



#ClimateChangesHealth

# Midwest CLIMATE AND HEALTH

## BACKGROUND

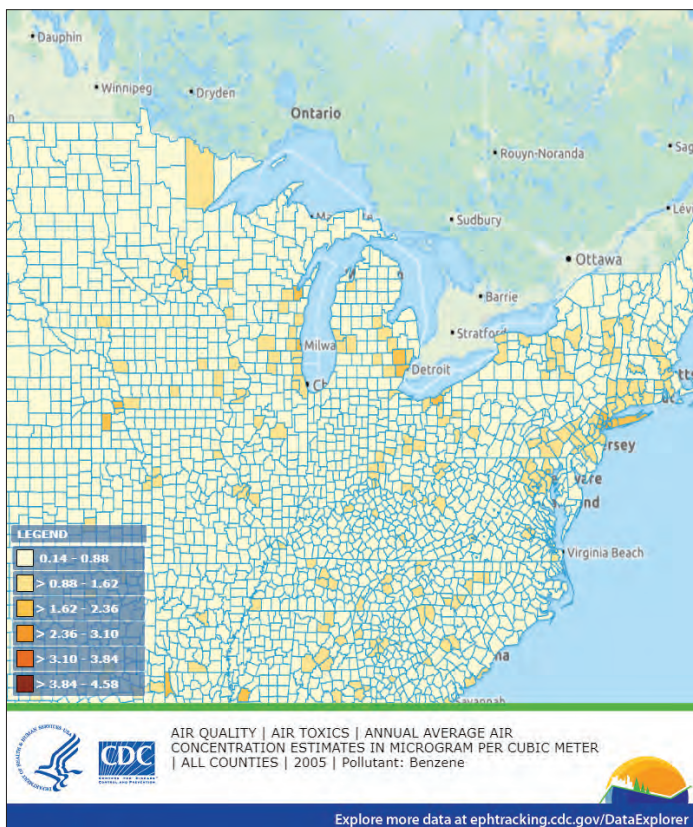
Burning fossil fuels, such as coal and gas, releases carbon dioxide. CO<sub>2</sub> builds up in the atmosphere and causes Earth's temperatures to rise. This extra, trapped heat disrupts many of the interconnected systems in our environment, posing risks to human health. Some impacts of climate change are already being felt throughout the United States. We need to safeguard our communities by protecting people's health from the effects of climate change.

## ISSUE SUMMARIES

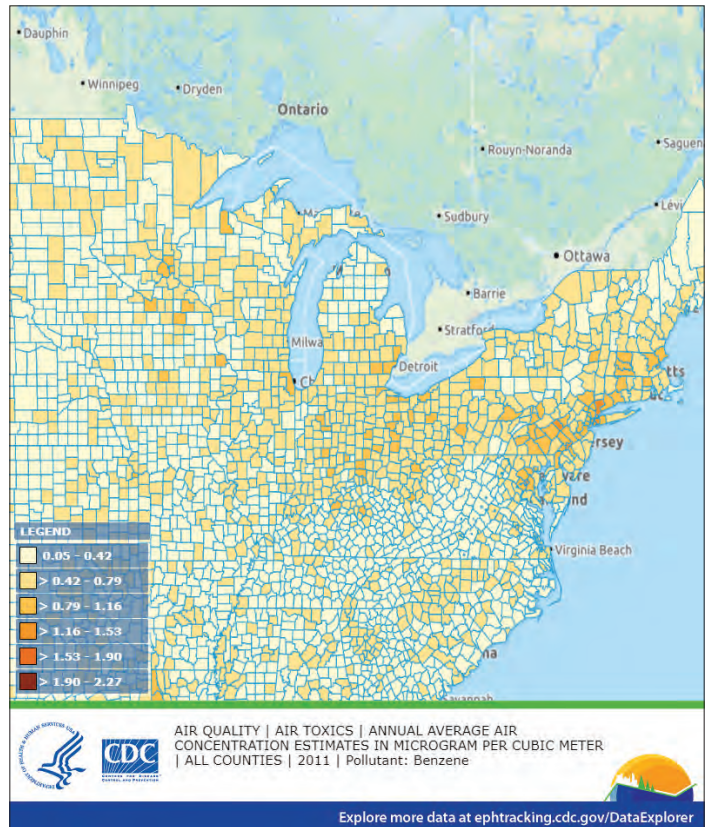
### AIR POLLUTION

Climate change is increasing ground-level ozone and other types of air pollution. Smog, air toxics, particulate matter and climate-changing gases such as CO<sub>2</sub> harm health. Smog makes it hard to breathe and worsens certain health conditions. Air toxics and particulate matter can cause increased hospitalizations, asthma, bronchitis, heart attacks, chronic obstructive pulmonary disease and premature death.

