

Climate Change and Health Equity: How HHS is making the connection

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National Advisory Council on the National Health Service Corps

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Office of
Climate Change
and Health Equity





<https://insideclimatenews.org/news/21062023/texas-heat-wave-records-climate-change/>



<https://www.wsls.com/news/national/2023/08/11/fast-moving-hawaii-fires-will-take-a-heavy-toll-on-the-states-environment/>

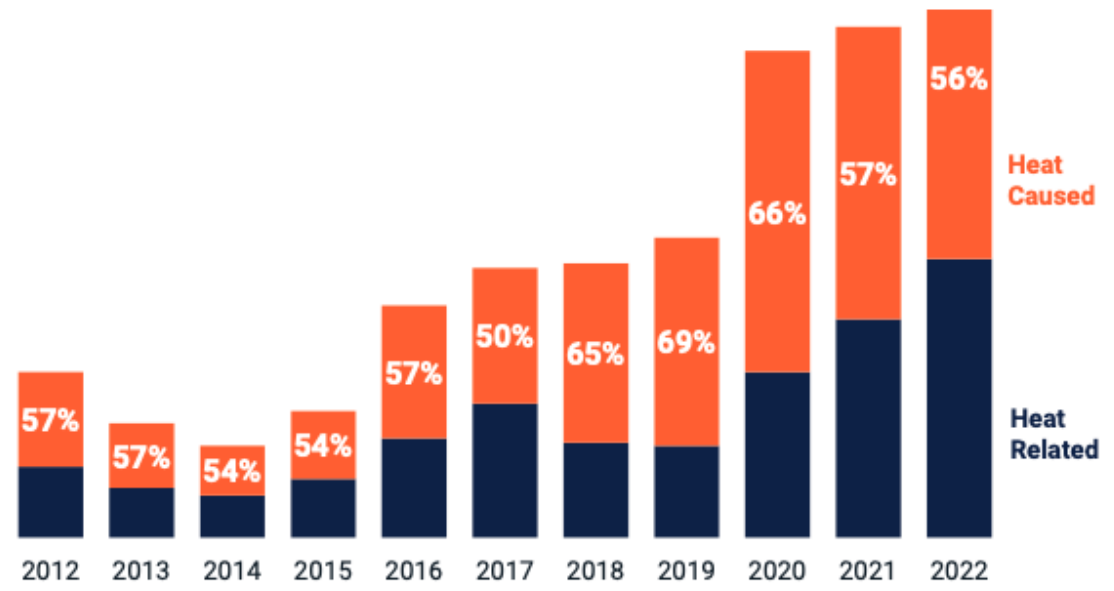


<https://www.washingtonpost.com/weather/interactive/2023/photos-hilary-tropical-storm-california/>

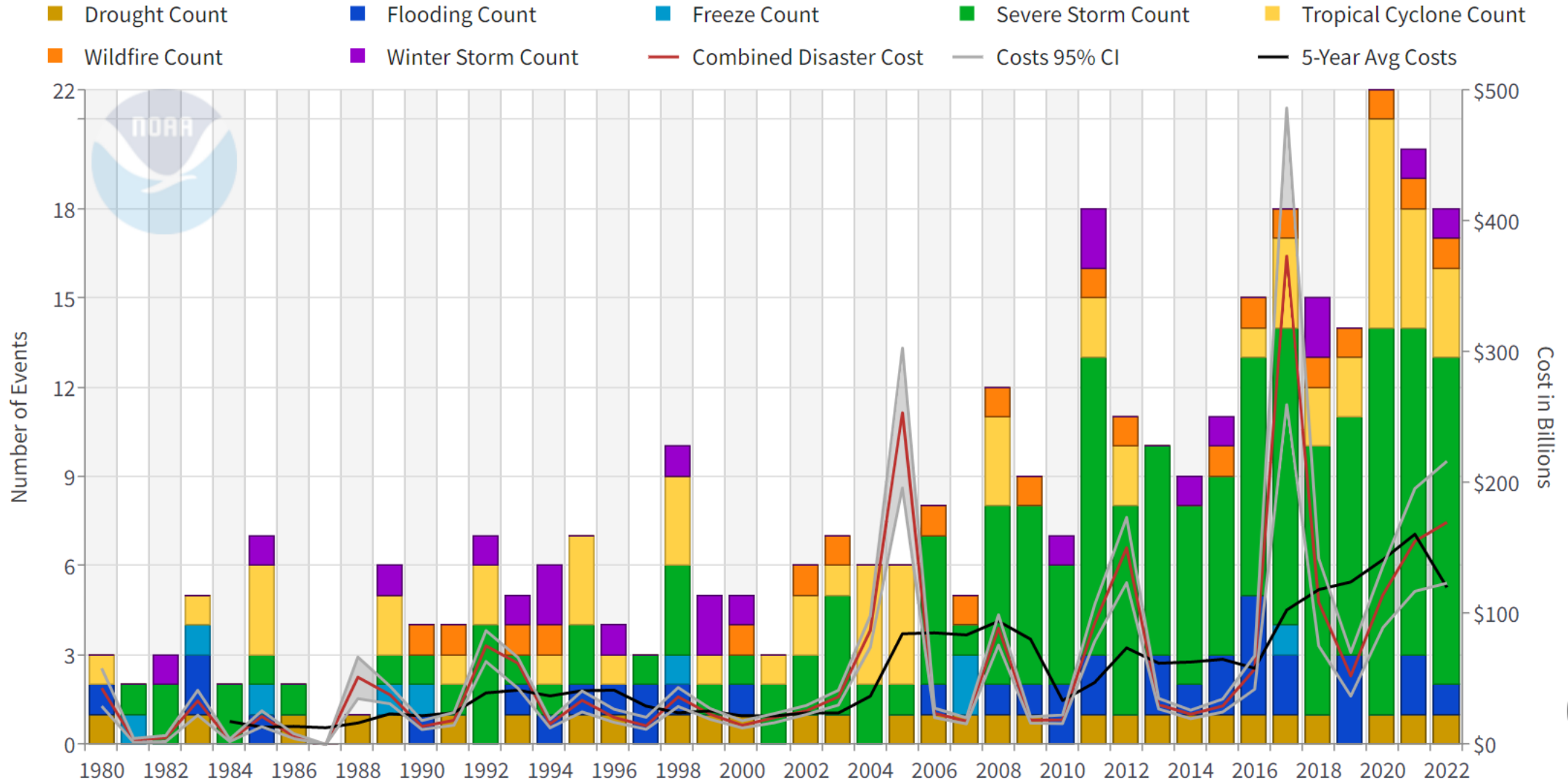
Maricopa County identified a total of 425 heat-associated deaths occurring in 2022.
 This represents a twenty-five percent increase from last year



In recent years, most deaths have been classified as heat-caused.
 This year, environmental heat was directly involved in the sequence of events causing death in more than half of all heat-associated death cases.

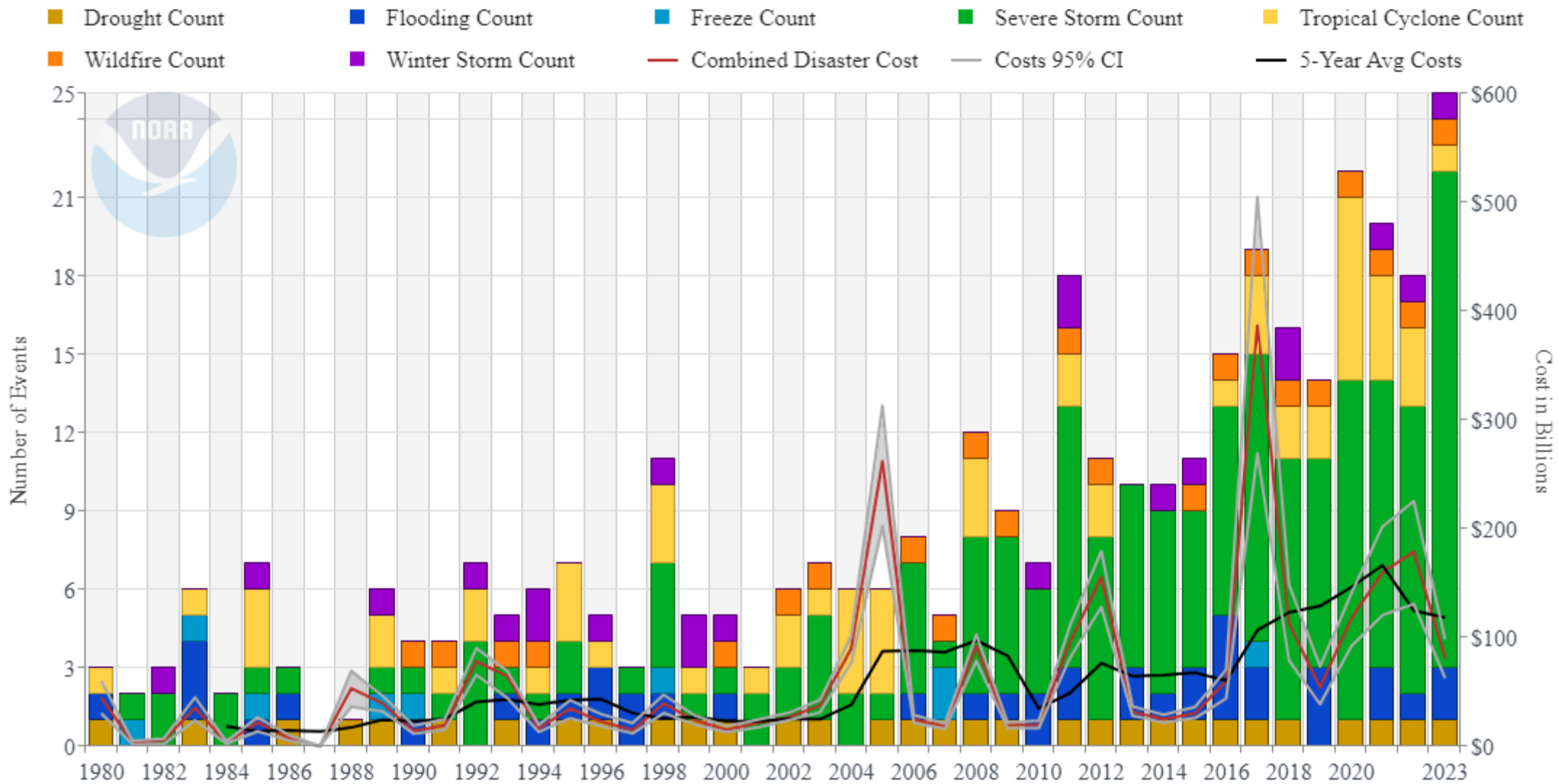


United States Billion-Dollar Disaster Events 1980-2022 (CPI-Adjusted)



