

2019-2020 LWVDC PUBLIC ISSUES FORUM — CLIMATE CRISIS SERIES

## Forum #1

# Why Climate Change is a Public Health Emergency



*The series aims to raise awareness and private/public action to reduce carbon emissions and build resilient communities through non-partisan leadership.*

### **SPEAKERS**

**Claire Gervais, M.D.** Family practice physician and Clinical Associate Director of *Wisconsin Health Professionals for Climate Change*

**Ralph Petersen, Ph.D.** UW-Madison Space Science and Engineering Center and former NASA and NOAA scientist

**Andrea Kaminski** Former executive director of the League of Women Voters of Wisconsin

**When:** Wednesday, September 4, 2019, 6:30 p.m.

**Where:** American Family Insurance DreamBank

**Admission:** Free

*For more information, visit [www.lwvdanecounty.org](http://www.lwvdanecounty.org) or call 608-232-9447.*

## League of Women Voters of Dane County Public Issues Forum – Climate Crisis Series

The League of Women Voters of Dane County presents a four-part series in 2019-2020 on the Climate Crisis. It aims to inform the public about the history, escalating impacts, and up-to-date science-based solutions for our communities. Our invited speakers will clarify existing and proposed solutions, with an eye on diversity, equity and inclusion. We are setting a course through non-partisan leadership to foster private and public actions to reduce carbon emissions and build resilient communities.

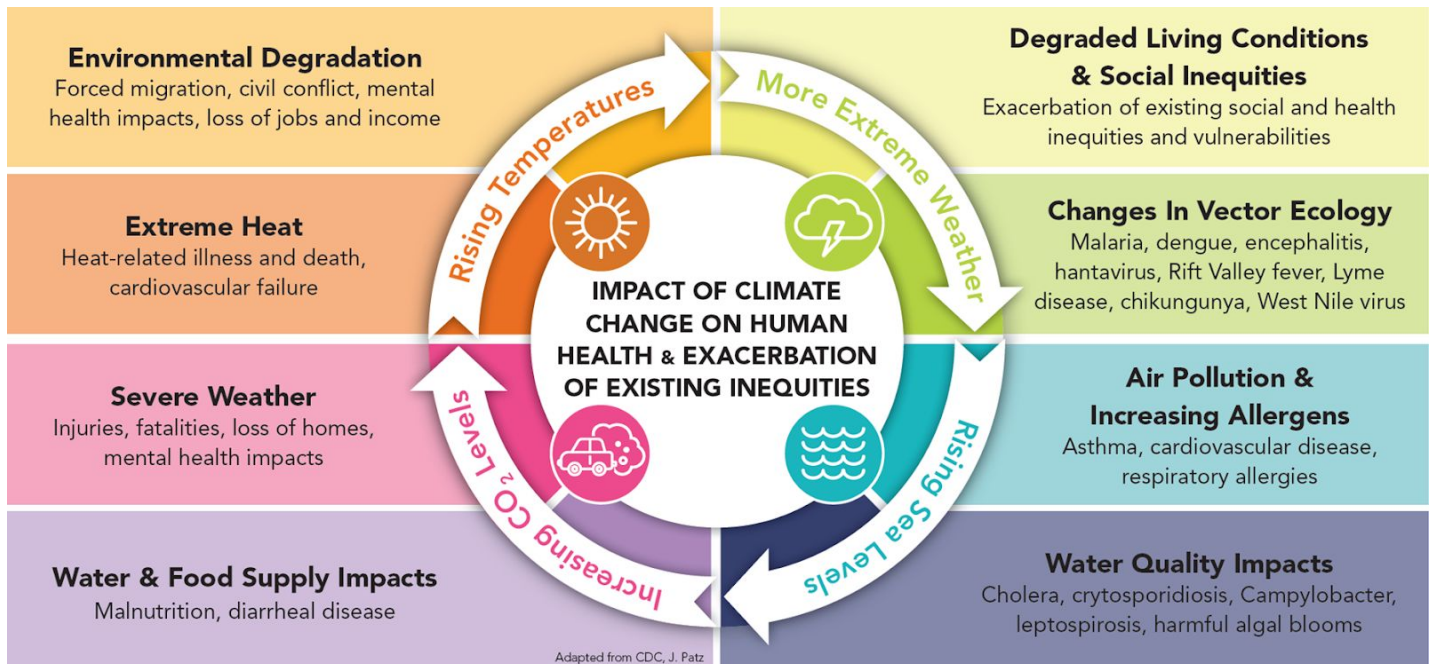
### Forum #1: Why Climate Change is a Public Health Emergency