#### 2005 ANNUAL AVERAGE AIR CONCENTRATION ESTIMATES OF BENZENE



#### 2011 ANNUAL AVERAGE AIR CONCENTRATION ESTIMATES OF BENZENE

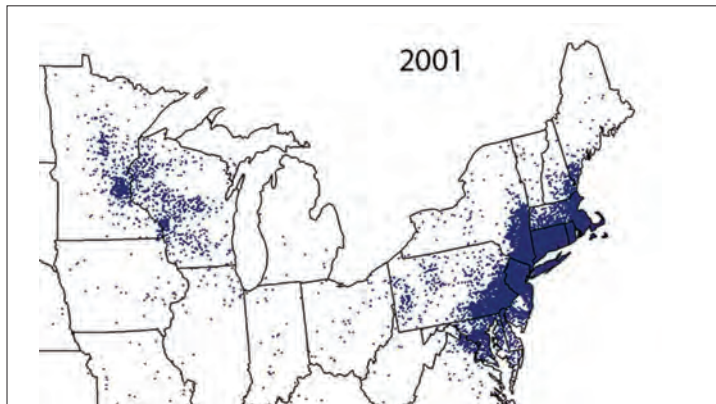


Source: The Centers for Disease Control and Prevention

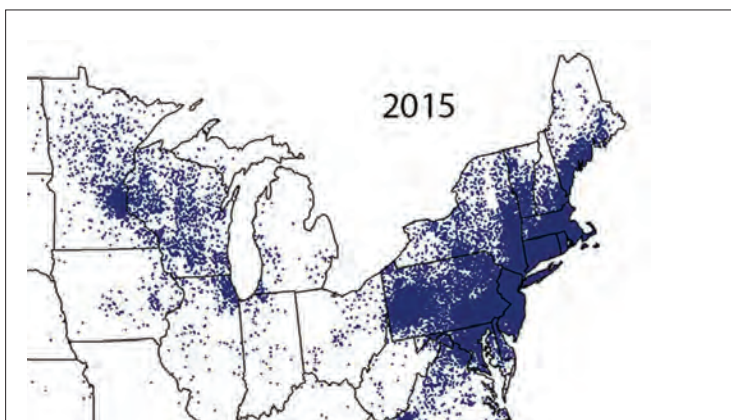
## VECTOR BORNE DISEASE

Climate change increases the risk of diseases spread by vectors such as fleas, ticks and mosquitoes. Warmer than average temperatures make previously unaffected regions new habitats for these disease-carrying organisms. In particular, mosquitos carrying West Nile Virus and ticks carrying Lyme disease have expanded their geographic ranges, resulting in disease transmission in previously unaffected areas.

### LYME DISEASE CASES, 2001



### LYME DISEASE CASES, 2015



Source: The Centers for Disease Control and Prevention

## FLOODING AND WATER QUALITY

Heavy rain, worsened by climate change, contributes to severe flooding and sewer overflows. Floodwaters can be contaminated by agricultural waste, chemicals and raw sewage that can carry harmful bacteria, viruses and parasites. Flooding and poor water quality can lead to injury and illness.

## FAST FACTS



**Aging infrastructure makes many Midwestern cities vulnerable to climate change-related flooding.**



**Northern cities like Cleveland are vulnerable to heat waves** because many homes lack air conditioning.



**The ragweed season in Minneapolis is 21 days longer than it was in 1995**, exacerbating pollen allergies and triggering asthma attacks for some.



**Poor air quality aggravates asthma symptoms, impacting 15.5% of adults in Detroit**, compared to the national average of 7.2% of adults.



**Increasingly severe rainstorms have caused sewers to overflow into Lake Michigan more often**, threatening beach safety and drinking water quality.