Public Health and Climate Change in Michigan

MICHIGAN CLIMATE & HEALTH ADAPTATION PROGRAM

DIVISION OF ENVIRONMENTAL HEALTH, MDHHS

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DEH Goal

Apply the best available science to end or prevent injury from environmental, chemical, and physical hazards, and promote equity for the people of Michigan.

MICHAP

The Michigan Climate and Health Adaptation Program (MICHAP) supports a climate-resilient public health system by investigating climate-driven health risks, identifying information for decision-making across sectors, and collaboratively implementing climate adaptation strategies.

Addressing health hazards in:

Air

Food

Soil

Community

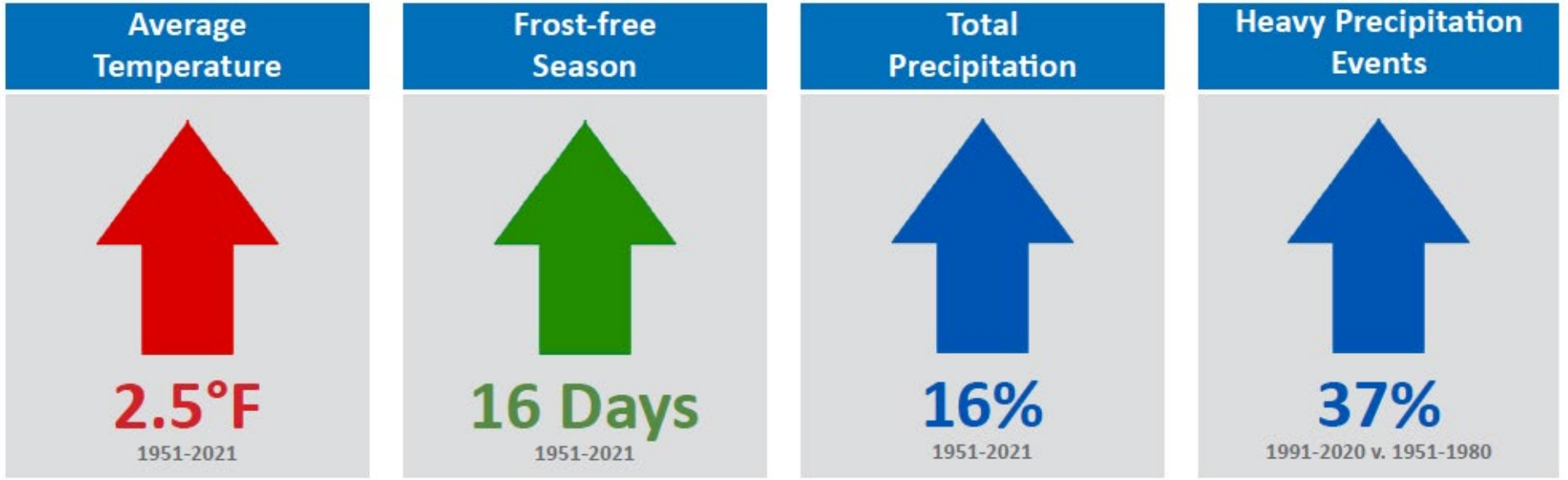
Home

Water

MDHHS
Michigan Department of Health & Human Services

Climate Change in the Great Lakes Region

GLISA
A NOAA RISA TEAM



Michigan 1951-2021
2.6°F

Michigan 1951-2021
15%

Houghton, 2018

"Father's Day Flood" – up to 7" of rain in 9 hours, 1,000-year flood event

Midland, 2020

4-7” of rain in 48 hours, 500-year flood event

Southeast MI, 2021

7” of rain in 4 hours, 100-year flood event

2023

3-5” of rain in 6 hours

Detroit News

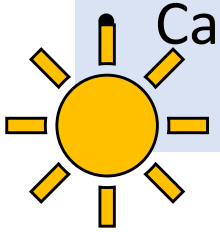
Detroit, 2023

Wildfire smoke from Canada impacts air quality

How is Climate Change Affecting Health?