<https://www.ncei.noaa.gov/access/billions/time-series>

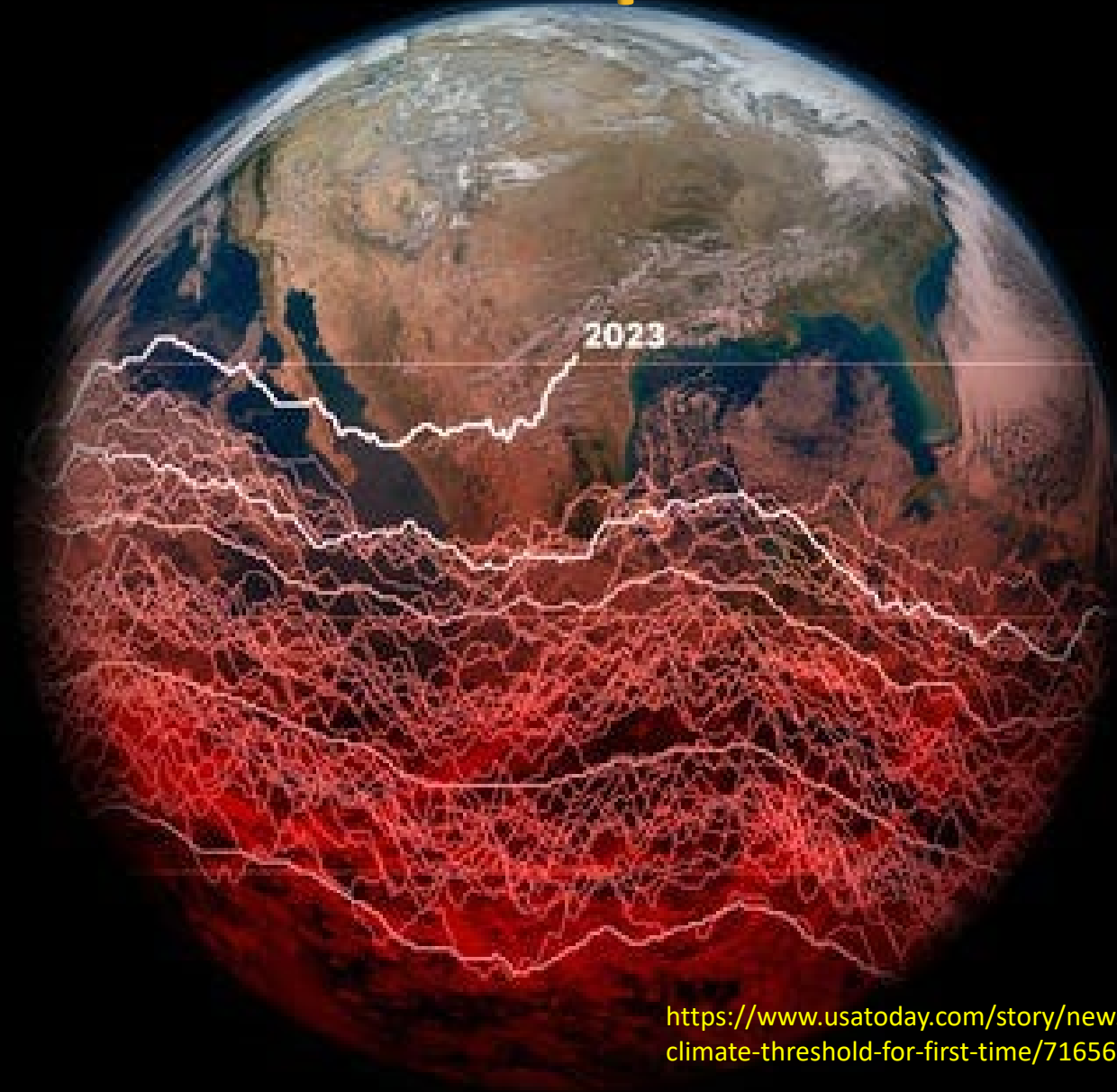
United States Billion-Dollar Disaster Events 1980-2023 (CPI-Adjusted)



Updated: December 8, 2023

<https://www.ncei.noaa.gov/access/billions/time-series>

Houston, we have a problem



<https://www.usatoday.com/story/news/weather/2023/11/20/earth-briefly-surpasses-key-climate-threshold-for-first-time/71656639007/>

Climate Change and the HHS Mission

Climate change poses current and increasing threats to human health. As the climate continues to warm, the risks to human health will grow, exacerbating existing health threats and creating new public health challenges.

HHS is committed to taking actions across the whole department to protect the health and wellbeing of all people, especially those most vulnerable.



Climate change

Health risk

Vulnerability factors

- Demographic
- Geographical
- Biological factors & health status
- Sociopolitical
- Socioeconomic
- Health system capacity
- Gender & equity

Climate-related hazards

- Extreme weather events
- Heat
- Sea level rise
- Air pollution
- Vector distribution & ecology
- Water scarcity
- Reduced food production

Exposure

- People & communities
- Health workforce
- Infrastructure
- Energy systems
- Water systems
- Food systems
- Health systems

Environmental threats and GHG emissions

Health outcomes



Injury and mortality from extreme weather events



Heat-related illness



Respiratory illness



Water-borne diseases and other water-related health impacts



Zoonoses



Vector-borne diseases



Malnutrition and food-borne diseases



Noncommunicable diseases (NCDs)



