



**NATIONAL
NURSE-LED CARE
CONSORTIUM**
a PHMC affiliate

Climate Change and Health: Tools and Strategies for Health Professionals to Address Emerging Environmental Issues

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NURSE-LED CARE CONFERENCE
WEDNESDAY, OCTOBER 17, 2018



National Nurse-Led Care Consortium

Mission:

To advance nurse-led health care through policy, consultation, and programs to reduce health disparities and meet people's primary care and wellness needs.

- Training and Technical Assistance
- Direct service programs (nurse-home visiting and environmental health)

>> Learn more at www.nurseledcare.org



Today's Agenda

- Climate change, extreme weather events, and health impacts
- Role of health professionals
- Strategies to engage in environmental action
- Highlights from NNCC programs

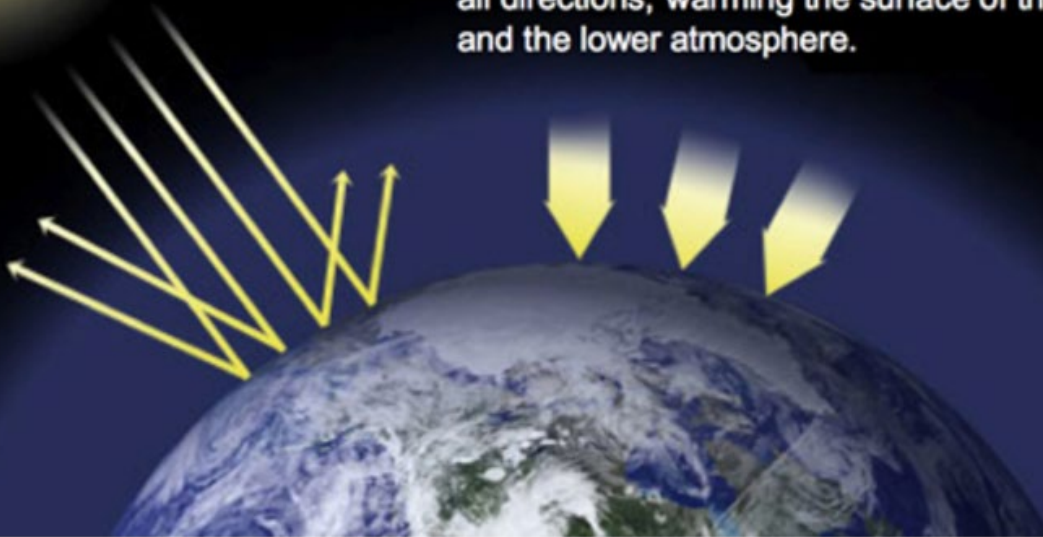
What is Climate Change?

“Climate change is any change in average weather that lasts for a long period of time, like warming temperatures. Climate change affects the **food we eat, the air we breathe, and the water we drink**. It also leads to extreme weather events, like flooding, droughts, and wildfires. **All of these impacts affect human health.**” (U.S. EPA)

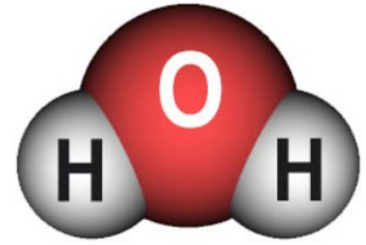
How does it happen?

Sunlight passes through the atmosphere and warms the Earth's surface. This heat is radiated back toward space.

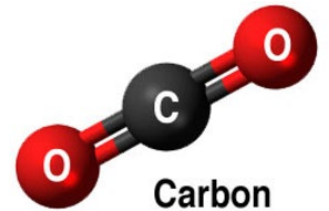
Most of the outgoing heat is absorbed by greenhouse gas molecules and re-emitted in all directions, warming the surface of the Earth and the lower atmosphere.



<https://climate.nasa.gov/causes/>

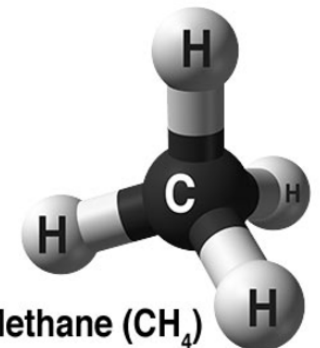
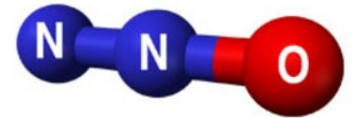


Water vapor (H_2O)



Carbon dioxide (CO_2)

Nitrous oxide (N_2O)



Methane (CH_4)

Human activities contribute to rising levels of greenhouse gases

“Humans have increased atmospheric CO₂ concentration by **more than a third** since the Industrial Revolution began”

