



# Climate and Health in ILLINOIS

PREPARED FOR THE ILLINOIS DEPARTMENT OF PUBLIC HEALTH (IDPH) BY

The Building Resilience Against Climate Effects in Illinois (BRACE-Illinois) project  
of the University of Illinois at Chicago School of Public Health, Division of  
Environmental and Occupational Health Sciences

WITH FUNDING FROM

THE U.S. CENTERS FOR DISEASE CONTROL AND PREVENTION

**ENVIRONMENTAL  
AND  
OCCUPATIONAL  
HEALTH SCIENCES  
SCHOOL OF  
PUBLIC HEALTH**



## MAIN POINTS

- ▶ **Climate change has begun and we are seeing the impacts here in Illinois.**
- ▶ **Many health conditions are tied to climate and extreme weather.**
- ▶ **As the climate of Illinois becomes warmer, wetter, and more unstable, some people and some communities are at a higher risk than others for health problems.**
- ▶ **The climate will continue to change and we need to be prepared.**

## WHAT IS CAUSING CLIMATE CHANGE?

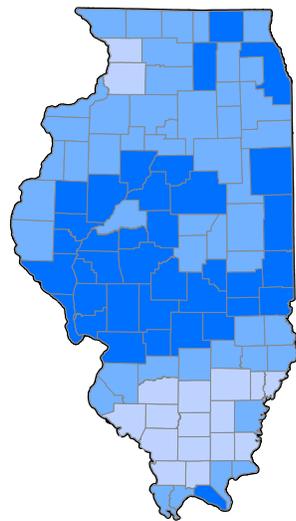
We need a natural level of carbon dioxide in our atmosphere to live; however, too much of it is problematic. When the sun's energy reaches the Earth's atmosphere, some of it is reflected back to space and carbon dioxide and other greenhouse gases absorb a lot of the energy. This is the natural greenhouse effect and it helps keep some heat in our atmosphere so that life can exist on Earth. The amount of carbon dioxide and other greenhouse gases is higher than ever before. This means that more heat is being absorbed than necessary, and this increased heat absorption is causing many types of environmental changes throughout the world.

## CLIMATE AND EXTREME WEATHER

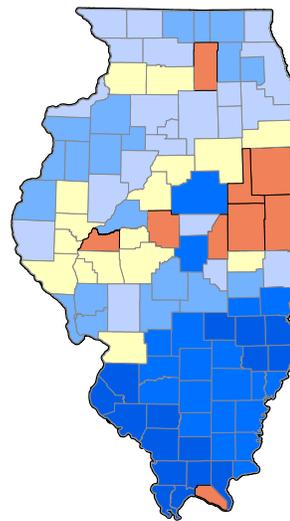
Climate is average weather over a long time—usually 30 years or more. In other words, the average temperature, the average amount of rainfall, and the extreme weather events that happen in a place over an extended period of time is the climate of that place. The climate of the world is changing. Overall, the world is getting warmer and extreme weather events like floods, droughts, and hurricanes are becoming more common. Some parts of the world are getting drier, but Illinois and the rest of the Midwest are becoming wetter. Figure 1 shows how the amount of precipitation has changed in Illinois by season, over time. Much of Illinois has become wetter in winter and fall, drier in summer, and significantly wetter in the southern part of the State in spring.

The climate of Illinois isn't the same everywhere and the impacts from climate change will vary across the State. Some places will be hotter while others will be more prone to flooding. In addition, two different locations might experience the same weather but one might have a worse outcome than the other one because of how each is designed. For example, the air temperature might be the same in two different locations—one with more concrete and the other with more green space—and the one with more concrete will feel hotter than the one with more green space. Similarly, two locations can get the same amount of rainfall but one

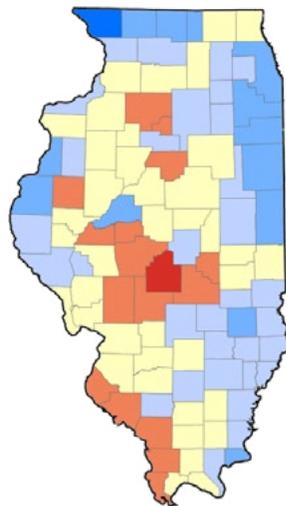
# Changes in Precipitation in Illinois by Season



