

Michigan Climate & Health Adaptation Program (MICHAP)

MDHHS - Division of Environmental Health

January 2017

www.michigan.gov/climateandhealth

Why is climate change important to public health?

- Climate change is altering weather and climate patterns.
- These changes could affect human health in direct and indirect ways, sometimes severely.
- APHA and WHO call climate change *'one of the most serious public health threats'* facing us today.

What climate change-related health impacts can we expect for Michigan?

- Warmer climate increasing the concentrations of ozone, pollen, and particulates leading to worsening respiratory problems and allergies.
- More frequent/severe storms and flooding increasing injuries, water contamination and power outages leading to food/water-borne disease, food insecurity, mental distress and social disruption.
- More insects increasing the risk of insect-borne diseases (e.g. West Nile, Lyme Disease).
- Warming lakes and severe rains increasing the risk of toxic algal blooms and waterborne pathogens.
- More heat events with increased heat-related illnesses, deaths and hospitalizations.
- These adverse health impacts will likely *differentially* affect Michigan's most vulnerable people - the poor, elderly, and people with chronic diseases. Exacerbation of chronic conditions by climate effects would be costly; for example, a 1% increase in Michigan's asthma prevalence alone could cost an additional \$40 million.

Who are MICHAP Staff?

- **Dr. Lorri Cameron, MPH, PhD** Senior Environmental Epidemiologist and Principal Investigator, CameronL@Michigan.gov; (517) 335-8342
- **Aaron Ferguson, MPA** Program Manager, FergusonA1@Michigan.gov; (517) 335-8139
- **Yonathan Kefelegn, MPH** Epidemiologist, KefelgnY@Michigan.gov (517) 284-4829

How is climate change impacting Michigan and the Great Lakes Region?

- Temperatures are rising; heat waves are becoming more frequent. By 2030 summers in Michigan may feel like current-day Ohio. By 2095, summers will resemble northern Arkansas'.
- Annual rainfall is increasing and extreme rainfall events are becoming more frequent, especially in winter and spring; with more winter ice storms.
- Frequency and intensity of all types of severe storms will continue to increase.

How is MDHHS addressing this threat?

Our strategies to help communities adapt to a warmer and more unstable climate include:

- **Public Education:** through brochures, fact sheets, press releases, social media
- **Analytics:** conducting health surveillance; assessing and projecting trends
- **Emergency Preparedness:** developing severe weather response in partnership with Preparedness staff
- **Local Public Health Support:** Technical Assistance; training; tools
- **Internal Partnerships:** integrating climate adaptation into MDHHS programs
- **External Partnerships:** sharing information, resources with experts and communities
- **Focus on Vulnerable Populations:** Identifying and targeting vulnerable populations emphasizing adaptation.

Who are our partners?

- **MDHHS:** Emergency Preparedness and Response; Cardiovascular Health, Physical Activities & Nutrition (Building Healthy Communities); Communicable Diseases (Syndromic Surveillance, Vector-borne); Chronic Diseases (Asthma); Vital Records & Health Statistics; Family & Maternal Health (WIC)
- **State Agencies:** MDEQ, MSP, MDARD, MDNR, MDOT
- **Federal Agencies:** CDC, EPA, NOAA, NWS
- **Academia & Others:** U of M, MSU; Great Lakes Integrated Sciences & Assessment; municipal planners/local govts; Local Health Depts.; environmental and public health groups; community groups; Michigan Climate Coalition