Mental and psychosocial health

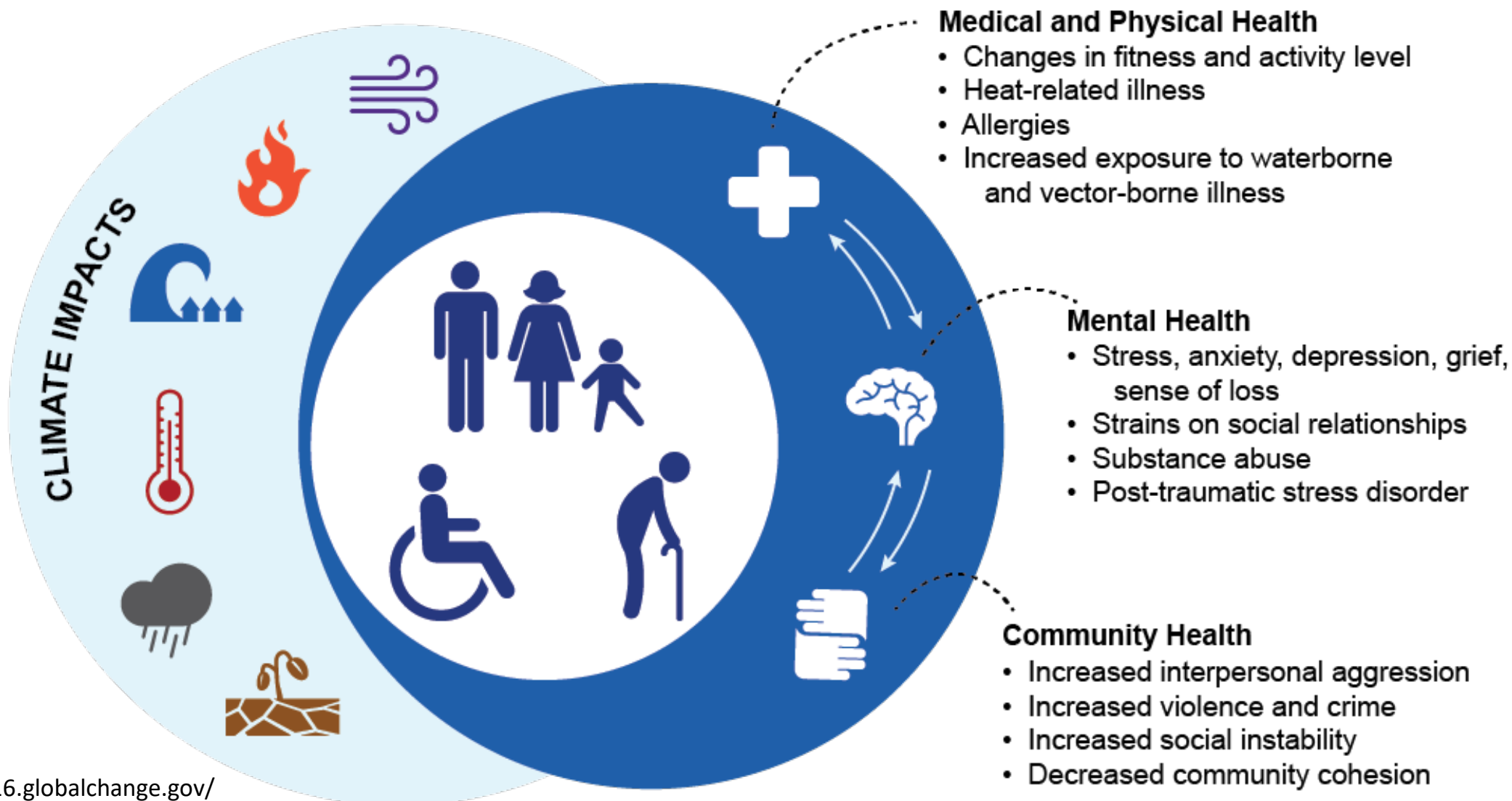


Impacts on health care facilities



Effects on health systems

Impact of Climate Change on Physical, Mental, and Community Health



ENVIRONMENTAL INJUSTICE IN THE US

SYSTEMIC RACISM

REDLINING



EXTREME WEATHER RISK



UNSAFE WATER



HEAT ISLANDS



ENERGY, HOUSING, AND FOOD INSECURITY

ORIGINS

IMPACTS



DISINVESTMENT



CLIMATE MIGRATION



POLLUTION EXPOSURE

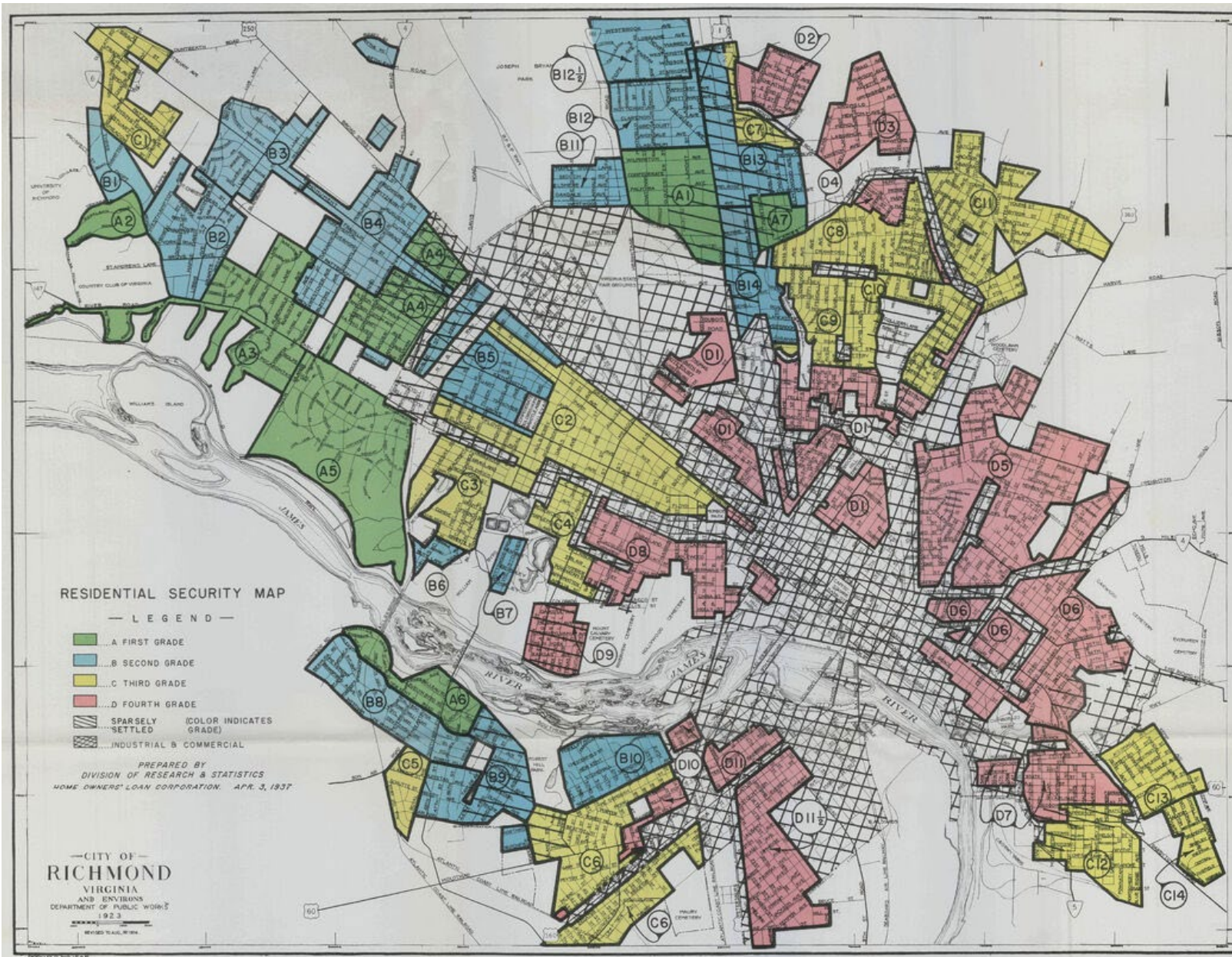


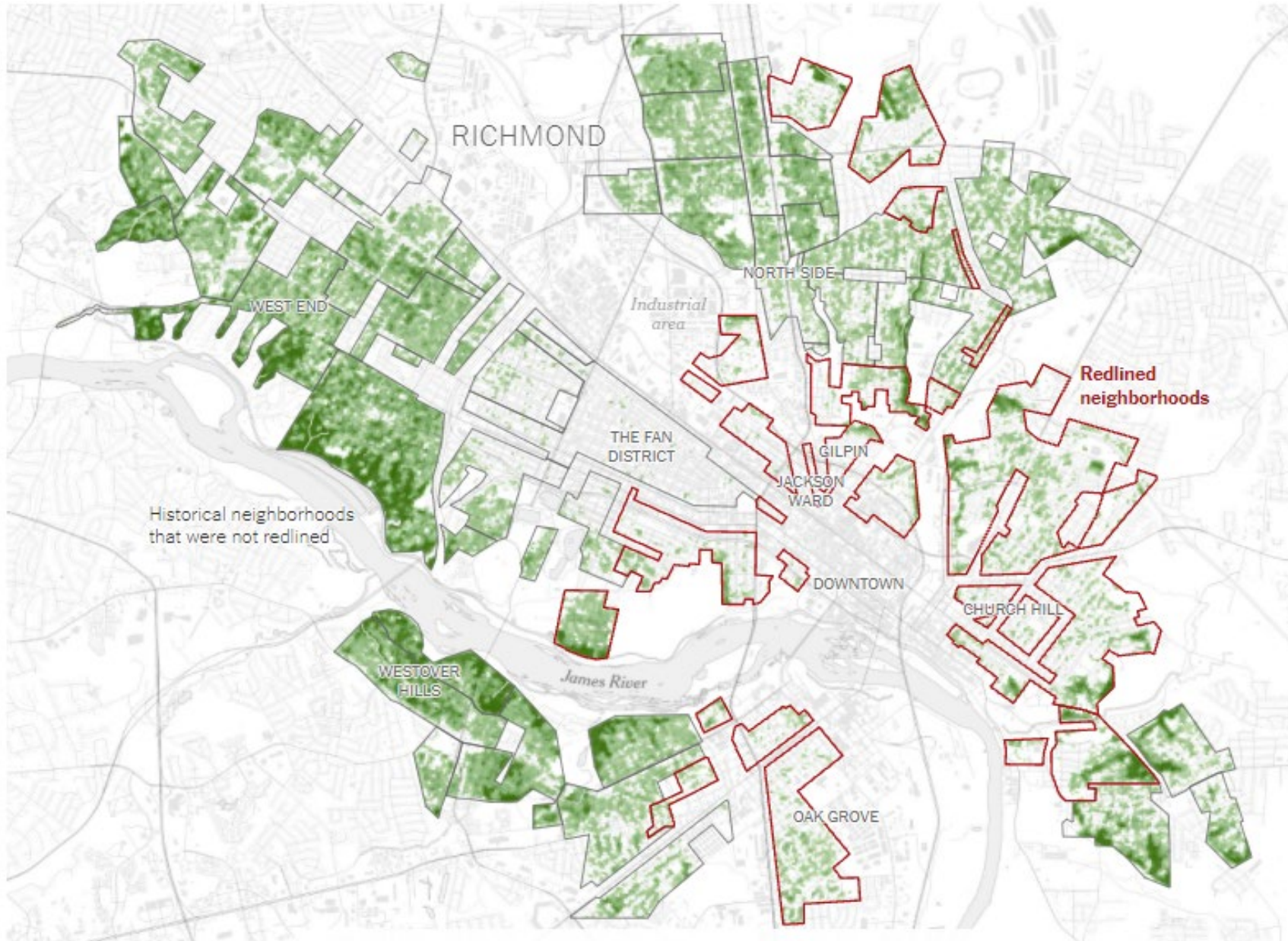
WORSENERD MENTAL HEALTH

History of Redlining

1923, City of
Richmond, Virginia
– “Residential
Security Map”

Source: Nelson, Winling,
Marciano, Connolly, et
al., [Mapping Inequality](#)





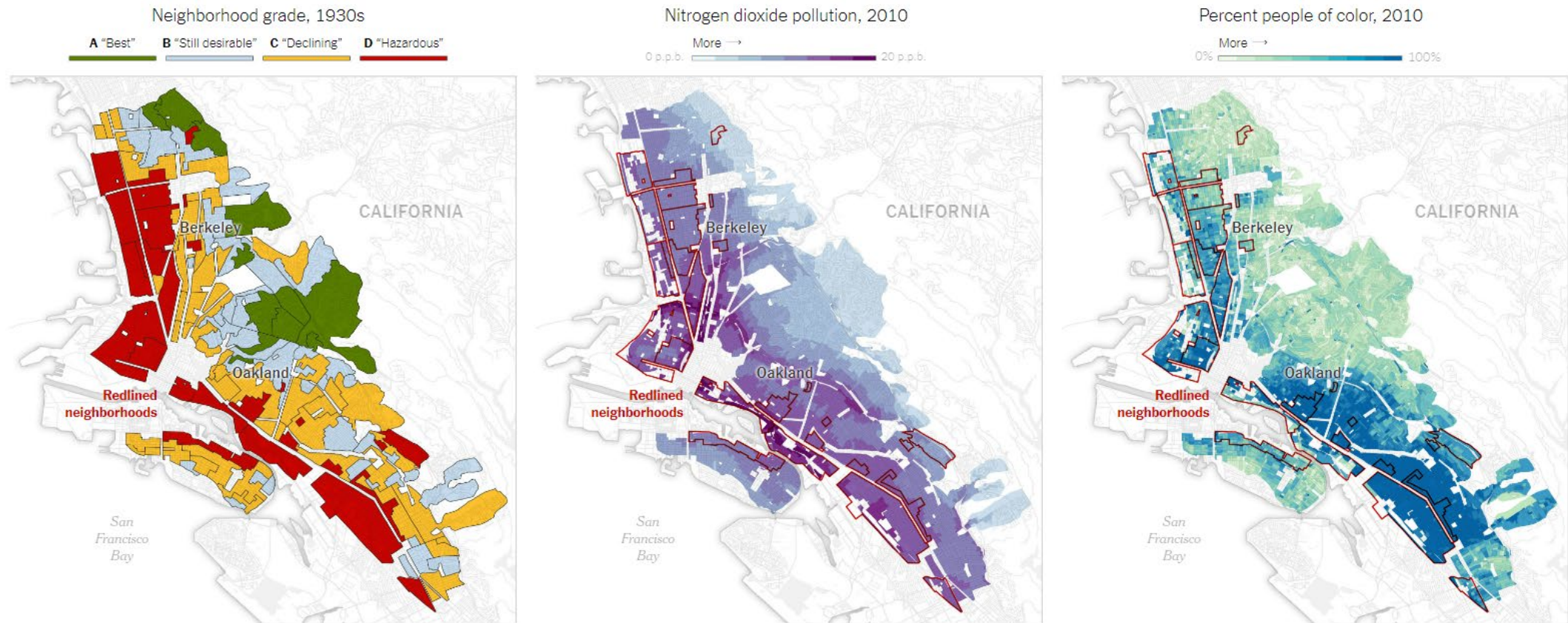
Formerly redlined areas have less **tree cover** today than areas that weren't redlined.