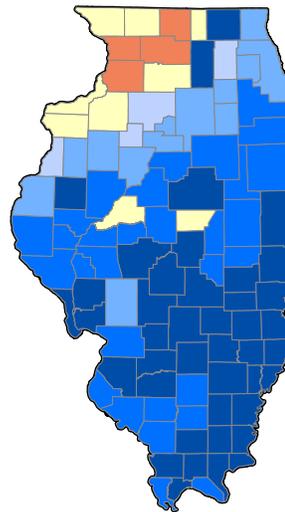
Winter



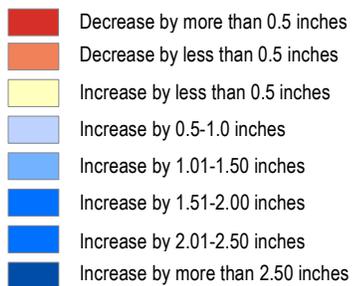
Spring



Summer



Fall



**Changes in precipitation in Illinois, by season**

Data from the Midwest Regional Climate Center

Comparison: Difference between 2001-2015 and 1951-1965

Figure 1: Changes in the amount of precipitation that Illinois counties received in 1951–1965, compared to 2001–2015. The climate of Illinois has become wetter in fall and winter. Some parts of the state have seen little change in spring rainfall, but the southern portion of the state has become significantly wetter. At the same time, summer has become drier in many counties.

Source: Data from the Midwest Regional Climate Center

might flood because the streets don't allow water to easily drain or their pipes are in poor condition and cannot handle high levels of rain. Our communities need to be prepared for the kinds of weather and diseases that climate change will bring to Illinois.

## **CONNECTIONS BETWEEN CLIMATE AND HEALTH**

Our health depends on where we live, how our neighborhoods are built, and the quality of our air, food, and water. Climate change is causing many environmental changes and impacts to our ecosystem, infrastructure, and communities. In Illinois, it is contributing to more frequent and severe heat waves, floods, droughts, and worsening air quality. These changes can lead to an increased risk of various health conditions.

- There are several kinds of illnesses people can get from very hot weather such as heat stroke and heat exhaustion. People can become critically ill and even die.
- Floods can cause massive damage to the economies of counties, harm agricultural output, and damage homes and businesses. Flood waters can contaminate our drinking water and cause mold growth in our homes. Residents are at a higher risk of injury when moving around flooded homes and streets.
- People often have to evacuate their homes because of flooding and other extreme weather events, causing extreme psychological and emotional stress.
- Mosquitoes and ticks can carry many different types of diseases, including West Nile virus and Lyme disease. As temperatures and rain increase, mosquitoes and ticks are able to live in places where they previously couldn't survive. Because of this, the places where they cause disease can change and possibly expand.
- A hotter climate means we can expect more ozone pollution in the air we breathe. Ground level ozone is a type of air pollution. It is made by the combination of sunlight, heat, and air pollution that comes out of the exhaust pipes of cars and from factories. Ozone levels can get very high in hot, sunny weather. This can make breathing difficult for children, the elderly, and people with asthma and other lung and respiratory illnesses or conditions.

## **SOCIAL VULNERABILITY**

Illinois' communities have to prepare for and respond to the environmental changes from climate change. Many factors can increase the risk of developing the health conditions related to climate change mentioned in the previous section. Some of these factors include poverty, unemployment, lack of access to transportation, crowded housing, and having small children or elderly people in the home. Such factors are known as social vulnerability and it means that some communities will be at a higher risk of suffering from the public health impacts from climate change. These communities are often disproportionately low-income and of color.