-NASA

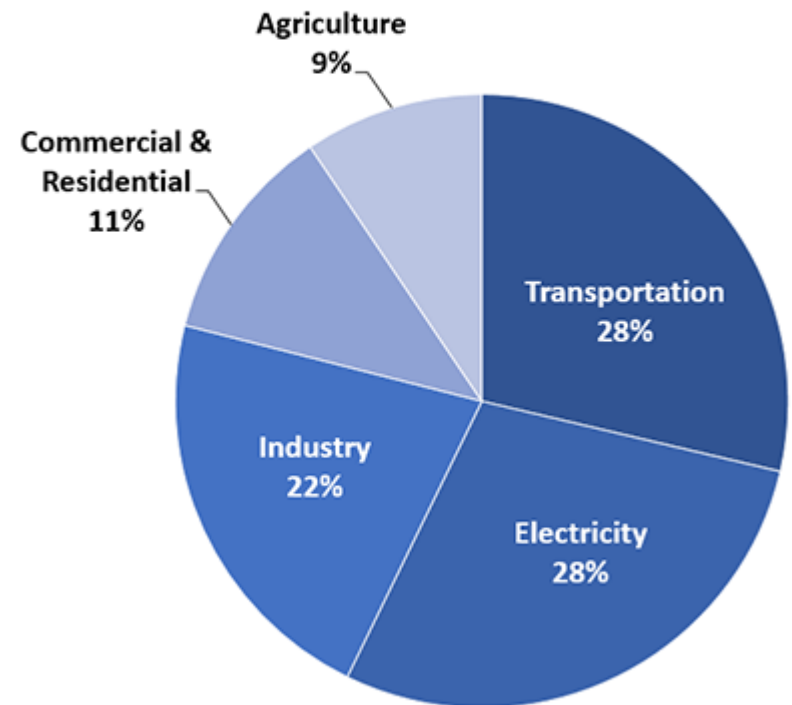
Some examples:

- Burning fossil fuels for transportation and electricity
- Deforestation, land use changes
- Agricultural changes and cultivation practices used for grain and soil

Health care system = 10% of U.S. GHG emissions in 2013

(Eckelman & Sherman, 2018)

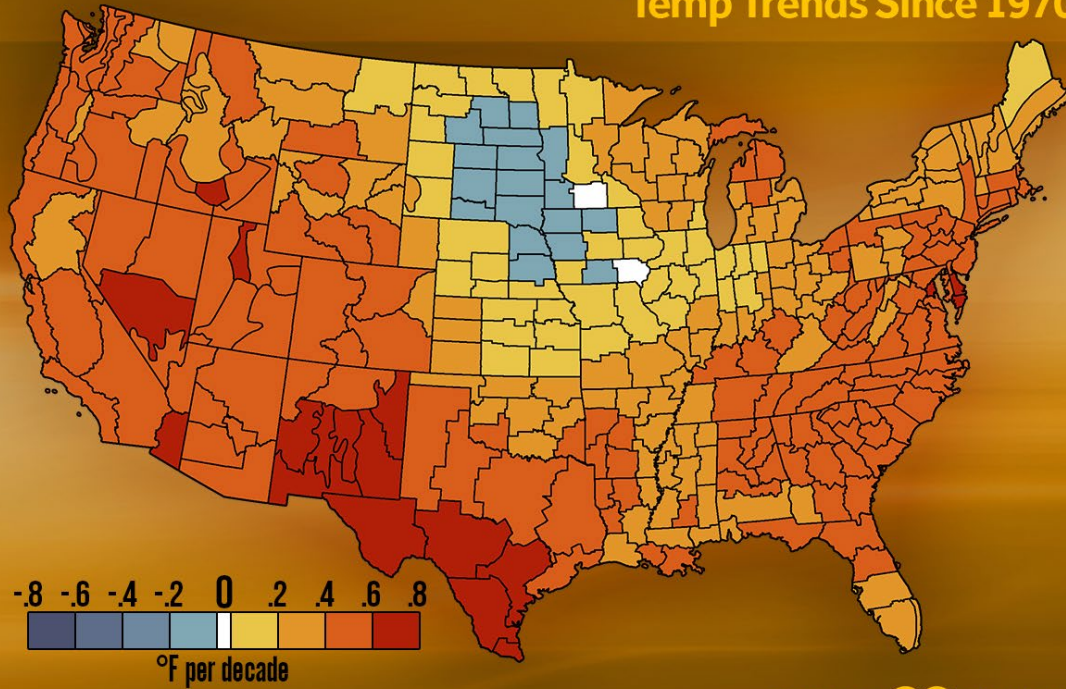
Total U.S. Greenhouse Gas Emissions by Economic Sector in 2016



U.S. Environmental Protection Agency (2018). Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2016