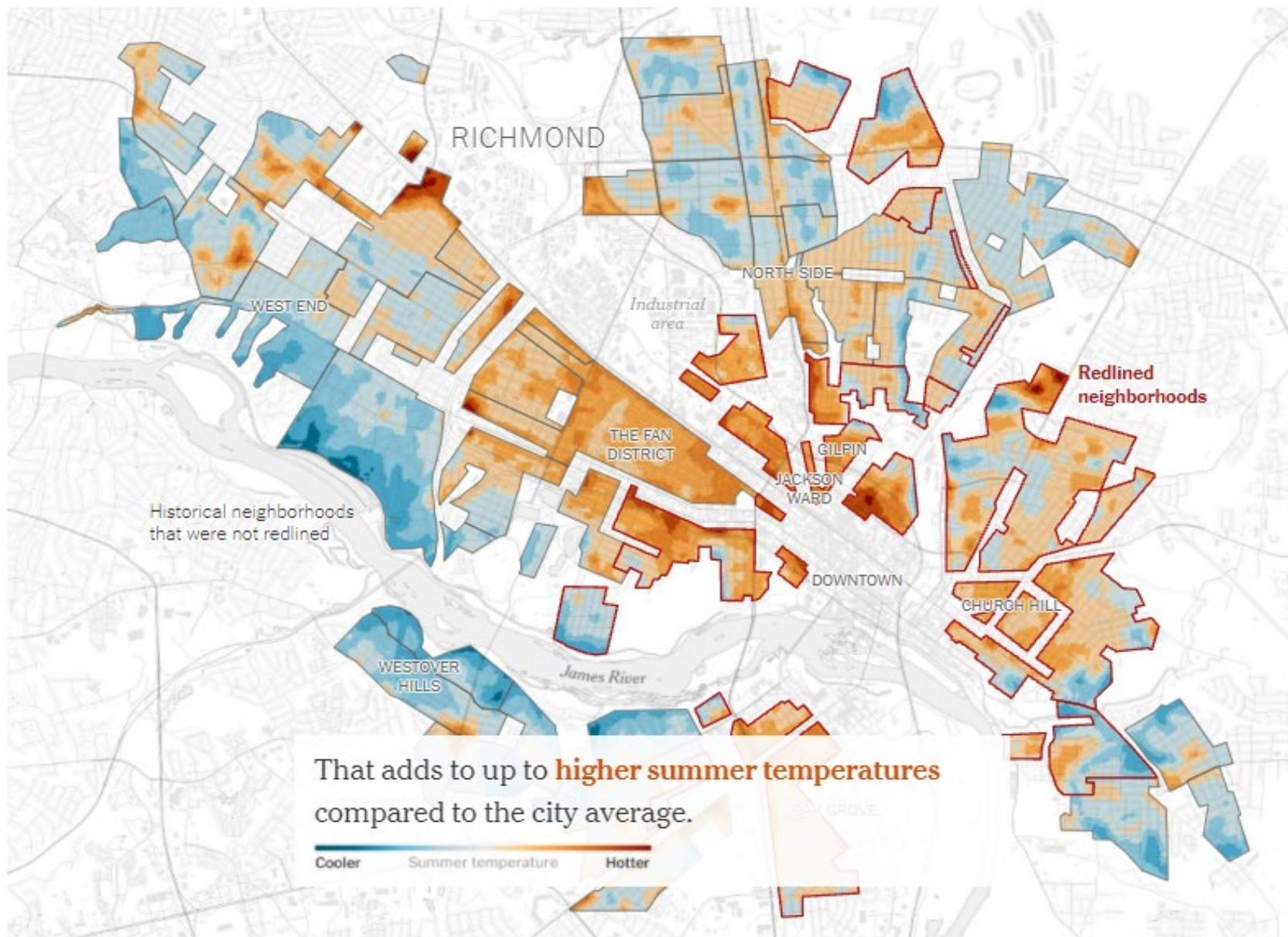
Source: New York Times. How Decades of Racist Housing Policy Left Neighborhoods Sweltering, Plumer and Popovich, 2020 from Hoffman, Shandas, and Pendleton, Climate, 2020



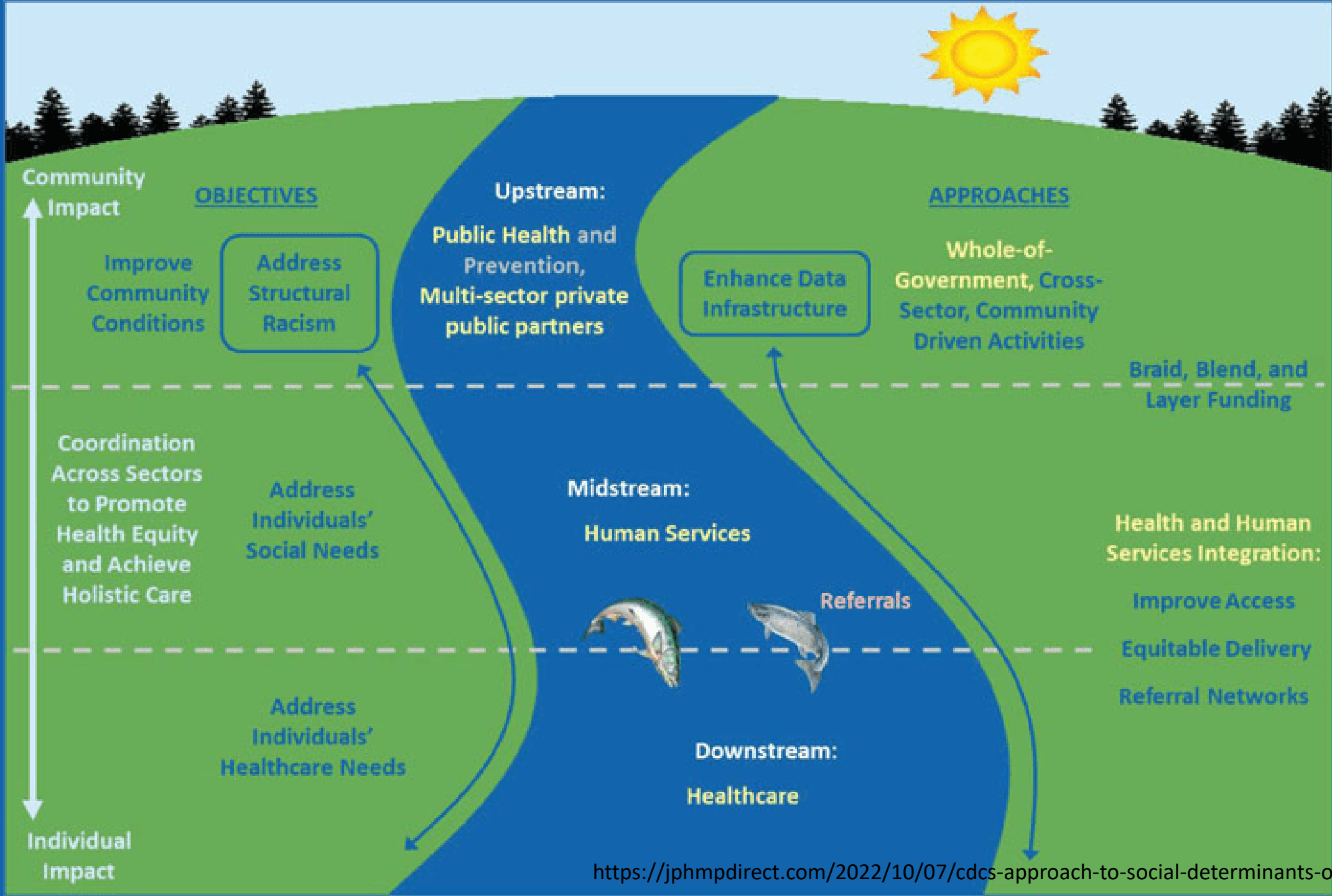
Source: New York Times. How Decades of Racist Housing Policy Left Neighborhoods Sweltering, Plumer and Popovich, 2020 from Hoffman, Shandas, and Pendleton, Climate, 2020

Housing policy, race, and air pollution





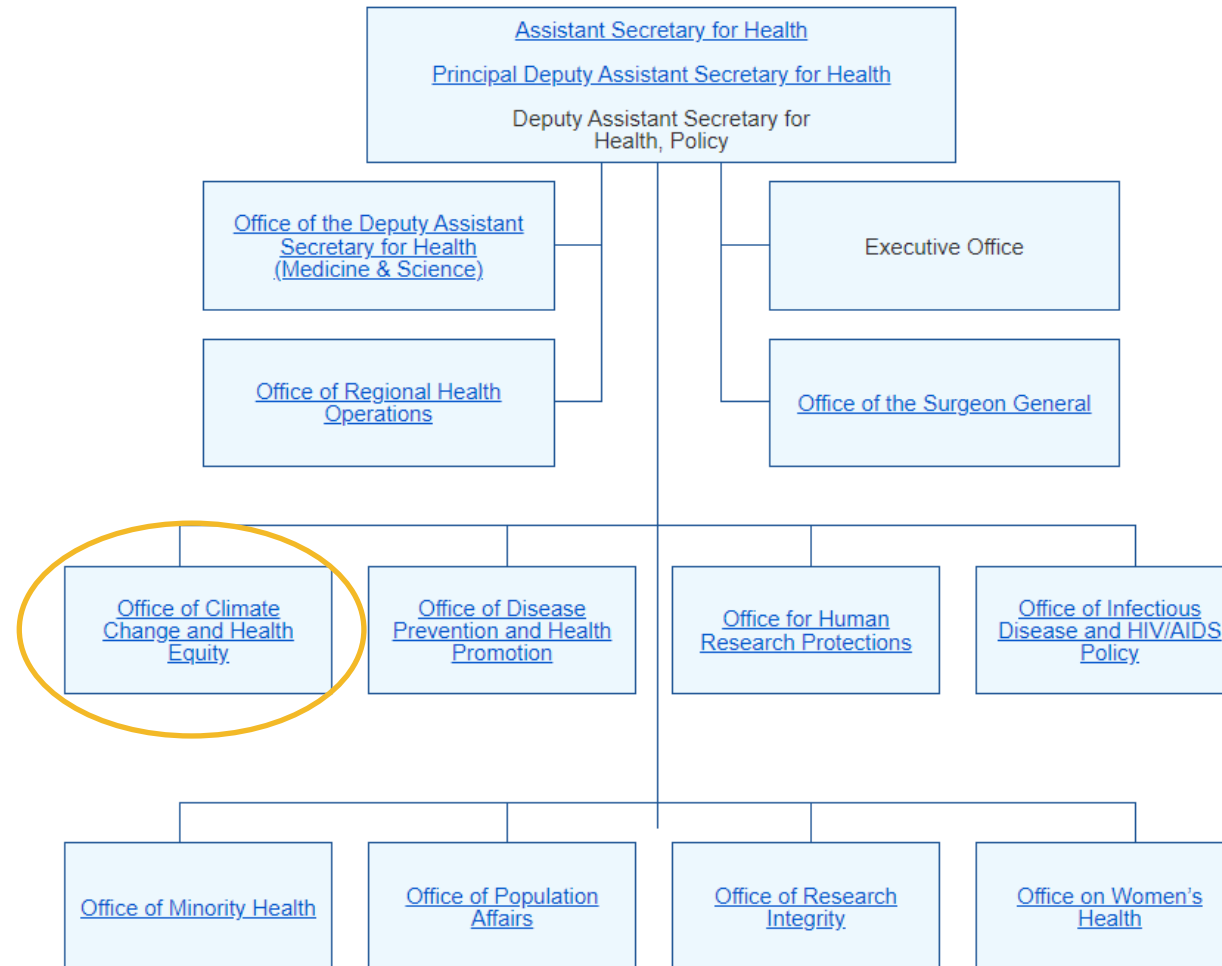
Source: New York Times. How Decades of Racist Housing Policy Left Neighborhoods Sweltering, Plumer and Popovich, 2020 from Hoffman, Shandas, and Pendleton, Climate, 2020



The Office of Climate Change and Health Equity (OCCHE)