# CLIMATE CHANGING HEALTH

## in Illinois

### Environmental Changes



Heat Waves



Floods



Droughts



Worsening Air Quality

### Health Conditions



Tick and Mosquito Diseases



Injuries and Infections



Respiratory Problems from Mold



Heat Stroke and Exhaustion



Contaminated Drinking Water



Mental Health



Worsening Allergies and Asthma

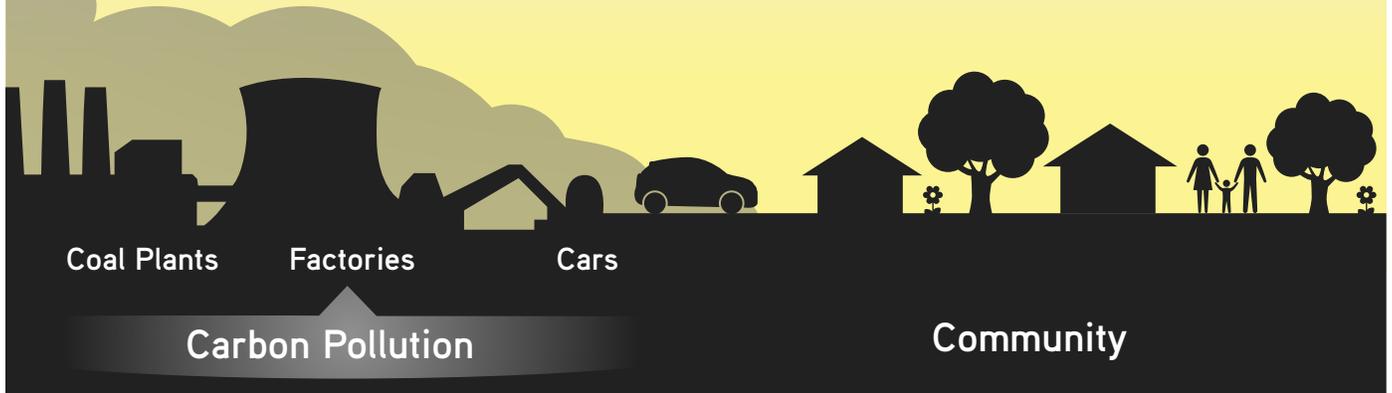


TABLE 1: How climate change is affecting public health in Illinois

The Social Vulnerability Index is a tool the Centers for Disease Control and Prevention (CDC) created to help emergency response planners and public health officials identify the communities that will most likely need support before, during, and after a natural disaster. Table 2 describes the four themes and 14 social factors from the U.S. Census that it uses to rank communities from lowest to highest vulnerability. Communities can learn more about their social vulnerability to extreme weather events using the mapping tool at <http://svi.cdc.gov/>. This is one tool that can help communities ensure equity in preparing for the impacts from climate change.

<b>Overall Vulnerability</b>	<b>Socioeconomic Status</b>	Below Poverty
		Unemployed
		Income
		No High School Diploma
	<b>Household Composition &amp; Disability</b>	Aged 65 or Older
		Aged 17 or Younger
		Older than 5 with a Disability
		Single-Parent Households
	<b>Minority Status &amp; Language</b>	Minority
		Speak English "Less than Well"
	<b>Housing &amp; Transportation</b>	Multi-Unit Structures
		Mobile Homes
		Crowding
		No Vehicle
Group Quarters		

TABLE 2: CDC's Social Vulnerability Index themes and social factors

## HEAT AND HEALTH

There are several kinds of illnesses that are caused by very hot weather. These include heat rash, heat cramps, dehydration, heat exhaustion, and heat stroke. The most serious illness is heat stroke, which is often deadly. Table 3 describes the different heat illnesses, their symptoms, and first aid responses.

### People at Risk for Heat Stress Illness in Illinois

Some people are at much greater risk for experiencing health difficulties in extreme weather. One such group is the elderly, as they are more likely to suffer from heat stroke in hot weather.

In addition to heat-related illness, certain health conditions are made worse by heat. On average, there are more deaths caused by heart attacks on days when the temperature is hotter. That means, even when we're not having a heat wave, we can expect more heart attack deaths on an 85-degree day than on an 80-degree

Heat Illness	Symptoms	First Aid
<b>Heat Rash</b>	Red bumps on skin usually on neck, chest, and folds of skin	Keep the affected area dry and try to be in a cooler and less humid area
<b>Heat Cramps</b>	Heavy sweating and muscle pain	Stop all activities and rest Drink water or clear juice Get medical help if cramps don't go away in an hour
<b>Heat Exhaustion</b>	Cool, moist skin; heavy sweating; headache; nausea or vomiting; dizziness; light headedness; weakness; irritability; fainting; fast breathing; fast and weak pulse	Get out of the sun and go to a cooler place Lie down and loosen clothes Apply cool wet cloth to the body Sip water If symptoms worsen, get medical help If you vomit, seek medical help Heat exhaustion can lead to heat stroke
<b>Heat Stroke</b>	Very high body temperature (above 103°); hot, red, dry, or moist skin; fast and strong pulse; fainting; confusion	Call 911 and get medical help right away! Heat stroke can cause death Move to a cooler place Use cold cloths, a cold shower, a garden hose, or any other way to cool down fast

TABLE 3: Heat illness, symptoms, and first aid chart

day. As the climate of the U.S. continues to heat up, people who have heart conditions will be more likely to suffer from heart attacks.