Summers Are Getting Hotter

Temp Trends Since 1970

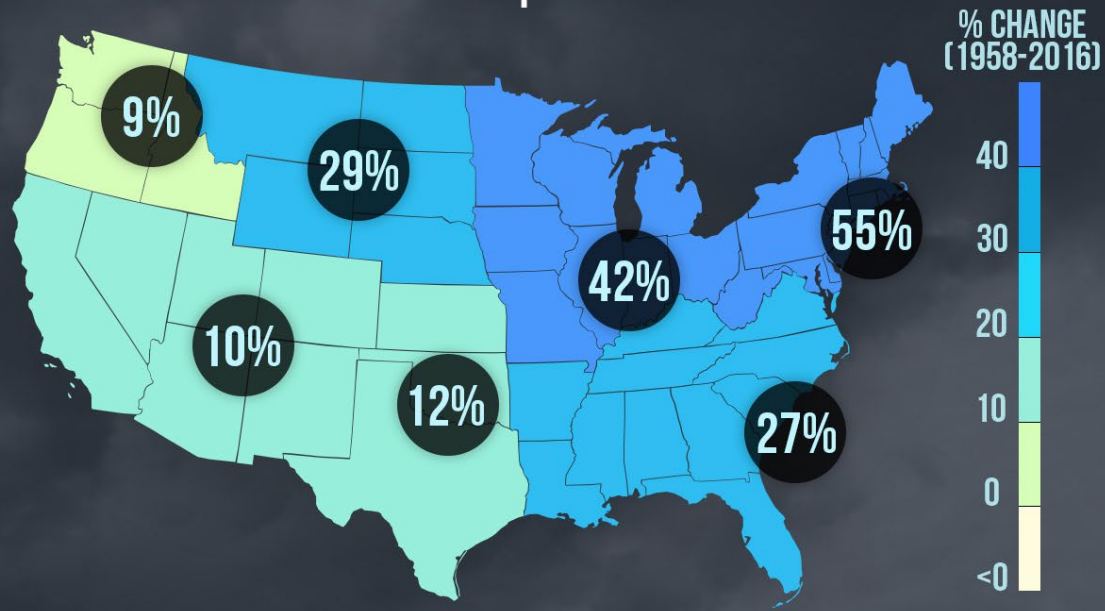


Source: NOAA/NCEI Climate at a Glance Climate Divisions

CLIMATE  CENTRAL

MORE DOWNPOURS

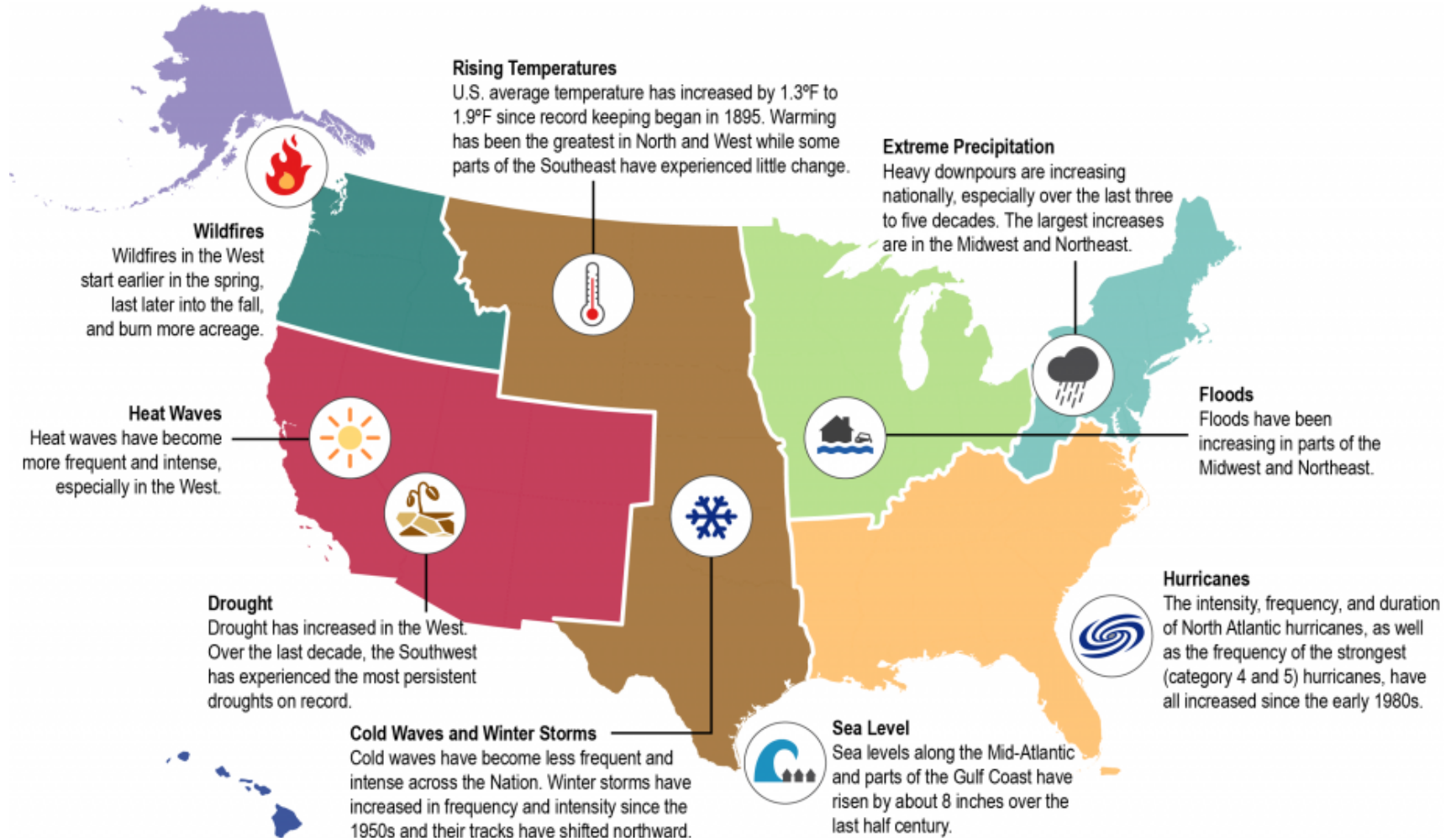
Increase in Heaviest Precipitation Events



Heaviest events defined as top 1% of events
Source: USGCRP Climate Science Special Report 2017