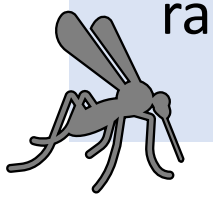
Heat Harm

- Strains the heart and lungs
- Worsens air quality
- Can cause death



Spread of Disease

- Insects, ticks and rodents to survive longer and expand range



Threats to Water Quality

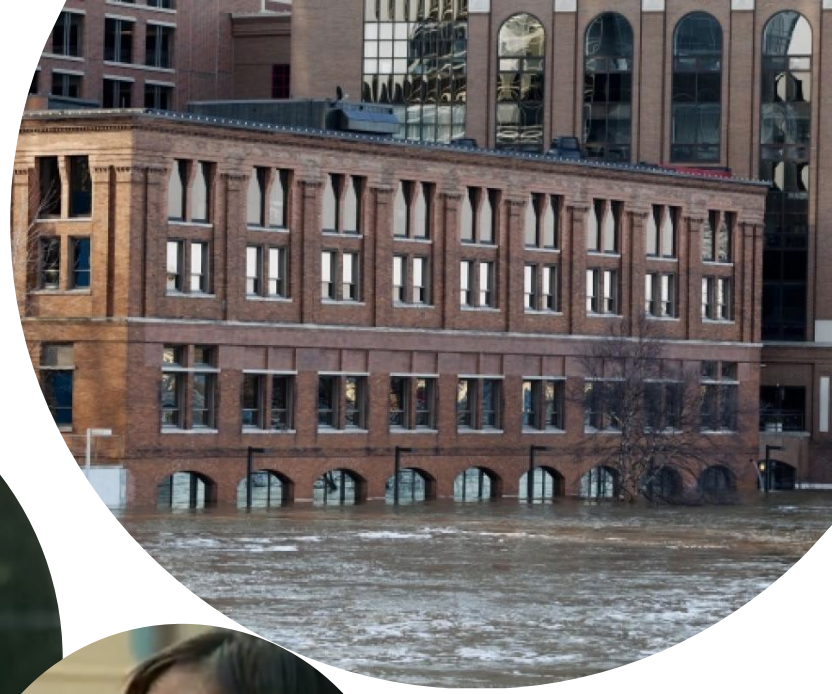
- Increased flooding stresses infrastructure
- Harmful algal blooms from warm water, runoff

Distrups Well-Being

- Climate-related disasters can cause short and long-term impacts on mental health

MI Climate and Health Program's Focus Areas

1. Heat-related illness and mortality.
2. Respiratory disease exacerbation, especially asthma.
3. Carbon monoxide poisoning and physical injuries related to extreme weather events.
4. Mental health conditions.
5. Waterborne diseases related to extreme rain events.
6. Vector-borne diseases, especially Lyme disease and West Nile virus.



Health Equity & Climate Change

- **Root causes** of climate change and health inequities are often the same.
- Climate change impacts are **not equally or fairly distributed** across people or communities.
- **Risk multiplier**: climate change exacerbates existing health and social inequities.
- Climate change actions also address and improve health inequities.

"The [Midland] flood in 2020 had great impact on those with diabetes in this area. We had patients that lost homes or were living outside of their home for a long time after the flood. This led to issues with refrigeration for their insulin and obtaining supplies for their insulin pump because they had no address for their durable medical equipment company to ship their diabetes supplies to."