## 1995 CHICAGO HEAT WAVE

From July 12–15<sup>th</sup>, 1995 the temperature in Chicago was close to 100°F. One day the temperature rose to 104°F, but with the humidity it felt like 119°F. The parking lots, roads, buildings, and sidewalks got extremely hot during the day, not allowing the city to cool down at night. 739 people died and thousands of others were treated for heat-stress illnesses in emergency rooms. Many of the people who died lived alone in apartments and didn't have air conditioning or could not afford to turn it on. Many were found dead in their overheated apartments. These deaths didn't occur at random. The elderly and those living in poverty—especially in African-American communities—were particularly vulnerable. Chicago was not adequately prepared for a natural disaster of this magnitude. Bodies piled up at the Medical Examiner's Office and there weren't enough paramedics and ambulances to respond to emergency calls. Emergency departments had to turn away ambulances because they were overwhelmed with people suffering from heat stress.

Many lessons were learned and Chicago became a leader in heat emergency response plans. Some of the lessons include: 1) Determining temperature thresholds to have a clear trigger to begin a coordinated response; 2) Developing comprehensive coordination with all city departments to outline responsibilities, procedures, and lines of accountability; 3) Improving outreach through partnerships with community-based organizations; and 4) Improving pre-crisis preparations by developing a public information campaign.



**A father and son pray at a mass gravesite after tossing a flower onto the coffins at the Homewood Memorial Cemetery in Homewood, Ill. More than 40 of the forgotten and unclaimed victims of Chicago's July summer heat disaster are buried at the cemetery.**

— AP file photo, Aug. 25, 1995

## Places at Risk in Illinois

The people who are at greatest risk of dying in a heat wave are:

- Elderly
- People who live alone
- People who don't have air conditioning or can't afford to use it
- People who suffer from mental illness, heart disease, or kidney problems
- People who do physical labor outdoors, especially in agriculture, landscaping, road construction, and roofing

### BUILT ENVIRONMENT MATTERS

In locations with the same exact temperature and humidity, places with more concrete and asphalt will become hotter and stay hotter than vegetated communities, or places with more trees and green space. This often happens in cities where the sun heats up the concrete, asphalt, and other building materials, and temperatures can become 5–10 degrees warmer than in nearby towns. This is called the “urban heat island effect.” At night, the buildings and sidewalks stay warm for hours, not allowing cities to cool off. It is important for an area to cool off because it allows peoples’ bodies to cool off too and this helps prevent heat stress illness. Although the urban heat island effect often happens in cities, not all parts of a city experience this uniformly. There are cooler places within cities where there are more trees and green spaces. Conversely, rural and suburban areas can be extensively built using concrete and asphalt and become very hot. This is one reason why it is so important to include green spaces, trees, shrubs, and grassy areas into municipal design plans.

### URBAN VS RURAL AREAS

Even though Chicago is known for having heat waves, the rest of the state has also experienced extreme heat waves that made many people sick and hospitalized others. The southern part of Illinois is warmer than the northern part, and people living in rural areas of Illinois are actually at greater risk of suffering from heat stress illness than in urban areas. Individuals in every



**Chicago**

*Photo Credit: FEMA/Carolyn Deming*



**Peoria**

*Photo Credit: 3Ton Group*

county of Illinois have been hospitalized for heat stress illness, but overall, the risk is about 1.5 times greater for those who live in rural counties compared to urban counties. Public health specialists are not sure why people in rural counties are at greater risk for heat stress illness. It could be because there is more agricultural work in rural counties and agricultural work in the heat is hazardous. Another explanation is that in cities, neighbors are close by but in rural areas, the nearest neighbor might be a mile away, making it difficult for people to check up on neighbors and relatives. As Figure 2 demonstrates, the parts of the state with the highest rates of hospitalization (in red) are mainly in the southern part of Illinois.