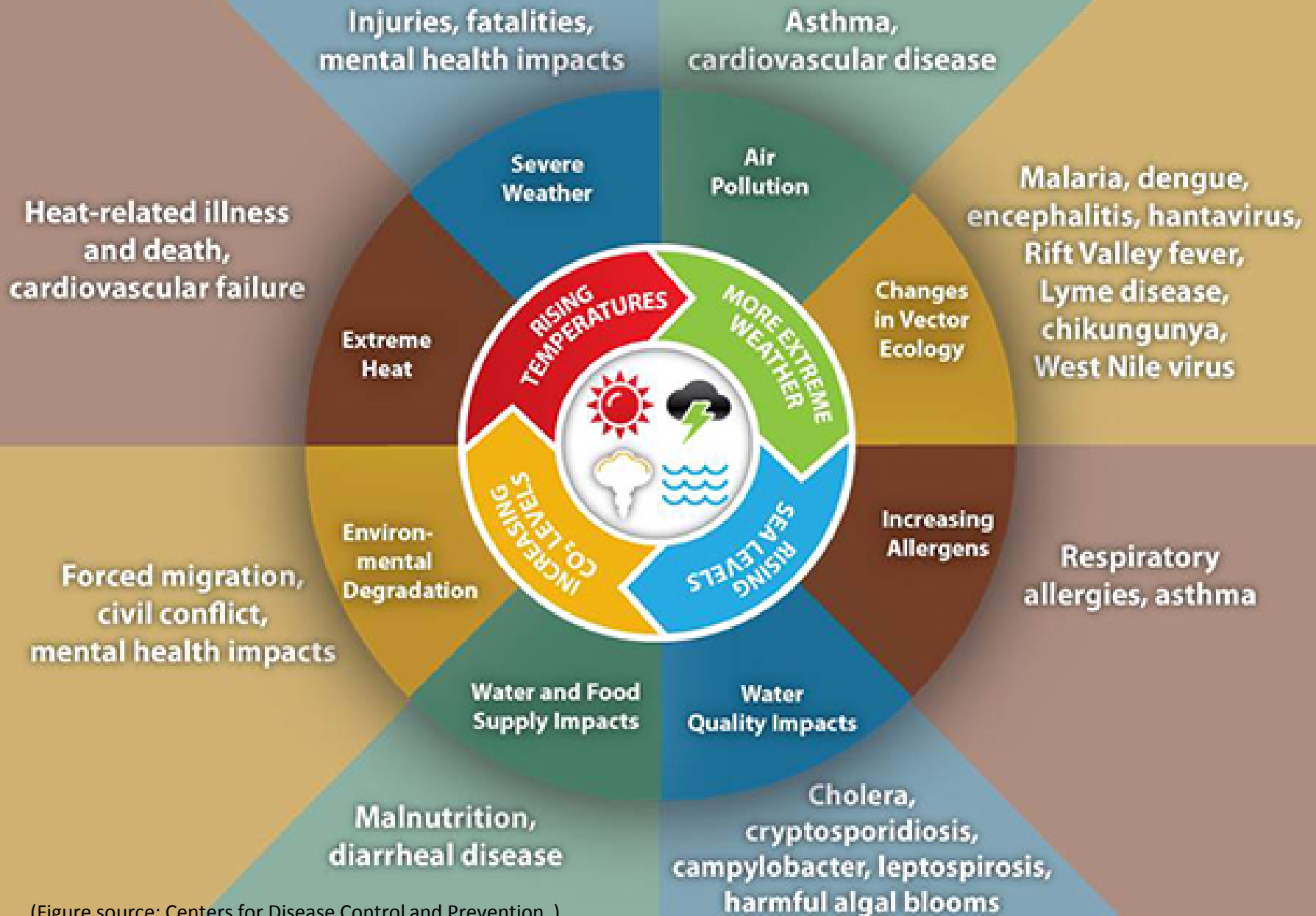
CLIMATE  CENTRAL

Major U.S. national and regional climate trends. U.S. regions defined in the 2014 National Climate Assessment.



The Impacts of Climate Change on Human Health in the United States: A Scientific Assessment. U.S. Global Change Research Program, Washington, DC, 25–42. <http://dx.doi.org/10.7930/J0VX0DFW>

Impact of Climate Change on Human Health



(Figure source: Centers for Disease Control and Prevention.)

Who is Affected by Climate Change?

EVERYONE! But, some groups are disproportionately vulnerable...

- people living in poverty
- people without air conditioning
- outdoor workers
- children, as they are more susceptible to dehydration and have faster breathing rates
- the elderly, who have increased susceptibility to heat due to decreased mobility and limited ability to thermo-regulate
- pregnant women
- people with chronic or acute illness
- people who are disabled

(APHA, 2011)



The Role of Health Professionals

“The growing realization of the impacts of climate change among health professionals, the need to convey this information to the public, and the fact that Americans report that they trust health professionals more than any other source for information present a rare opportunity. **The health and medical community is uniquely positioned to advance the message that climate solutions are a health priority** and will provide enormous health benefits.”

-Jennifer Tabola, Director, Climate for Health



5 Steps to Becoming a Climate and Health Advocate

Alliance of Nurses for Healthy Environments (ANHE) partnered with ecoAmerica's Climate for Health program to create these action steps:

GETTING STARTED WITH CLIMATE SOLUTIONS:

A GUIDE FOR NURSES



1. Become climate literate.
2. Relate climate to patient and client health.
3. Be vocal, model leaders within your communities.
4. Elevate your voice on climate within your professional community.
5. Take your climate leadership national.

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APHA Webinars on Climate Change and Health

Climate Change Webinars

<https://www.apha.org/events-and-meetings/webinars/climate-webinars>

Climate Change and Health 4-part Webinar Series (with ecoAmerica)

<https://www.apha.org/events-and-meetings/webinars/climate-webinars/climate-changes-health>

EPA Online Trainings for Health Professionals

Particle Pollution and Your Patients' Health

CONTACT US

SHARE



Evidence-based Training for Healthcare Professionals

- Describes the biological mechanisms responsible for the cardiovascular and respiratory health effects associated with particle pollution exposure.
- Provides educational tools to help patients understand how particle pollution exposure can affect their health and how they can use the Air Quality Index to protect their health.