– Erin, RN, CDCES, Diabetes Center Manager, MyMichigan Medical Center, Midland

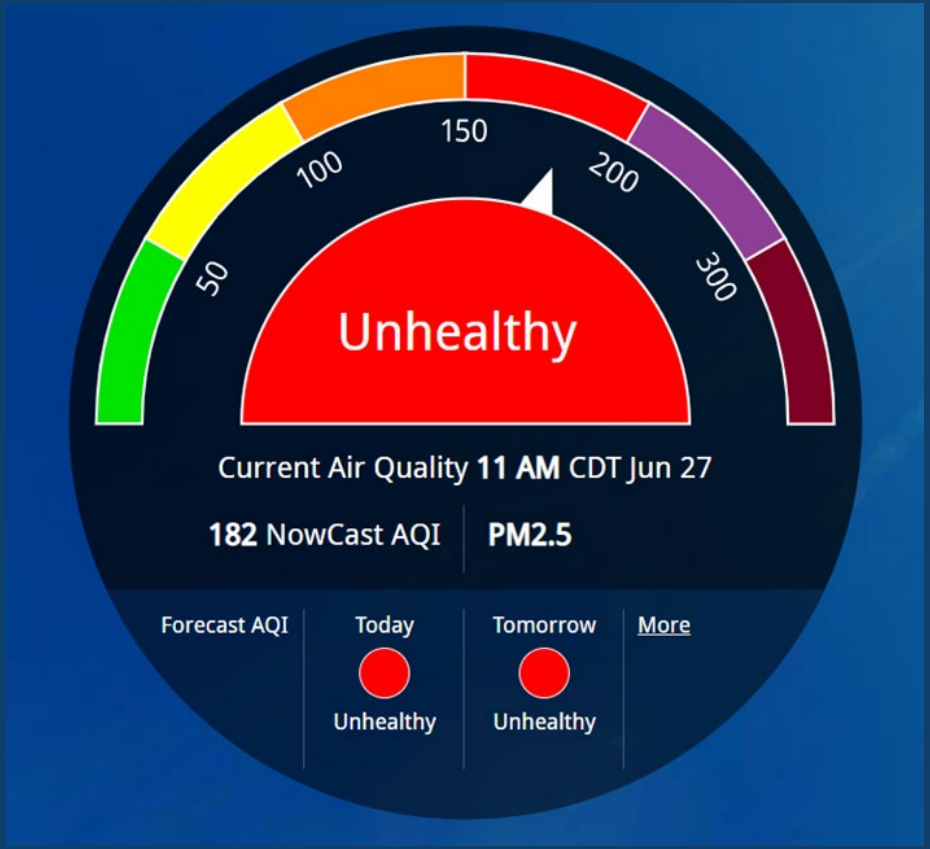
Chronic Disease & Climate Change

Climate change is increasing the frequency and severity of extreme weather events.

Climate change exacerbates existing health, social, and economic inequities.

Climate-driven disasters (extreme storms and floods) disrupt people's ability to access healthcare, food, ability to exercise, etc.

Chronic Disease & Climate Change



People with chronic disease are often most at risk of climate impacts to health

- Air Quality
- Air Pollution
- PM2.5
- Group 1 carcinogens

Resources on Climate Change and Cancer

- Ambient heat during pregnancy linked to increased risk of childhood cancer
- Relationship between climate change and skin cancer and implications for prevention and management: a scoping review
- Cancer and Climate Change: The Health Threats of Unnatural Disasters
- ASCO Climate Change and Cancer Care Policy Statement

What Does the Michigan Climate & Health Adaptation Program (MICHAP) Do?

MICHAP's Work:

- Create health education materials
- Conduct emergency preparedness & response
- Research climate impacts to health
- Subject matter experts

Michigan.gov/climateandhealth

Communication Materials

Fact Sheets

- Cold Health and Safety
  - (*Spanish*)
- Heat Health and Safety
  - (*Spanish, Arabic, Bengali*)
- Flooding Health and Safety series
- Wildfire Smoke and Our Health

Factsheets located under ***Educational Resources*** *on*
Michigan.gov/climateandhealth