New Office Within the Office of the Assistant Secretary for Health

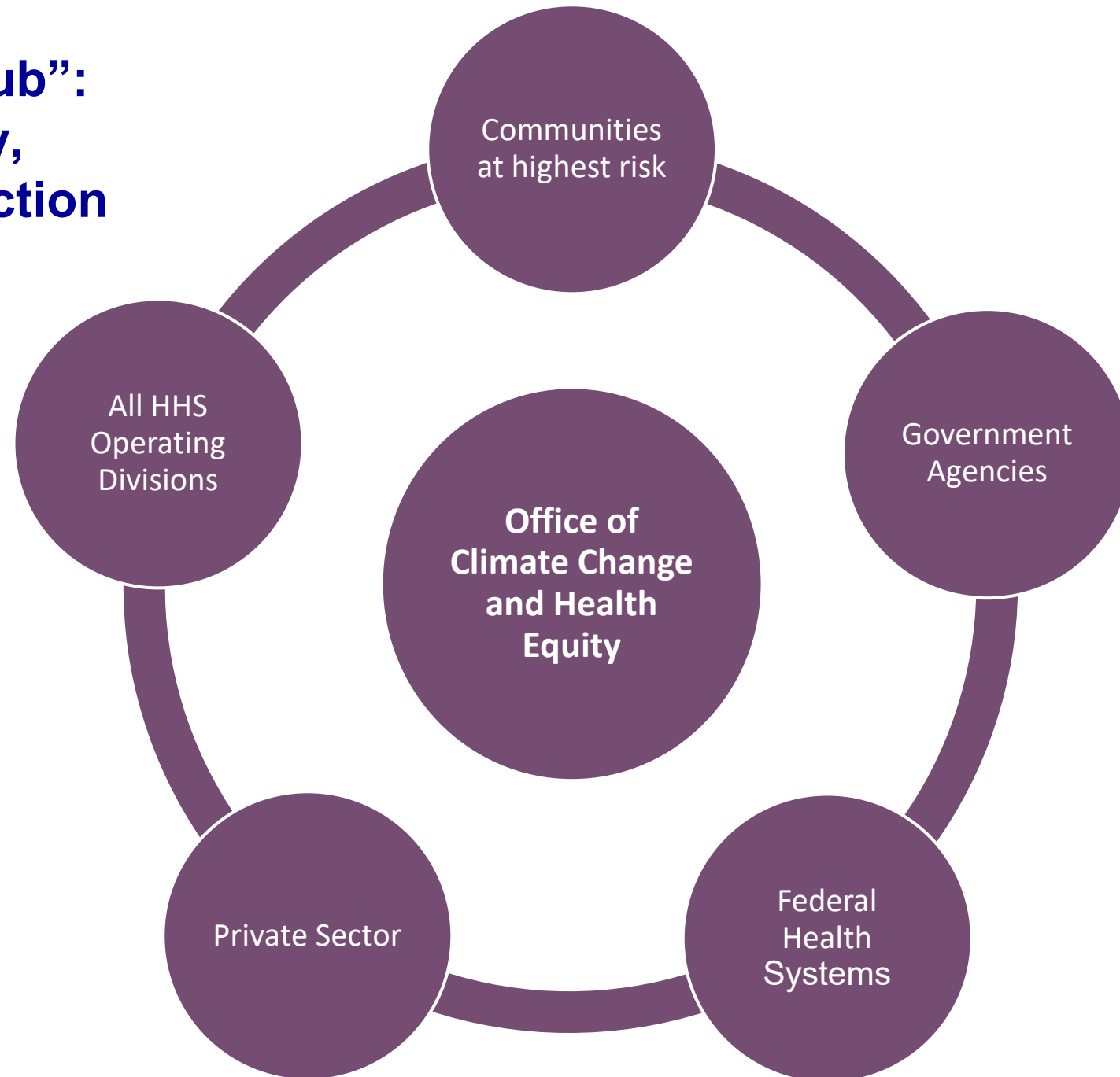


Vision for Climate Health and Equity

In the next five years, communities and the healthcare organizations that serve them are transformed...

- Every community and care provider in every U.S. geography is prepared for both disruptive and chronic climate impacts on its most vulnerable populations.
- Every healthcare institution is prepared for long-term operation in the face of climate catastrophes.
- Every hospital and health system in the United States is publicly tracking its greenhouse gas emissions and is on a path to net zero by tackling Scope 1, Scope 2 and Scope 3 emissions.
- Public sector investments to reduce greenhouse gas emissions and fossil fuel dependence address improvement of health and health equity.
- *All HHS Operating Divisions and other relevant agencies are contributing toward these goals...*

The OCCHE “Hub”: Setting Strategy, Coordinating Action



How has OCCHE Approached its Mission So Far?

- 1. Set the foundation for climate change and environmental justice work across all of HHS**
- 2. Articulate the vision by developing and sharing clear objectives**
- 3. Develop supports for internal and external stakeholders**

Setting the Foundation



OASH

Office of the
Assistant Secretary
for Health

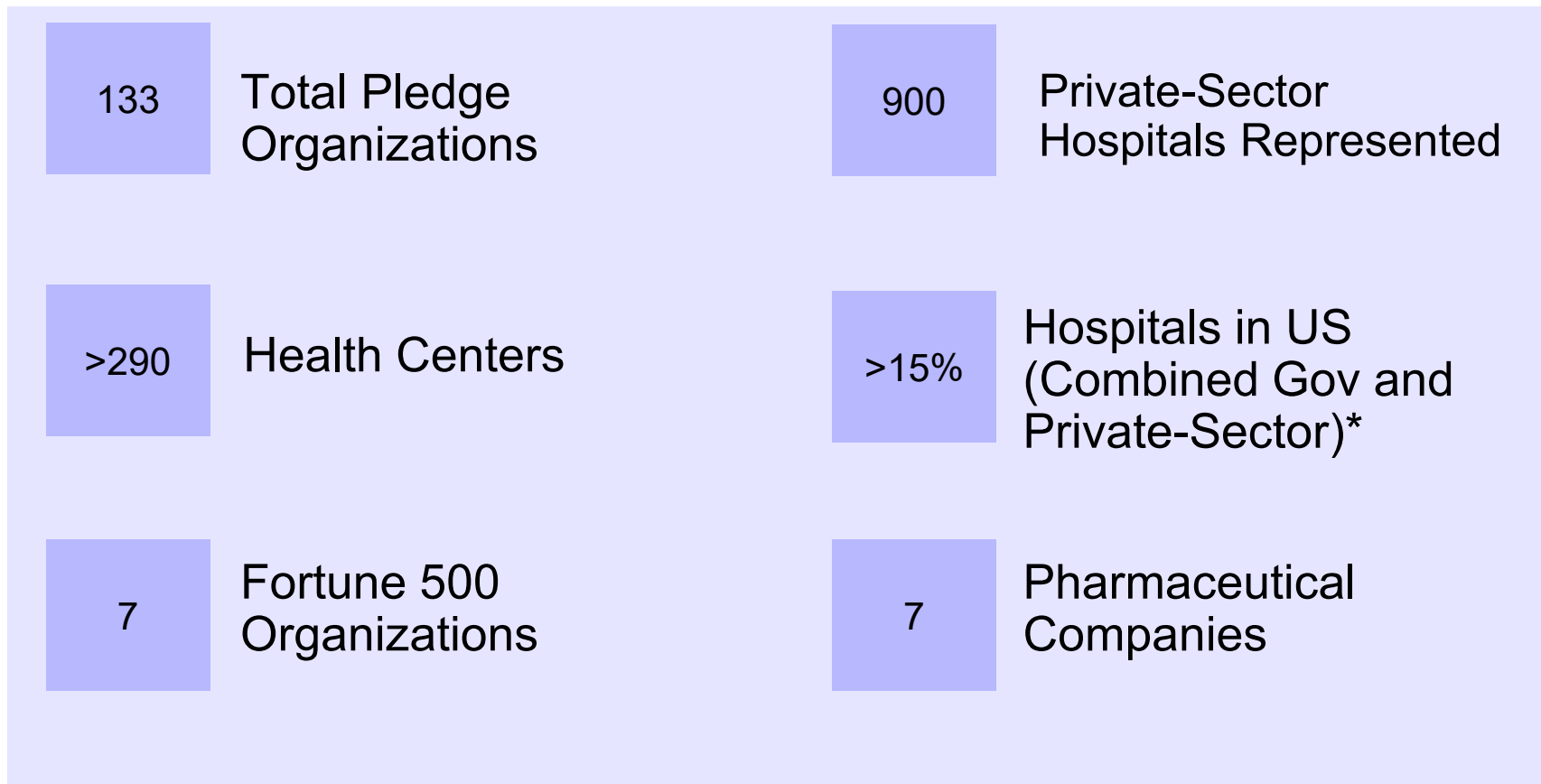
White House/HHS Health Sector Climate Pledge

1. Reduce organizational emissions by 50% by 2030 and achieve net-zero by 2050, publicly accounting for progress on this goal.
2. Designate an executive-level lead for work on reducing emissions and conduct an inventory of Scope 3 (supply chain) emissions by the end of 2024.
3. Develop and release a climate resilience plan for continuous operations by the end of 2023, anticipating the needs of groups at disproportionate risk of climate-related harm.



June 30 White House Event

White House/HHS Health Sector Climate Pledge as of November 2023



**Including federal health systems, over 1,140 hospitals have made the Pledge commitments*

Articulating the Vision



The Short and the Long of it: the HHS CCHE Strategy

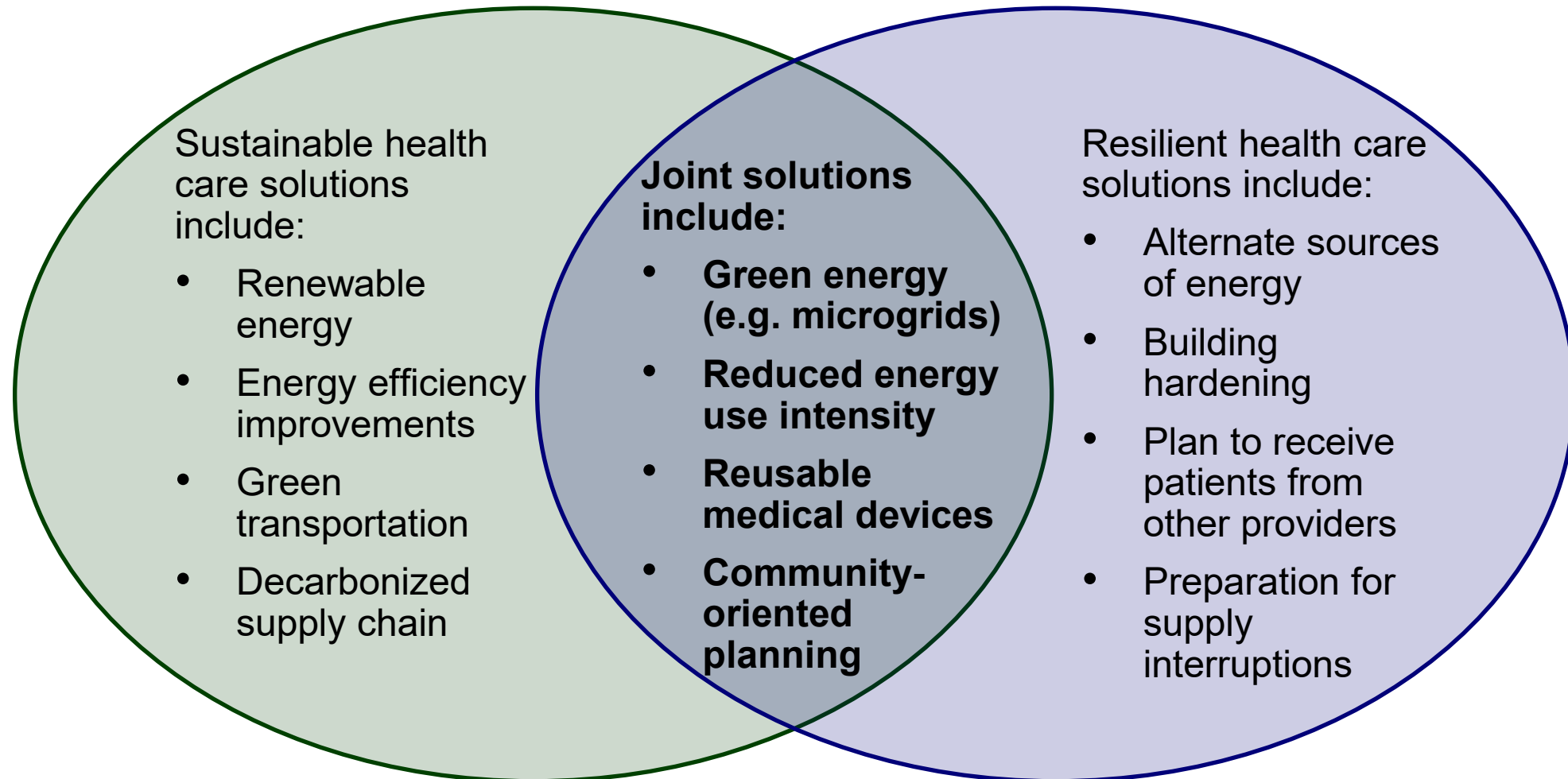
- The Short
 - **40 Accomplishments**
 - **50 Actions planned for the next 1-2 years**
- The Long
 - **8 pillar framework**
 - **Research to fill gaps in evidence base**
 - **Consensus development of indicators and measures of quality**
 - **Incorporating decarbonization and resilience in health sector technical assistance**
 - **Exploring authorities for policies for reporting and emissions reduction**