This course is designed for family medicine physicians, internists, pediatricians, occupational and rehabilitation physicians, nurse practitioners, nurses, asthma educators, pulmonary specialists, cardiologists, and other medical professionals.

<https://www.epa.gov/pmcourse> 1.2 CNE available!



EPA Online Trainings for Health Professionals

Ozone and Your Patients' Health

CONTACT US

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Learn the science behind ozone's effect on respiration and how to manage respiratory health using the [Air Quality Index](#).



Ozone and Your Patients' Health

is designed for family practice doctors, pediatricians, nurse practitioners, asthma educators, and other medical professionals who counsel patients about asthma, air pollution, or exercise.

[Course developers](#)

<https://www.epa.gov/ozone-pollution-and-your-patients-health>



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What Americans Think about Climate Change

Climate Change in the American Mind (March 2018 national survey)

- Yale Program on Climate Change Communication and George Mason University Center for Climate Change Communication
- 1,278 American adults, aged 18 and older

Among Key findings:

- Seven in ten Americans (70%) think global warming is happening.
- A majority of Americans are worried about harm from extreme events in their local area including **extreme heat (64%), droughts (61%), flooding (60%), and/or water shortages (52%)**.
- The most common reason why Americans want to reduce global warming is to **provide a better life for our children and grandchildren** – a reason selected by one in four Americans (24%).

How to Communicate about Climate Change

Start with a personal connection—avoid doom and gloom!

- Listen to audience's concerns and values (e.g., making the future safer for grandchildren) and use them as a guide for the conversation.
- Connect climate change to health and wellbeing.

Make it relatable

- Talk about local weather events and engage on audience's experiences.

Stick to climate facts, not opinions!

- Provide information on scientific consensus (e.g., 97% of climate scientists affirm that human-caused climate change is happening).
- Facts about warmer and wetter weather over time

Stay focused on solutions

- Empower audience to prepare for action (e.g., asthma action plans, preparedness plans)
- Start small and work your way to larger (e.g., community level) actions

Tools to Prepare for Weather-Related Emergencies



www.ready.gov

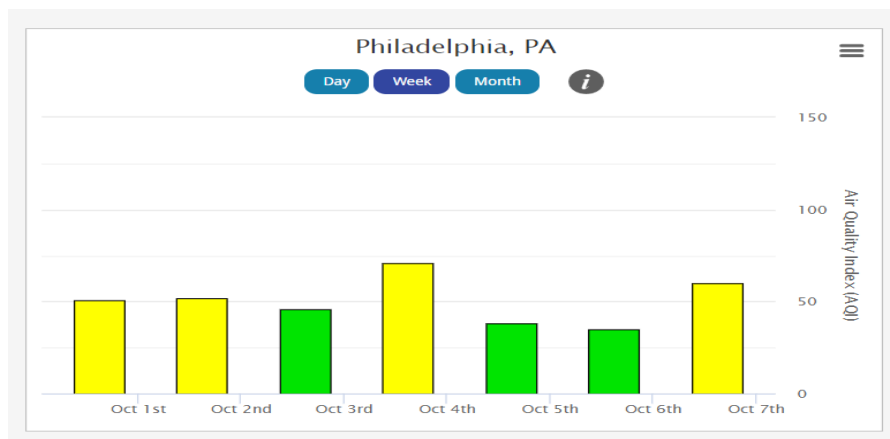
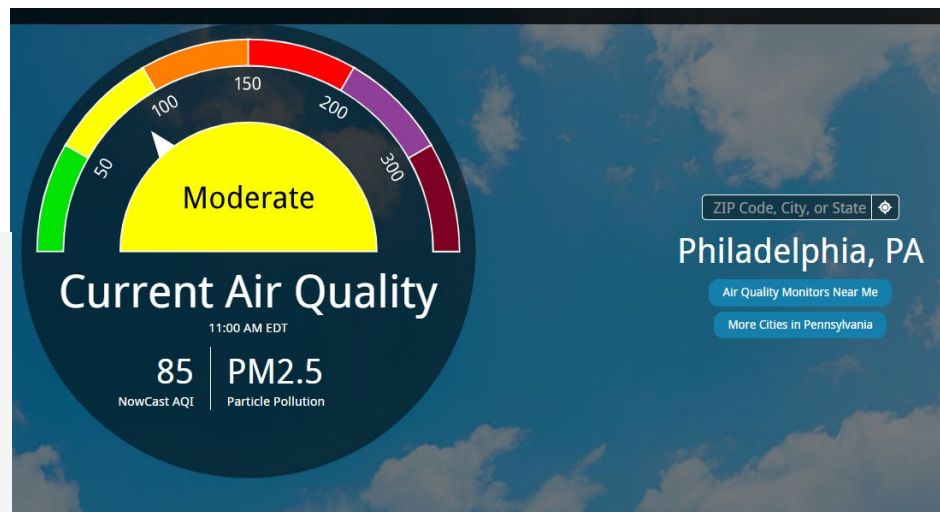
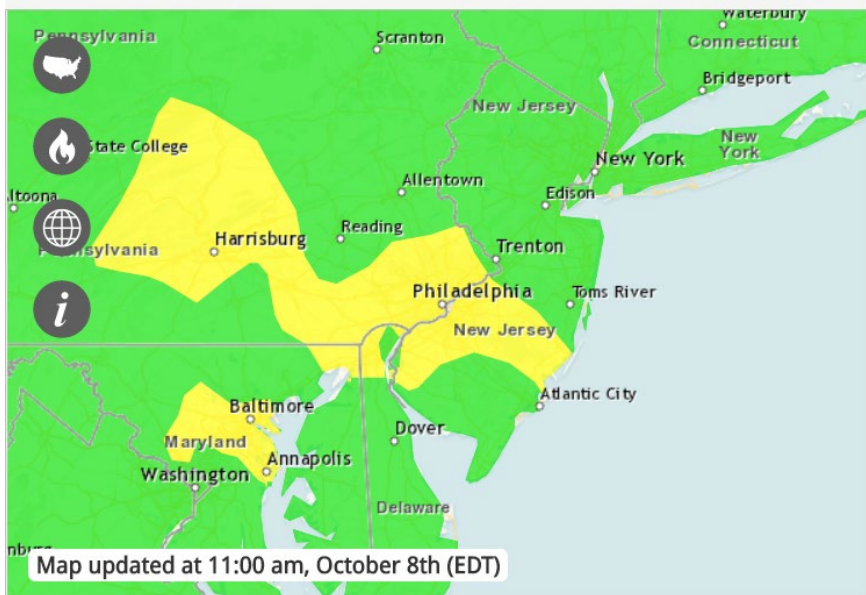
- Learn about local, state, and national weather alerts
- Learn how to make a preparedness plan for weather-related and other emergencies.
 - Resources for parents, children, pets, seniors, individuals with disabilities, etc.