## RAINFALL AND HEALTH

The Mississippi and Ohio Rivers run along the borders of Illinois. The Wabash, Kaskaskia, Illinois, and many other rivers run through the State. This abundance of water makes Illinois a great place to go fishing or enjoy boating. But if river levels reach flood stage due to high levels of rainfall, homes and businesses get damaged, crop yields can fall, and people may have to evacuate their homes. Illinois receives a large amount of rain and thus has a wet climate. Figure 3 shows the number of federal flood disaster declarations by county from 1981–2013. The floods from 1993–2013 cost Illinois more than \$5.6 billion. Water damage to homes often leads to mold growth indoors. The high indoor mold levels can trigger attacks of asthma and allergies. Injuries are also common when people clean up from floods. Carbon monoxide poisoning often occurs when people run generators indoors because of a loss of electricity from a flood. Heavy rains can also cause fertilizer and manure from farms

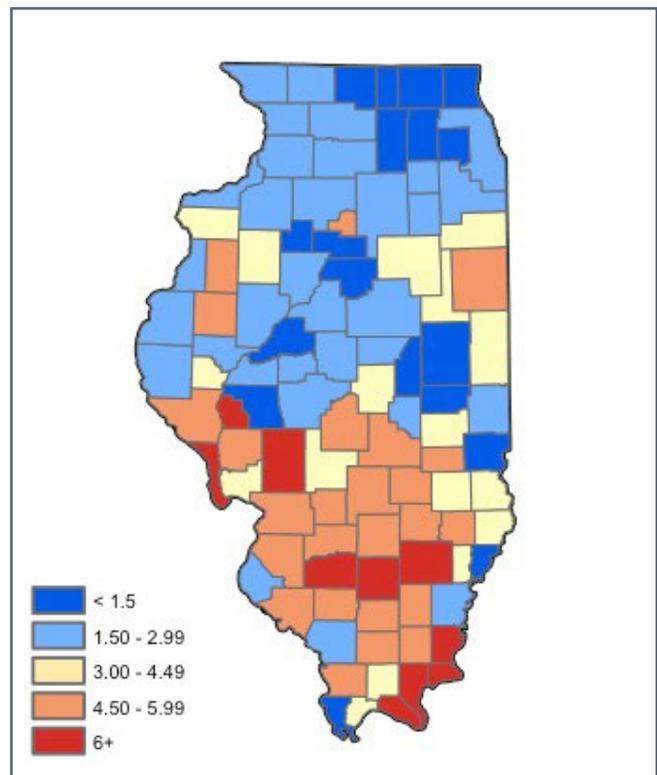


Figure 2: Rates of hospitalization for heat-stress illness in Illinois from 1987–2014. This map shows the risk of being hospitalized for a heat-stress illness in each county. It is based on the number of heat hospitalizations in each county from 1987–2014. Red is a high risk and blue is a low risk.

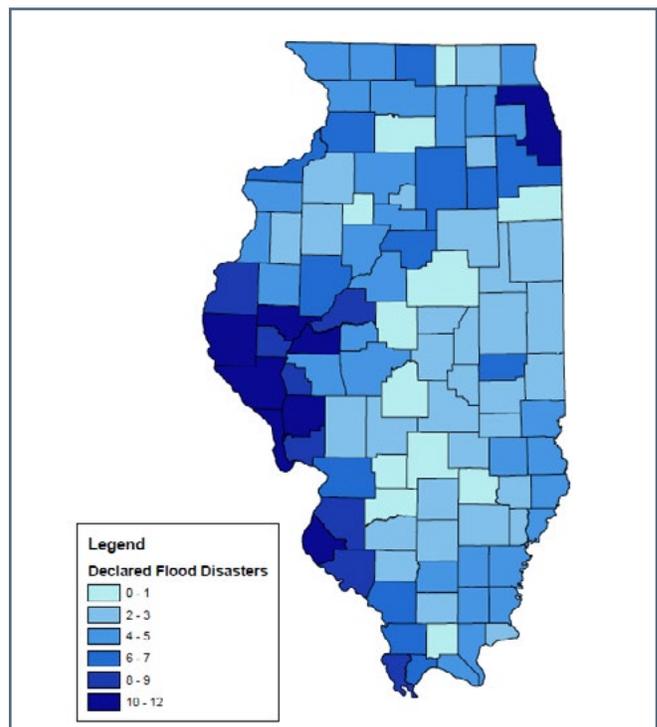


Figure 3: Number of federal flood disaster declarations by county from 1981–2013.

and toxic chemicals from industry to flow into lakes, rivers, and private wells that supply drinking water. Living through a flood, suffering from property and business damage, having to temporarily leave a flooded home, and agricultural loss can all cause psychological and emotional stress. All of these impacts are destructive, expensive, and stressful. Watch [this video](#) to learn more about how we can be better prepared for extreme weather events.