Eight pillar framework for health sector transformation



Health Care Sustainability Supports Health Care Resilience



The Health Sector Resilience Ecosystem



National Health Security Strategy (ESF-8)

Hospital Preparedness Program (HPP)

>85% of nation's acute care hospitals
326 Health Care Coalitions (HCC) across the nation
Secondary facility types optional

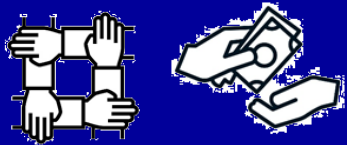
MIND THE GAP!

Community Health Centers/FQHC's, ambulatory care, residential facilities lack direct support for preparedness

Public Health Emergency Preparedness Program (PHEP)

62 recipients in 50 states, 4 cities and 8 territories
Funds can be shared with local HD's, tribes and tribe-serving organizations

CMS Emergency Preparedness Rule



Conveners, funders, advisors

- HUD Promise Zone, or State/Local Transformative Community Programs
- Technical assistance identifying, applying for, and braiding funding and resources
- Data-driven decision making

Emergency preparedness/ services

- Mass testing/vaccination sites
- Cooling and clean air shelter
- Resource distribution point

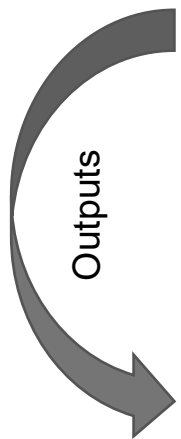
Public health and medical services

Co-locate clinical services and public health services

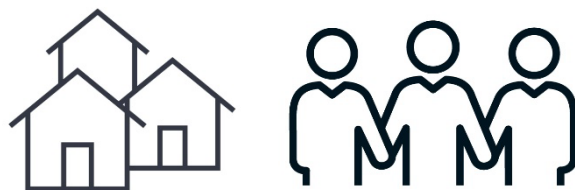
State and local government & services

- Utilities prioritization/microgrid
- Social services
- Active transportation
- Housing/employment assistance

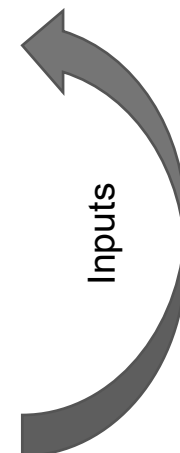
- Services and programming
- Communications
- Building and landscape
- Power systems
- Operations
- Social Capital and RESILIENCE



Climate health resilience hub



Community



Community-identified needs. Ex:

- Adult education
- Counseling services
- Job training/placement
- Meal services
- After-school programming

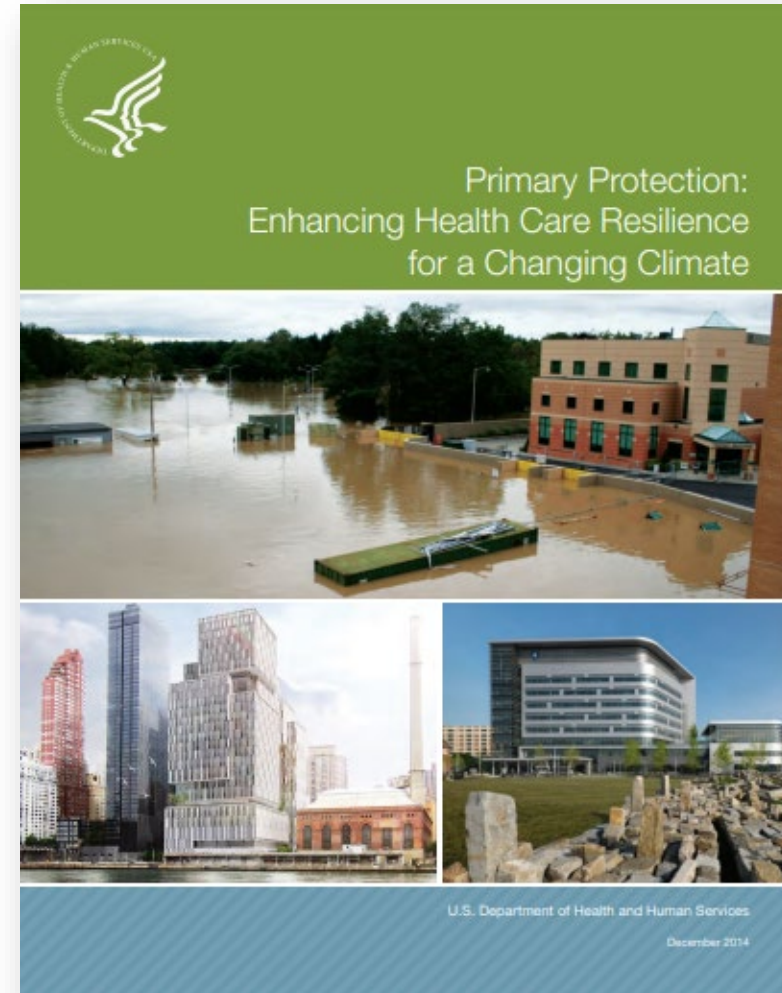
Slide credit:
Michael Huff, Jason Wilken

Supporting Change



Support for Community Health Centers' Climate Resilience

- HRSA National Training & Technical Assistance Partnerships
 - **Preparedness for Emergencies and Environmental Impacts on Health**
- Workforce training
- Support for solar backup power & access to community solar
- Integrate protection from climate-related hazards in clinical care coordination to address SDOH
- Incorporate safety net health services in community climate resilience hubs



Resources for Decarbonization and Resilience

Compendium of Federal Resources for Health Sector Emissions Reduction and Resilience

This Compendium of Federal Resources features funding opportunities, tools, and supports from the federal government that can assist the health sector in the important work of climate resilience and greenhouse gas emission reduction. It is organized in six sub-sections that map to key steps in a health organization's journey to meet the challenges of climate change. These steps align closely with the commitments of the [White House-HHS Health Sector Climate Pledge](#).

Each subsection notes relevant tools and resources from the federal government that can assist a health sector organization in taking action. Resources are divided into the categories "General Guidance and Tools" and, where applicable, "Financial Resources, Funding Opportunities and In-Kind Supports." In some cases, programs and policies are further divided by the population or community they are most applicable to. This compendium also notes relevant free resources from other organizations active in the space.

The Compendium includes programs and policies made possible by the landmark Inflation Reduction Act (IRA), which provides billions of dollars in incentives, grants, and loans for organizations to make significant investments in resilient infrastructure, renewable energy, and operational efficiency. A more complete guide to these opportunities – [OCCH's Quickfinder for Leveraging the IRA for the Health Sector](#) – is also available. Many of these programs and policies are - or will be - explored more deeply in OCCH's [webinar series on Accelerating Healthcare Sector Action on Climate Change and Health Equity](#) in the coming months.

Resources for Climate Resilience and Emissions Reduction

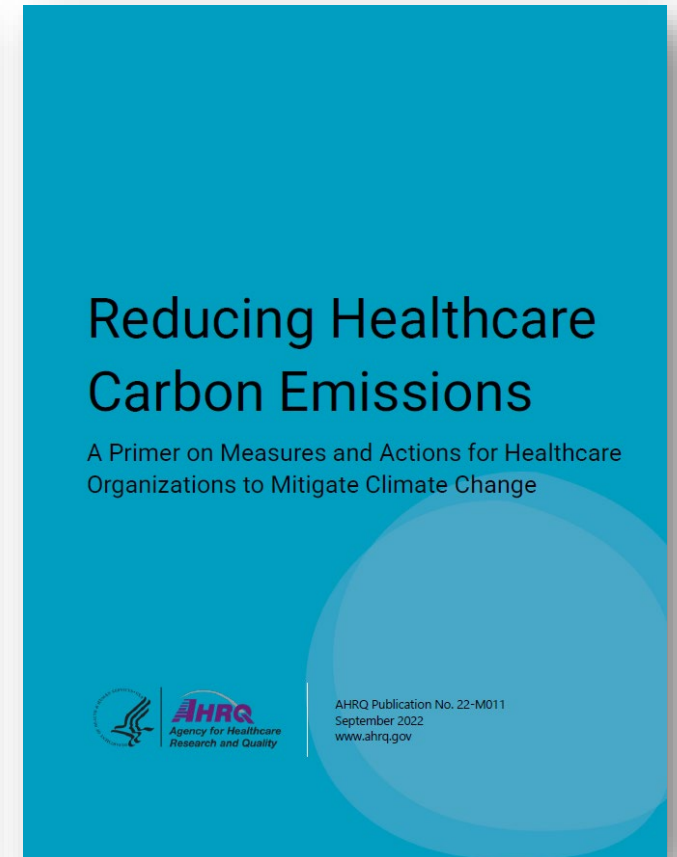
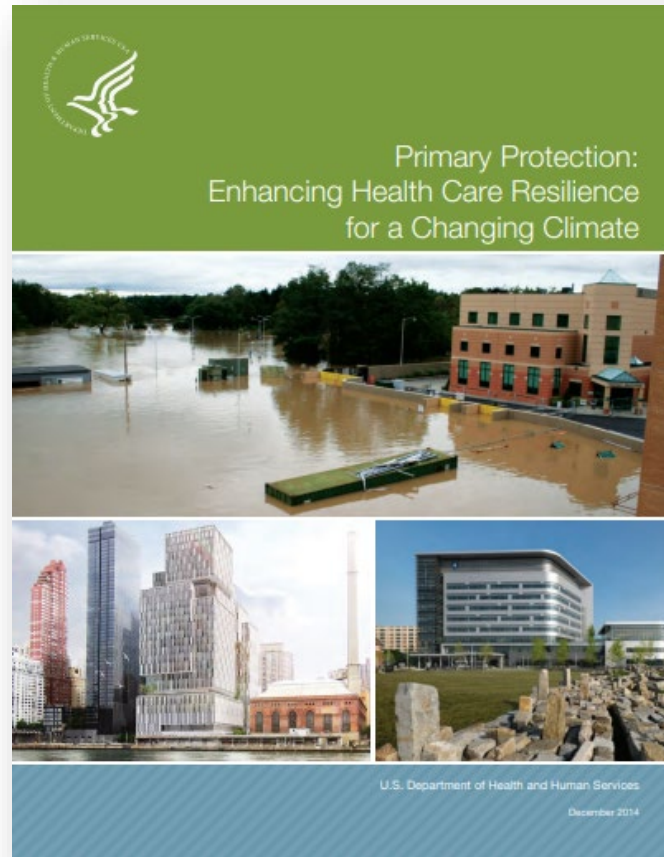
OCCH has organized the resources that follow into six subsections corresponding to key actions organizations are likely to take in their work to address the challenges of climate change. These actions need not be followed in order. OCCH also notes that while a resource may apply to multiple areas, each item has only been included once where it is considered most relevant.