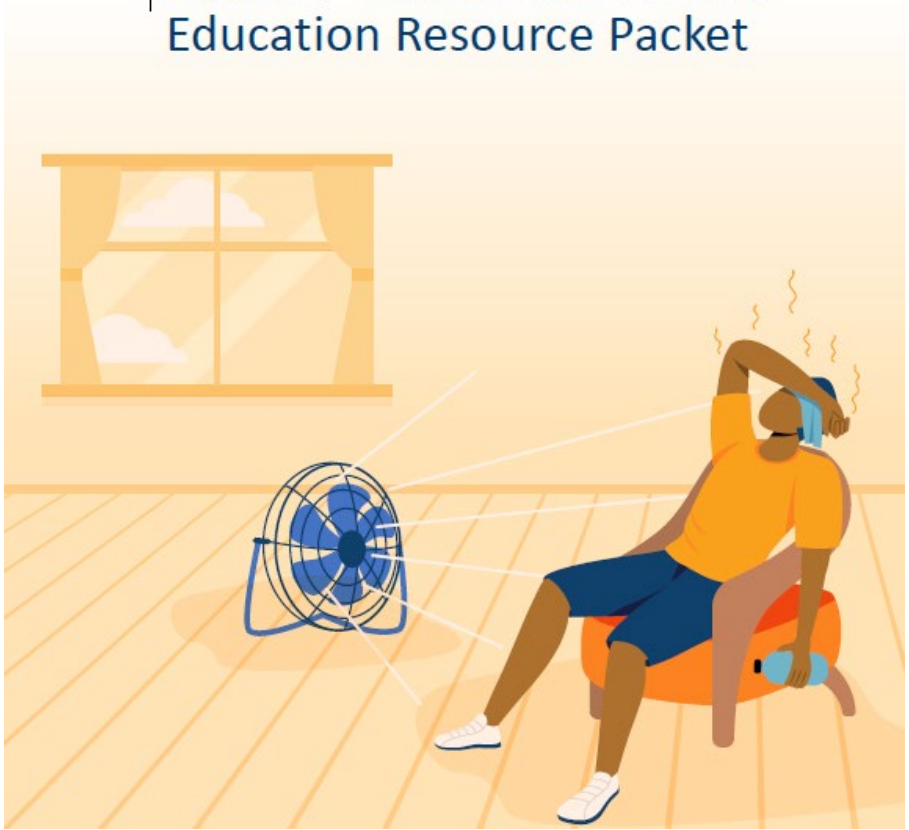
Seasonal Resource Packets

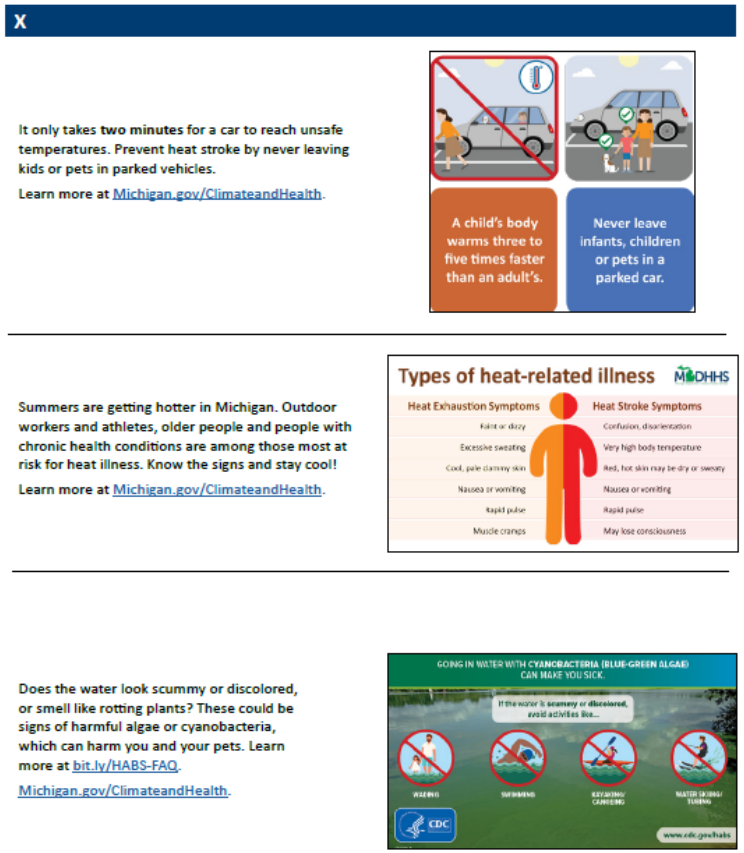
MDHHS Michigan Department of Health & Human Services

Division of Environmental Health

Michigan Climate and Health Adaptation Program

Summer Climate and Health Education Resource Packet





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It only takes **two minutes** for a car to reach unsafe temperatures. Prevent heat stroke by never leaving kids or pets in parked vehicles.