## THE APRIL 2013 FLOODS

“It must have been five or six days that it rained in April and the ground could only take so much. I came home at about five o’clock and the water was still rising. It got up to the deck and it stayed there for a while. We didn’t realize it was underneath our house, in our underpinning and that saturated our insulation. In the past, we had flooding, but it hadn’t come all the way up to



**Tony and Pam Monske, residents of Minooka, Illinois, were victims of the 2013 floods**

our home. In 2013, the flood came up to our home, which was very unusual. People were riding around in row boats, they came and got people out in row boats, the Fire Department was here, and it was just like you were living in the middle of a lake. The septic system became a real problem here. It backed up and we had sewage water all through the neighborhood. It fertilized our lawn pretty well but other than that, it was not very healthy. The inside of the house smelled like mold, the carpets felt damp, we had to tear everything out, and we had to start from scratch. We didn’t have flood insurance; we never needed it before in 25 years. It was a sickening feeling. You know you have to fix everything, there’s nothing you can do about it, insurance only pays so much,



and as a result of what we had to have done here the insurance deductible went from \$500 to \$1000. It was very stressful. We lost a lot of valuable items and items you can’t replace—pictures of my family, of my parents, my Christmas items that I’ve had since I was a little girl and I got when my mom died, and it was like cutting my heart out.”

- Tony and Pam Monske

## People at Risk in Illinois

Illinois is prone to flooding and Illinoisans are familiar with floods. However, climate change will make floods more frequent and severe. People who are especially vulnerable to floods are:

- Elderly
- Physically disabled individuals
- Those living in long-term care facilities
- Children

## Places at Risk in Illinois

People who live near rivers, creeks, and in other flood-prone areas are at risk to experience flooding and the health problems that follow.

## HEAT, RAINFALL, AND HEALTH

Warmer, wetter weather will make some health conditions more frequent in Illinois. It will allow mosquitoes and ticks to live and spread diseases, such as West Nile virus and Lyme disease, in places where they previously couldn't survive. Warmer, wetter weather will also worsen respiratory health conditions.

## Diseases Carried by Mosquitoes and Ticks

West Nile virus is an infection spread by mosquitoes and it arrived in the United States in 1999. The first case of the virus in Illinois was diagnosed in 2001. In 2002, the virus peaked with the largest number of cases in the United States occurring in Illinois. Most people infected with West Nile virus only experience minor symptoms. The elderly are at greatest risk of developing the most serious form of West Nile virus, which is an infection of the brain. West Nile virus infections are related to weather and climate, but it's hard to accurately predict whether this disease will become more common in Illinois.

Certain ticks also spread infections, such as [Lyme disease](#), which can cause rashes, joint problems, and other complications. Like mosquitoes, ticks prefer specific kinds of temperature and moisture conditions. The Lone Star tick is one type of tick that can now survive in new places because the United States has become warmer. The Lone Star tick can transmit [Ehrlichiosis](#) and [tularemia](#) and it prefers the hot weather of Texas, Oklahoma, and Arkansas. As the temperatures in the Midwest have risen, the Lone Star tick can now be found in most parts of Illinois.



Photo Credit: CDC/Amanda Mills

## WEST NILE VIRUS HITS ILLINOIS

Illinois' first case of West Nile virus (WNV) in a nonhuman source was discovered in 2001. This came two years after this mosquito-borne virus was initially found in New York, drawing much attention and concern nationally among the scientific community and general public alike. The Illinois Department of Public Health began its surveillance efforts with federal funding in 2001 to monitor cases in humans, horses, dead birds, and mosquitoes statewide. The virus peaked in 2002 with 884 human cases and 67 deaths, which were more than any other U.S. state reported that year.

Despite the high number of human cases that year, the health impact of the WNV could have been much worse if state and local health departments did not implement early prevention activities and statewide surveillance. With proper funding, the state was prepared with dedicated staff to respond promptly by sending effective messaging to the community on how to reduce risk and utilizing a collaborative approach among public health divisions to proactively address the problem. Investing in prevention and performing the right activities can result in fewer people getting sick and empower the public to take action.