1. Engaging the C-Suite and Board

These resources should help an organization's leadership to become more familiar with the challenges of resilience and emissions reduction and opportunities for action.

General Guidance and Tools:

Clean Energy Economy: A Guidebook to The Inflation Reduction Act's Investments in Clean Energy and Climate Action +



Health Sector Resource Hub

The Office of Climate Change and Health Equity (OCCHE) Health Sector Resource Hub is a place where organizations committed to becoming more resilient and sustainable can find helpful resources and supports.

OCCHE envisions an American health sector that both: (1) adapts to increased crises and chronic stressors in service of its most vulnerable populations and (2) uses the best available evidence and technology to mitigate its own emissions. However, despite a growing recognition of the health problems associated with climate change and the need for action, many organizations – and particularly those serving the most at-risk communities – struggle to make investments in sustainability and resilience because of insufficient funding.

All federal resources and opportunities



Compendium of Federal Resources for the Health Sector

Quickfinder for Leveraging the IRA for the Health Sector



Inflation Reduction Act resources

Webinars



Accelerating Healthcare Sector Action Webinar Series

Protecting Vulnerable Patient Populations from Climate Hazards: A Referral Guide for Health Professionals

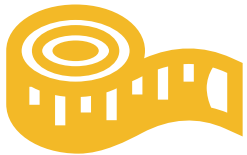


Referral guide (just released)

The Resource Hub is designed to help the health sector understand what resources, tools, and informational materials are available to accelerate the important work of emissions reduction and climate resilience. It includes the Compendium of Federal Resources, which reviews the relevant programs and policies and maps them to key steps in a health organization’s journey to meet the challenges of climate change. These steps align closely with the commitments of the [White House-HHS Health Sector Climate Pledge](#). One important tool featured in the Compendium is [*Guidance for the Health Sector - PDF](#) on using the Environmental Protection Agency’s free benchmarking tool ENERGY STAR® Portfolio Manager to track building-related energy and greenhouse gas (GHG)

OCACHE IRA Catalytic Program Aims

Self-Assessment



Define & prioritize opportunities for energy efficiency, renewable energy, and climate resilience

Understand IRA Opportunities



Identify corresponding IRA programs that can support those initiatives

Navigate Applications

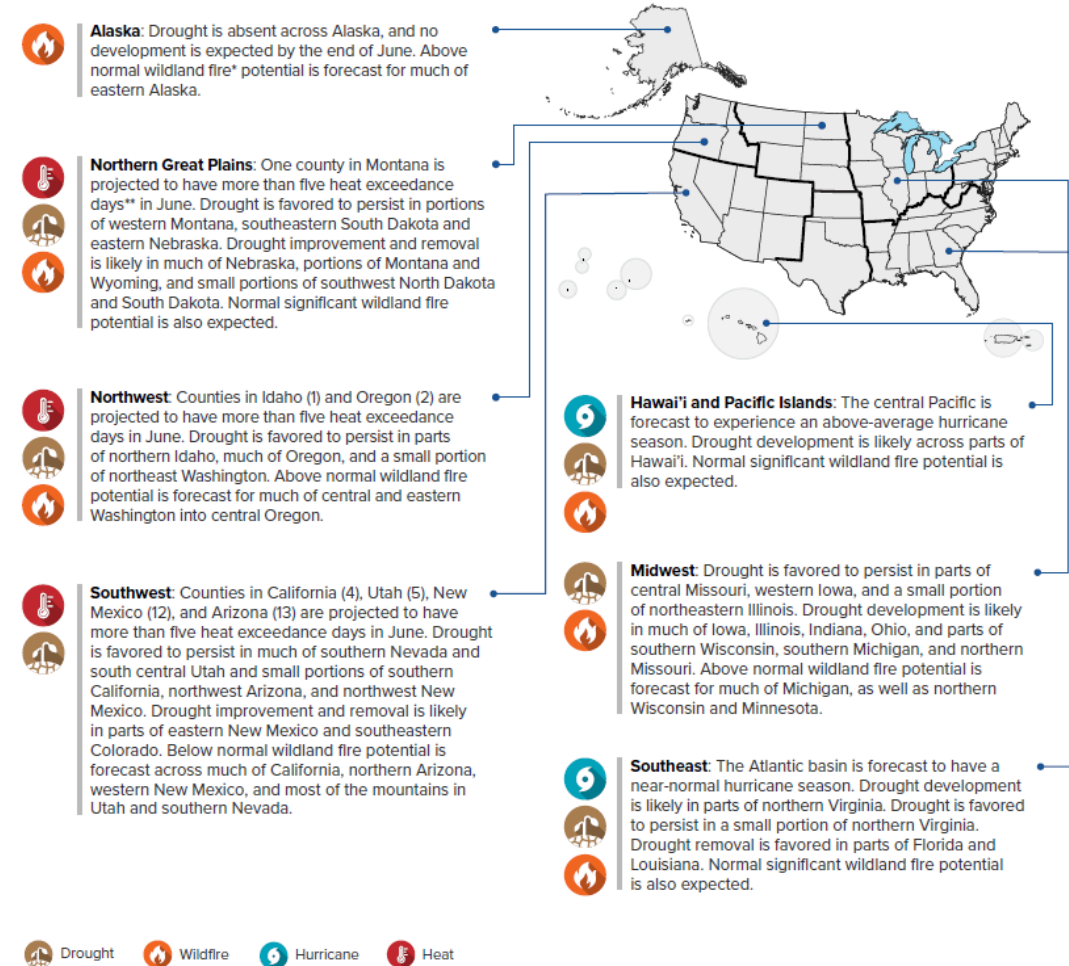


Learn in community with peer organizations to address specific challenges and share relevant case examples

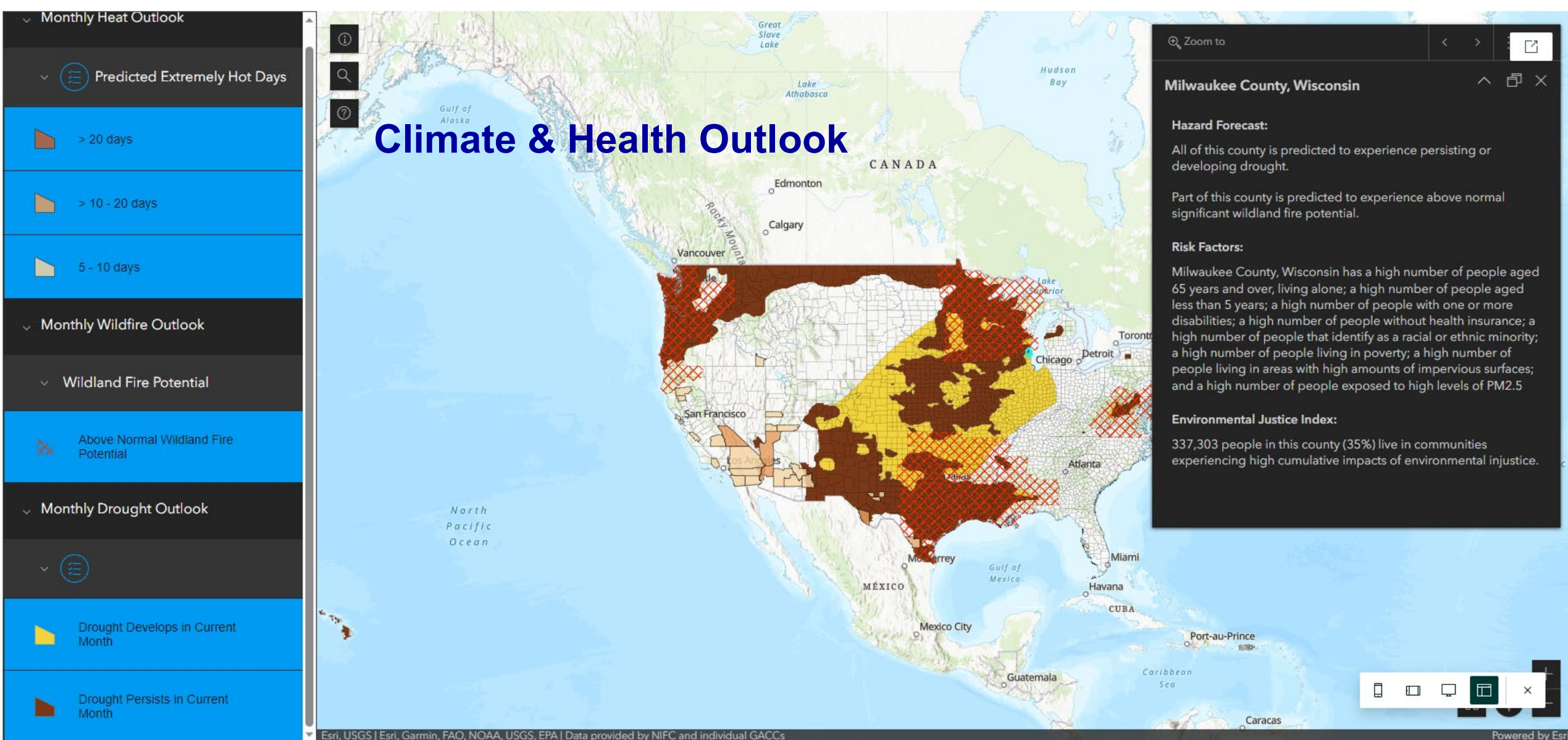
The Climate and Health Outlook is an effort to inform health professionals and the public on how our health may be affected in the coming months by climate events and to provide resources for proactive action. An [associated webpage](#) includes additional resources and information, including more detail on the wildfire and drought outlooks and populations at risk.

