerable populations