**Mark Dworkin, the former State Epidemiologist for the Illinois Department of Public Health, visiting an underground tunnel with mosquito experts from the University of Illinois Urbana-Champaign to investigate the number of mosquitoes with WNV hibernating within the tunnel.**

## Respiratory Conditions

People with asthma, emphysema, chronic bronchitis, or other respiratory health illnesses can have difficulty breathing when air pollution is bad. Ground-level ozone is a type of air pollution that is made through a combination of sunlight, heat, and air pollution that comes out of the exhaust pipes of cars and from factories. Ozone pollution makes it particularly difficult to breathe for many people. This is especially true for children, the elderly, and those with asthma and other respiratory health problems. Ozone levels can get very high in hot, sunny weather and as the world becomes warmer, we can expect more ozone pollution in the air we breathe.

In addition, warmer temperatures and wetter conditions allow for pollen producing plants to flower earlier, longer, and in more abundance. As a result, there is more ragweed in the air and the hay fever season is longer.

## LIFE WITH A RESPIRATORY ILLNESS IN A WARMING WORLD

"I was diagnosed in 1995 with sarcoidosis. Prior to that I had no idea what sarcoidosis is. They call it a mystery disease because the cause of it is unknown. They said it is an inflammatory disease and it attacked my lungs. It viciously attacked my lungs to where I became oxygen dependent and in 3 years it developed to stage 4. It affected my life in every aspect. Things that I normally enjoyed doing, like skating and swimming, I was no longer able to do. I used to teach at Chicago Public Schools and the sarcoidosis became so aggressive that for the last year I taught I was using oxygen. I had a very difficult time breathing, climbing stairs, I became very lethargic by midday and eventually I had to stop working. On very hot days I feel very lethargic, I feel like I'm being choked, my air isn't coming up properly, and I cough consistently. One time when it was very hot outside I was struggling to breathe, I was coughing, gasping for air, it felt like my chest was panting, I was throwing extra heartbeats, it just felt like an elephant was sitting on my chest, but I was determined to make it home. When I got home, I was in a worse situation. I felt so lethargic and tired but I knew I had to get to my lifeline button because I know when my body is in a serious crisis. When I got to my lifeline button I was not able to talk or communicate and they sent the paramedics out right away. It was a very frightening time because you don't know whether or not it will be your very last breath."



**Dorothy Williams, a resident of South Holland, IL, suffers from the chronic respiratory disease sarcoidosis.**

For the many people in Illinois with lung disease and allergies, this could mean more frequent hospitalizations, higher medical costs, and not being able to go outside when ozone or pollen levels are high.

### **People at Risk in Illinois**

People who are at greatest risk of contracting diseases caused by ticks or mosquitoes and experiencing breathing difficulties and other respiratory problems are:



**Photo Credit: CDC/Dawn Arlotta**

- People who are active outside
- People who work outside (farmworkers, landscapers, utility workers)
- People with respiratory illnesses and allergies
- Elderly
- Children

## **Places at Risk in Illinois**

Different locations are at a greater risk of diseases carried by mosquitoes or ticks and worsening respiratory illnesses:

- People who live near small or large bodies of water where mosquitoes breed will be at a higher risk for diseases carried by mosquitoes
- People who live, work, or are active in wooded areas will be at a higher risk for diseases carried by ticks
- People who live in urban areas will be at a higher risk of ozone pollution because they are densely populated with more cars and trucks on the roads burning fossil fuels.

These areas are often disproportionately home to low-income communities and communities of color.

## **PREPARING FOR THE IMPACTS OF CLIMATE CHANGE ON HEALTH IN ILLINOIS**

There are many ways Illinoisians can be more prepared for the health effects from climate change. Individuals and families can go to [www.ready.gov/build-a-kit](http://www.ready.gov/build-a-kit) to make an emergency preparedness kit and have it available; drink plenty of water and stay out of the sun on high temperature days; know the signs and symptoms of heat-related illness; check on family, friends, and neighbors during hot days and before and after an extreme weather event; follow EPA's Air Quality Index; plant a rain garden. Individuals and families can also be a part of the bigger solution to slow down climate change by taking steps to reduce carbon dioxide emissions such as driving less, planting trees, better insulating homes, turning off lights when not in the room, and unplugging cellphone and laptop chargers when not using them.