Tools to Protect Your Health- Air Quality Index

www.airnow.gov

Steps to Take

If you are **unusually sensitive** to particle pollution, consider reducing your activity level or shorten the amount of time you are active outdoors.



Tools to Protect Your Health- Pollen Forecast



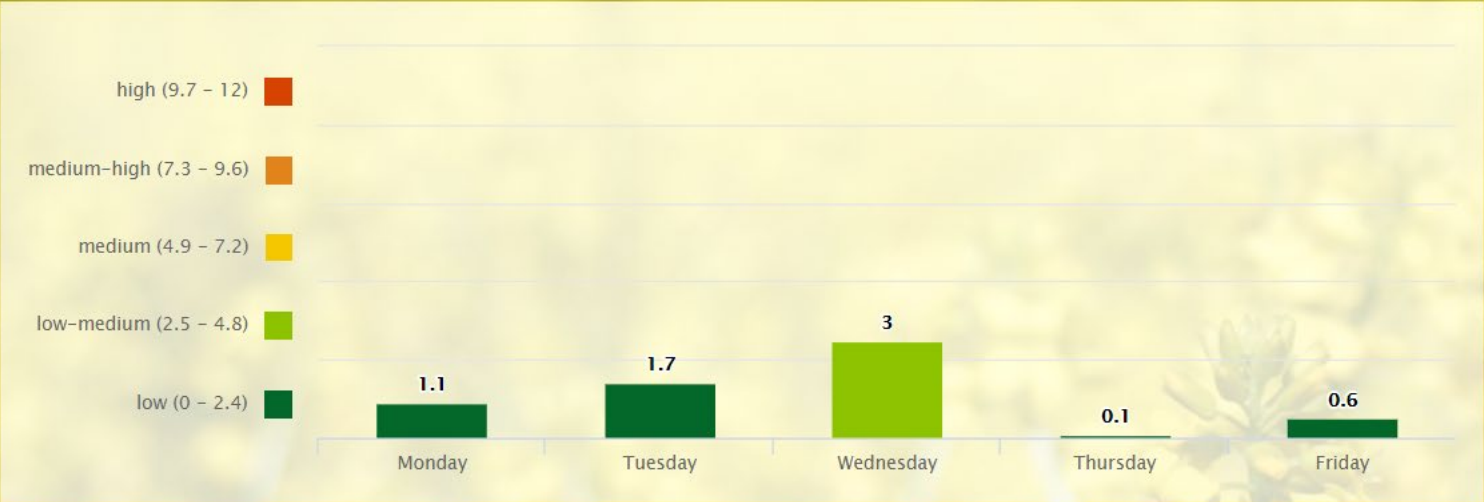
Enter city or ZIP to get your allergy forecast

[HOME](#)

[FORECAST](#)

[ALI](#)

5 Day Allergy Forecast for Philadelphia, PA



[CURRENT](#)

[5 DAY](#)

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[ALLERGY EMAILS](#)