Learn more at Michigan.gov/ClimateandHealth.

Summers are getting hotter in Michigan. Outdoor workers and athletes, older people and people with chronic health conditions are among those most at risk for heat illness. Know the signs and stay cool!

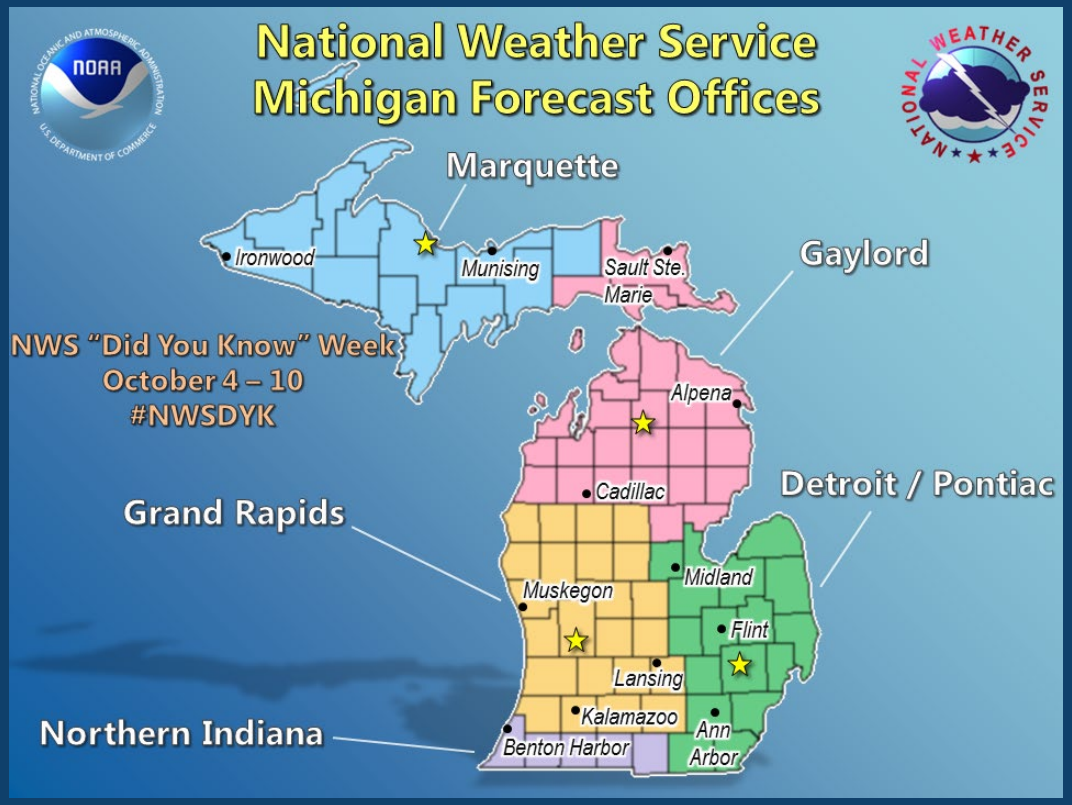
Learn more at Michigan.gov/ClimateandHealth.

Does the water look scummy or discolored, or smell like rotting plants? These could be signs of harmful algae or cyanobacteria, which can harm you and your pets. Learn more at bit.ly/HABS-FAQ.

Michigan.gov/ClimateandHealth.

MICHAP Summer Climate and Health Education Resource Packet

Emergency Response & Syndromic Surveillance



- **Monitor**
  - Syndromic surveillance
  - National Weather Service Alerts
  - Experts
  - Tools
- **Hazards**
  - Extreme heat
  - Air quality (PM2.5/ground level ozone)
  - Flooding (power outages)
- **Respond**
  - Michigan Health Alert Network (MI-HAN)
  - Post social media
  - Issue press releases
  - Notify stakeholders

MDHHS
Michigan Department of Health & Human Services

Are there other ways you see climate change impacting cancer care and your work?

Thank You!

Visit

www.Michigan.gov/climateandhealth for more information and to sign up for our **newsletter**!

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References

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