When the weather is hot, more electricity is needed to run air conditioners. Extreme heat situations can result in extreme demand of the electrical grid. This can overwhelm the grid to the point where electricity can go out temporarily. Storms can bring down electrical cables, which can also knock out electricity. Floods can overwhelm wastewater and storm water systems, resulting in the contamination of our drinking water supply. This puts added stress on hospitals, pharmacies, medical offices, and dialysis centers that depend on a steady supply of electricity and water. Health care systems have to be ready for the weather extremes of the future, not just the extremes we have now, to ensure they are operating when we need them the most.

Public health professionals must carefully consider and plan for extreme weather events and changes in disease patterns as a result of climate change. Emergency preparedness planners need to use the best available information when developing preparedness and response plans.

Climate Change Impacts		
Climate Change Impacts	Health Impacts	People Most Affected
<b>Extreme Rainfall and Floods</b>	<ul style="list-style-type: none"> <li>• Property damage, loss of home and livelihood, population displacement</li> <li>• Death from drowning</li> <li>• Injuries</li> <li>• Damage to drinking water and wastewater systems resulting in worsening quality of drinking water and disruption to agriculture</li> <li>• Water- and food-borne diseases from sewage overflow</li> </ul>	<ul style="list-style-type: none"> <li>• Residents in flood-prone areas</li> <li>• Elderly</li> <li>• Children</li> <li>• Low-income communities</li> </ul>
<b>Extreme Heat</b>	<ul style="list-style-type: none"> <li>• Heat-related illnesses such as heat cramps, heat rash, heat exhaustion, and heat stroke</li> <li>• Dehydration</li> <li>• Death</li> <li>• People with heart conditions are more likely to have heart attacks</li> </ul>	<ul style="list-style-type: none"> <li>• Elderly</li> <li>• Children</li> <li>• Low-income communities</li> <li>• People who live in places with more concrete and asphalt</li> <li>• People who work outside, such as farmworkers</li> <li>• People who are active outside</li> <li>• People with breathing diseases</li> <li>• Physically and mentally disabled people</li> <li>• People without access to or can't afford air conditioning</li> </ul>
<b>Increased Temperatures and Rainfall</b>	<ul style="list-style-type: none"> <li>• Increased number and range of diseases spread by ticks and mosquitoes, such as West Nile virus and Lyme disease</li> <li>• Increased and worsening breathing diseases caused by ozone pollution</li> <li>• Increased and worsening allergies caused by pollen</li> </ul>	<ul style="list-style-type: none"> <li>• Elderly</li> <li>• Children</li> <li>• People who work outside such as farmworkers</li> <li>• People who are active outside</li> <li>• People who live near wooded areas</li> <li>• People with allergies</li> <li>• People with asthma and other respiratory health conditions</li> </ul>
<b>Poor Air Quality/ Air Pollution</b>	<ul style="list-style-type: none"> <li>• Increased and worsening asthma, allergies, chronic obstructive pulmonary disease (COPD), and other breathing diseases</li> </ul>	<ul style="list-style-type: none"> <li>• Elderly</li> <li>• Children</li> <li>• Low-income communities</li> <li>• Communities of color</li> <li>• People with breathing diseases</li> <li>• People who are active outside</li> </ul>
<b>All Impacts</b>	<ul style="list-style-type: none"> <li>• Mental health disorders (e.g., depression, anxiety, Post-Traumatic Stress Disorder, and other conditions caused by traumatic events, displacement, and loss of home, lives, and livelihood)</li> </ul>	<ul style="list-style-type: none"> <li>• Low-income communities</li> <li>• Communities of color</li> <li>• All populations</li> </ul>

TABLE 4: Public health impacts from climate change and the people at risk

This includes taking into account our changing climate, and making sure they are equipped for weather extremes not seen in the past. Health departments and health care professionals have to educate the public—especially the elderly and people without access to air conditioning and other resources—about the dangers of extreme heat. People who design towns, cities, homes, and flood-control systems can play a key role in protecting the health of the public in a changing climate. All of these sectors are an important piece of preparing Illinois to adapt to the realities of a changing climate and recognizing the disproportionate risk of public health impacts faced by certain people, places, and communities, and building equitable climate resilience for everyone. These and other important steps to protect the public's health impacts from climate change in Illinois will be described in the Illinois Climate and Health Preparedness Plan (I-CHPP).