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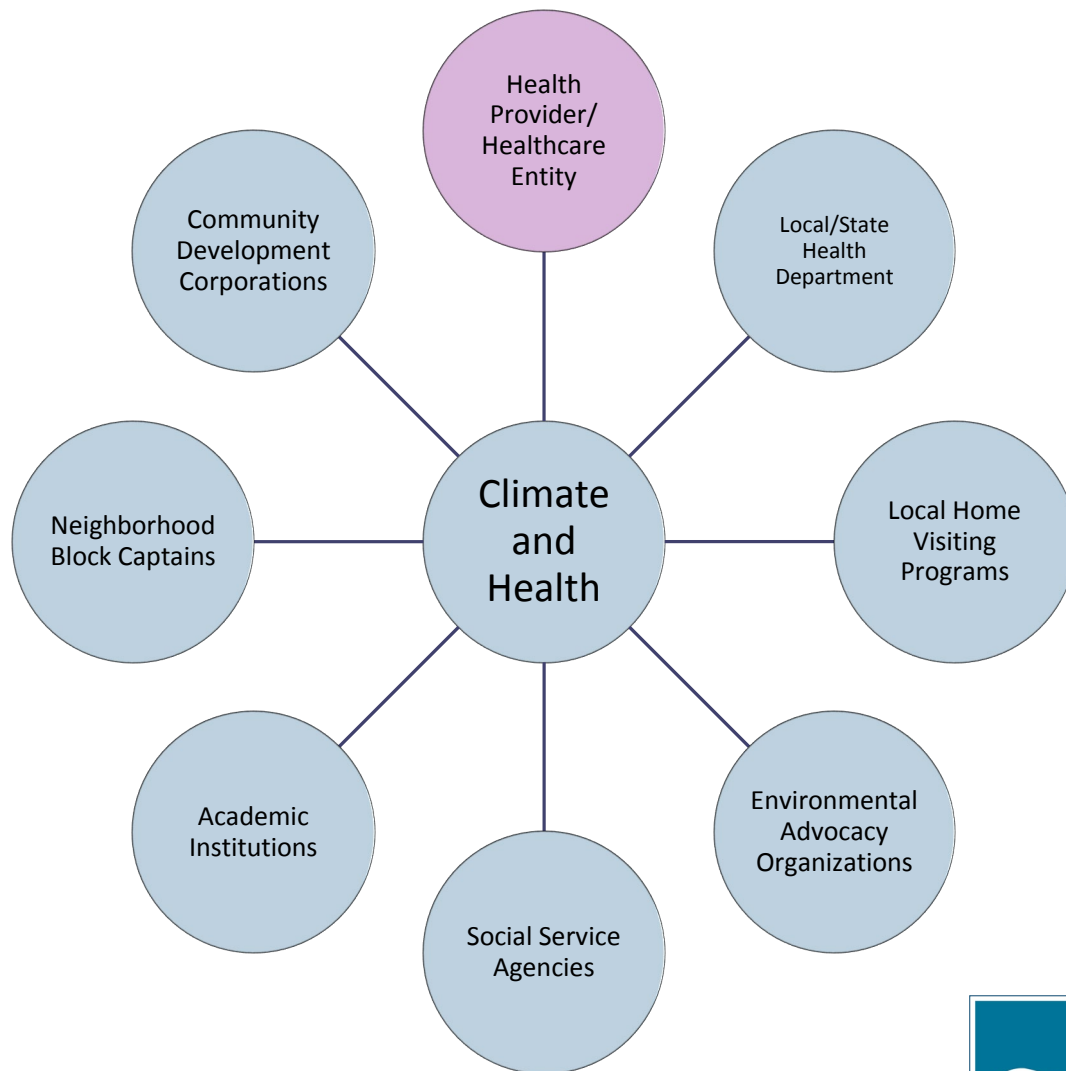


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Be Vocal, Model Leaders Within Your Communities

- Educate local leaders on climate change health impacts
 - ecoAmerica- <https://ecoamerica.org/>
Free downloadable guides and “Let’s Talk Climate Change” webinars
- Identify local programs and policies to integrate climate and health information
- **COLLABORATE** with community partners!
 - Who else is doing work in this area?
 - How can we share resources/leverage our mutual interest?

Building Cross-Sector Partnerships



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Elevate Your Voice on Climate Within Your Professional Community

- Advocate for climate-friendly practices at your workplace.
 - Reducing energy use
 - Reducing use of fossil fuels
- Discuss climate and health at educational forums and present at conferences.
 - CDC – <https://www.cdc.gov/climateandhealth/guidance.htm>
Trainings and presentation templates
- Encourage other health professionals to take action.

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5. **Take your climate leadership national.**

Take Your Climate Leadership National

- Be a climate and health advocate on social media.
- Stay informed and join regional and national coalitions.

➤ Get started with these groups!

Alliance of Nurses for Healthy Environments- <https://envirn.org/>

- Climate change nursing reports and resources, workgroups, Climate Change Committee

U.S. Climate and Health Alliance- <http://usclimateandhealthalliance.org/>



NNCC Climate and Health Highlights

Climate Change, Health, & Home Workshops

Goal: To engage Philadelphia residents in discussions on climate change, to increase awareness of available city resources, and to promote individual actions to protect health.

- Mini-grant funded by Climate Urban Systems Partnership (through the Franklin Institute)
- 5 years of collaboration
- Format: series of presentations by project partners, broken up by hands-on activities and 2-way dialogue
- Pre-/Post- surveys



Climate Change, Health, & Home Partners

- **Clean Air Council**- environmental advocacy
- **Energy Coordinating Agency**- energy efficiency/weatherization
- **Drexel University**- research expertise
- **Liberty Lutheran**- emergency preparedness
- **NNCC**- healthy housing and health center connection
- **Philadelphia Department of Public Health**- city resources

Cross-sector partnerships provide value!



Workshops at a Glance

EXTREME HEAT WORKSHOPS (2017)

- High-risk population- Elderly
- **91 participants**
- Workshop locations: Senior centers and public libraries
- Recruiting- flyers, community outreach, word-of-mouth
- Incentive- \$25 gift cards
- Activity: mapping neighborhood assets in extreme heat event

FLOODING AND MOLD WORKSHOPS (2018)

- High-risk populations- residents of flood-prone neighborhoods
- **50 participants**
- Workshop locations: Public libraries and churches
- Recruiting- flyers, community outreach, word-of-mouth
- Incentive- \$25 gift cards
- Activity: Creating individual preparedness plan (template provided by local health dept.)



NNCC discussing strategies to improve indoor air quality at home.