Climate and Health Outlook

- 12 issues produced since May 2022
- Includes information on climate hazards:
 - Extreme Heat
 - Wildfire
 - Drought
 - Hurricane
 - Tickborne Illnesses
 - Pollen
 - Spring Flooding



*Smoke from wildfires can impact health hundreds of miles from site of the fire.
 **A "heat exceedance day" is when the daily maximum temperature is above the 95th percentile value of the historical temperature distribution in that county.
 Developed with data from the Centers for Disease Control and Prevention, the National Oceanic and Atmospheric Administration, and the National Interagency Fire Center.



This interactive map shows county-level forecasts for **heat**, **wildfire**, and **drought** in the U.S. in the current month, as well as county-level individual risk factors that may increase vulnerability to the impacts of these climate-related hazards. These social, environmental, and health indicators characterize an increased risk of negative health outcomes for individuals who have these risk factors and are exposed to relevant climate-related hazards.

July 22, 2023 – August 4, 2023

Dashboard Updated On: August 7, 2023 (Updated Weekly)

Select Time Period: Previous 14 Days | Select Level of Geographic Detail: Counties | Select to View Specific State/District/Territory: (All) | Select Heat-Related Measure: Rate of Heat-Related EMS Activations

National Statistics

Average EMS Time to Patient

12.3 minutes | % Change -5.9%

Number of Heat-Related EMS Activations

4,944 | % Change -17.9%

Rate of Heat-Related EMS Activations per 100K Population

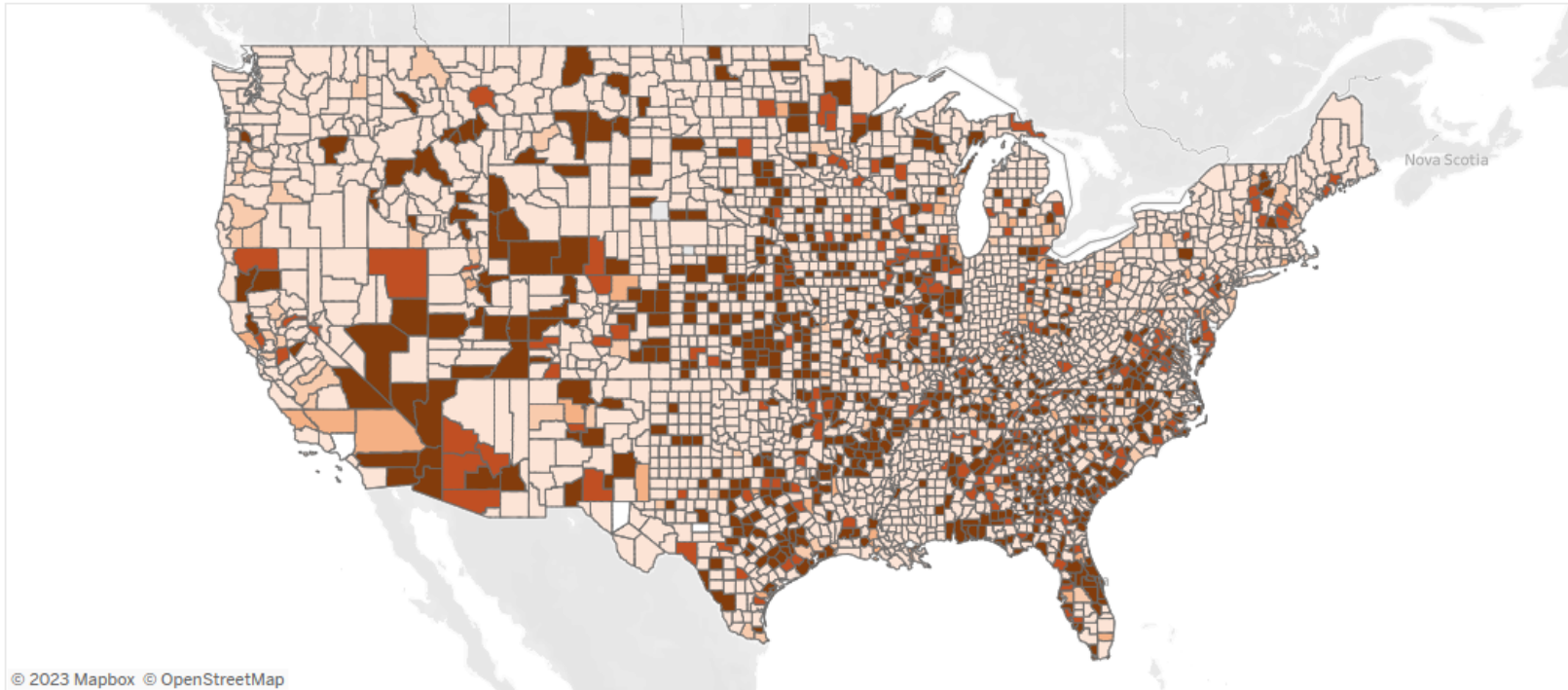
1.5 | % Change -17.9%

Number of Heat-Related Deaths Among EMS Activations

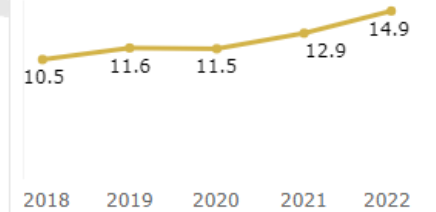
15.0 | % Change -31.8%

Patients Transported to a Medical Facility

64.5% | % Change -35.5%



National Rate of Heat-Related EMS Activations



Top Jurisdictions

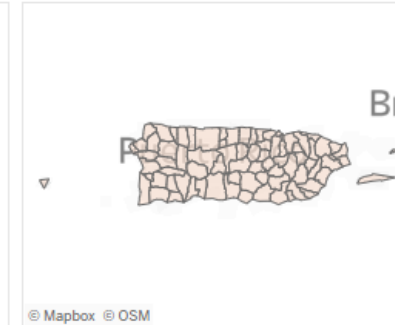
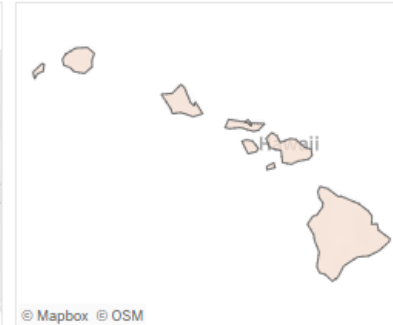
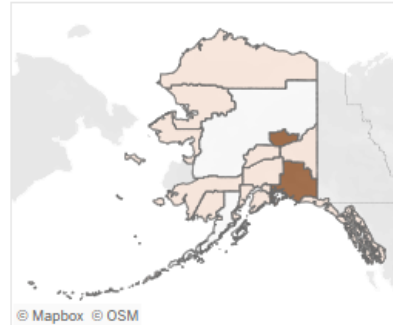
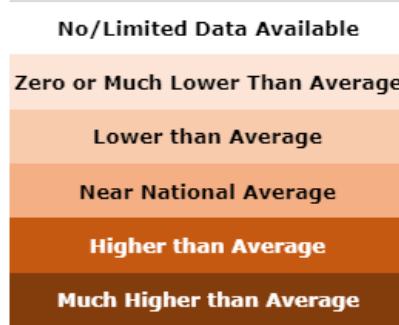
Rate of Heat-Related EMS Activations

- Arkansas
- Nevada
- Kansas
- South Dakota
- District of Columbia
- Nebraska
- Alabama
- Florida
- New Mexico
- Georgia

Top Counties

Rate of Heat-Related EMS Activations

- Williamsburg (city), Virginia
- Hall, Texas
- Briscoe, Texas
- Fallon, Montana
- Kiowa, Colorado
- Harrisonburg (city), Virginia
- Buffalo, South Dakota
- Dallas, Arkansas
- Billings, North Dakota
- Chase, Kansas

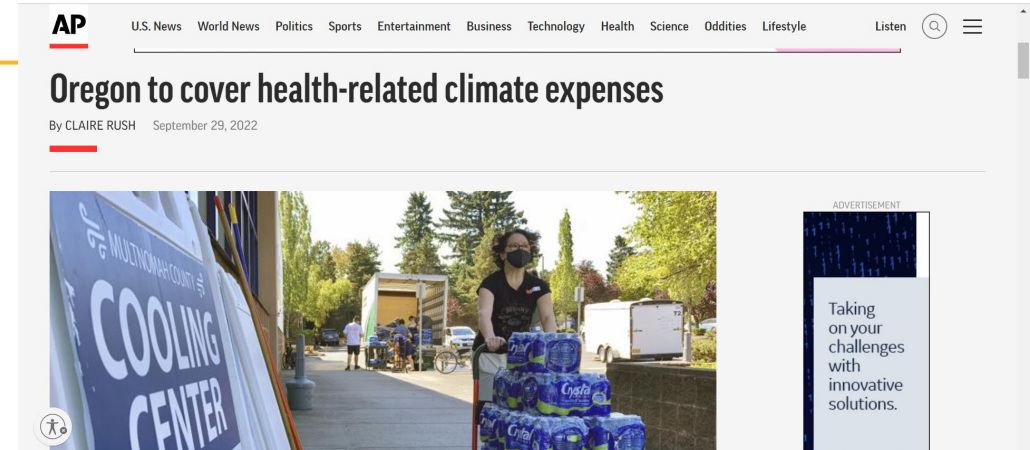


Policy and Regulation



Medicare and Medicaid: Steps towards resilience

- Letter on Implementing Supplemental Benefits for Chronically Ill Enrollees (April 24, 2019)
- Medicaid coverage of air filters and air conditioners, including the Oregon Health Plan 1115 Demonstration Waiver



JULY 28, 2021

Wyden Calls on Oregon Insurers to Provide Seniors With Cooling and Air Filters

Wyden-Authored Law Allows Medicare Advantage Plans to Fund Preventative Non-Medical Safeguards to Keep Seniors Out of the Hospital

Categorical Waiver – Health Care Microgrid Systems (HCMSs)

Title	Categorical Waiver – Health Care Microgrid Systems (HCMSs)
Memo #	QSO-23-11-LSC
Posting Date	2023-03-31
Fiscal Year	2023
Title	Various CMS regulations governing certain providers and certified suppliers require compliance with the 2012 edition of the National Fire Protection Association (NFPA) Health Care Facilities Code (NFPA 99). • 2012 edition of NFPA 99 requires emergency power for an essential electric system (EES) to be supplied by a generator or battery system. • 2021 edition of the NFPA 99 permits emergency power for an EES to be supplied by sources other than a generator or battery system, including a health care microgrid



[Our Websites](#) ▾

The Joint Commission announces Sustainable Healthcare Certification for U.S. hospitals



National Health Service Corps and Health Professional Shortage Areas

- **NHSC providers take care of those most affected by climate change health impacts**
 - **Low-income and those experiencing homelessness**
 - **Tribal populations**
 - **Incarcerated populations**
 - **Migrant and seasonal workers**
- **How might the NHSC best prepare its providers for the challenges posed by climate change to the health of their patients?**
- **How might the NHSC program work with other parts of HRSA and other agencies to enhance the resilience of NHSC-Approved sites?**



OASH

Office of
Climate Change
and Health Equity



Thank you!

Contact us: OCCHE@hhs.gov

**Visit us online and sign up for our
listserv at www.hhs.gov/ocche**