Extreme Heat Workshop, South Philadelphia Library, July 2017

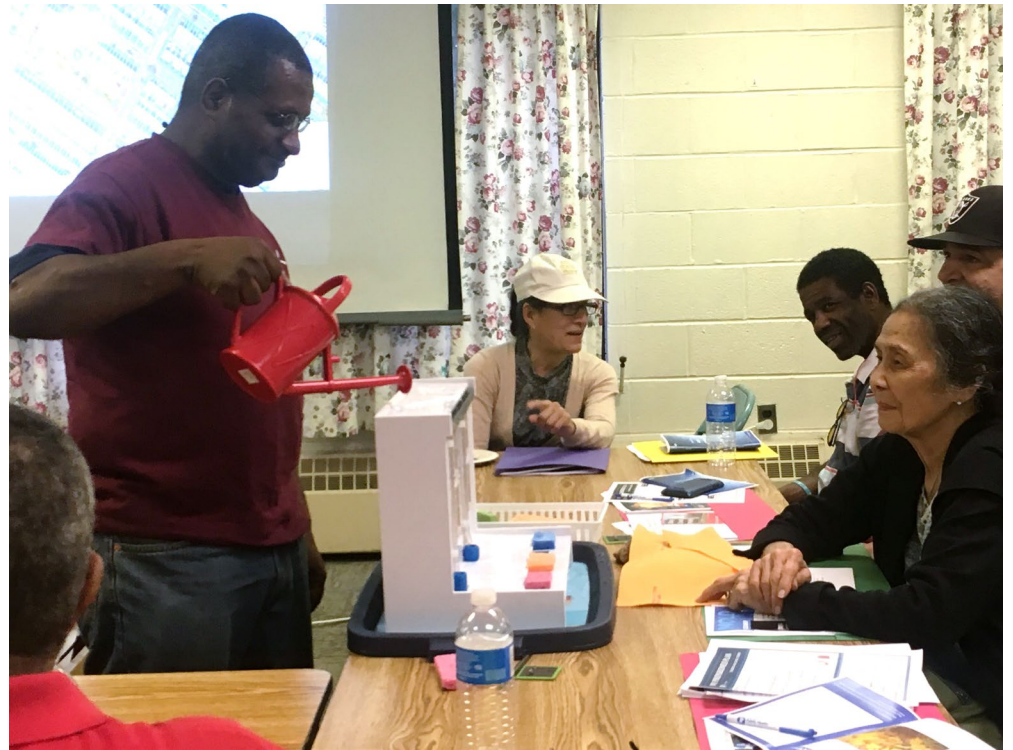
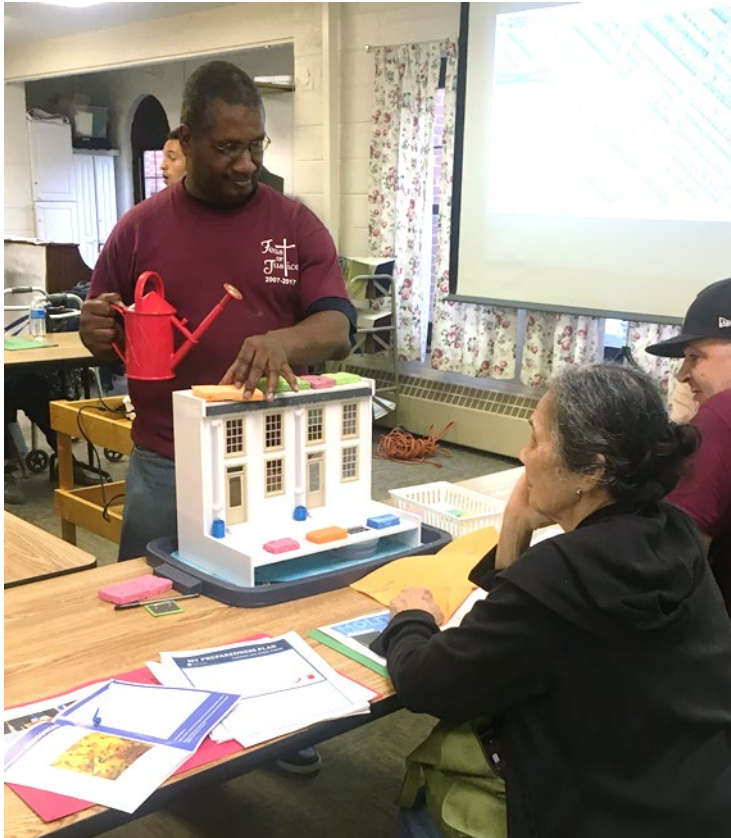




Maria Ramirez from Philadelphia Dept. of Public Health discussing **the city's heat health emergency plan and strategies to stay cool in extreme heat.**

Extreme Heat Workshop at McPherson Public Library, Philadelphia, Aug. 2017

Flooding and Mold Workshop
St. John's Lutheran Church, Philadelphia
May 2018





Alexandra Skula from Philadelphia Dept. of Public Health discussing **health information to have ready for weather-related emergencies.**

Flooding and Mold Workshop
Joseph E. Coleman Northwest Regional Library, Philadelphia,
June 2018



What We Learned from Community Residents

- Community members want to learn more about ways to conserve energy at home.
- Community members need/want more information about flooding, mold, health effects and how to prevent mold.
 - 64% of participants reported having or living with someone who has breathing problems.
- Community members need more information on preparing for climate-related events, such as flooding.
 - Only 20% of participants reporting having emergency preparedness plans.
- We found it to be effective **discussing the impacts of climate change within the context of people's lives and homes.**

... WE HOPE TO CONTINUE THESE WORKSHOPS AND PARTNERSHIPS!

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