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#### Discussion Questions

- a) Prior to attending the forum or reading the study materials, what were your biggest concerns related to climate change? What are they now?
- b) What did you hear in the forum that most impressed you?
- c) Have you or anyone you know experienced health issues related to climate change?
- d) Is there a climate issue you would like LWVDC to work on, such as public education and outreach? How do you want to be involved? What topics should LWVDC explore?
- e) What lifestyle changes are you willing to make? How will you hold yourself accountable?



## Actions You Can Take

1. **Explore LWWUS' excellent climate change toolkit.** This comprehensive [toolkit](#) can help you understand more about the basics of climate change, work with members of your community to educate and motivate others to take action, and promote public policies that can help mitigate the effects of climate change.
2. **Compare your energy use to others who use MG&E.** Go to MG&E [website](#), sign in to your account, and compare your energy use to others in Madison, to others who live in houses close to your size and to your energy use last year.
3. **Select one or two personal actions you can take.** [Earth Day Take Action](#) suggestions for personal action: Go green with us by making small changes that add up to making a big difference. Commit to earth-friendly acts, make more sustainable choices, reduce your carbon footprint, conserve energy and resources, collaborate on environmental projects in your community, vote for leaders committed to protect us and the environment, and share your acts of green to help educate and inspire others to join our movement! Start protecting our environment today and help us create a healthy, more sustainable future.
4. **Calculate your carbon footprint.** Here are two of many possible carbon footprint calculators. They go from fun and friendly to very complex. They also show you how to compare to others. Find one that works for you.

**Household Carbon Footprint Calculator** - Many of our daily activities, such as using electricity, driving a car, or disposing of waste cause greenhouse gas emissions. Together these emissions make up a household's carbon footprint. The [calculator](#) estimates your footprint in three areas: home energy, transportation and waste.

**Cool Climate Carbon Calculator** - Cool Climate provides *smart* decision-making tools and programs to accelerate the transition to a clean energy economy. [Cool Climate tools](#) quickly identify the unique opportunities each individual, business, organization or community holds to reduce greenhouse gas emissions. These tools are incorporated into programs to activate, educate, motivate and empower individuals and organizations to make low-carbon choices.

5. **Become a PSR (Physicians for Social Responsibility) Ambassador.** PSR Climate Ambassadors are asked to take a minimum of **one action per month**. PSR staff provide the Climate Ambassadors with a variety of activities each month. Sign up [here](#) with PSR and join an exciting group of activists who are committed to advocating for a healthier, safer world for present and future generations.

## League Position

### Climate Change

#### ***Statement of Position on Climate Change Policy, as announced by the National Board, January 2019:***

The League believes that climate change is a serious threat facing our nation and our planet.

The League believes that an interrelated approach to combating climate change—including through energy conservation, air pollution controls, building resilience, and promotion of renewable resources—is necessary to protect public health and defend the overall integrity of the global ecosystem. The League supports climate goals and policies that are consistent with the best available climate science and that will ensure a stable climate system for generations. Individuals, communities, and governments must continue to address this issue, while considering the ramifications of their decision, at all levels—local, state, regional, national, and global.



#### **League History on Climate Change**

In the later 2000s, LWVUS significantly increased its advocacy concerning global climate change. LWVUS believes that climate change is a serious problem that requires immediate domestic and international action. The League believes the U.S. government should move ahead immediately, without waiting for other nations, on initiatives to reduce emissions of heat—trapping gases like carbon, methane, and other air toxics. Such actions will reduce the threat of global climate change, combat air pollution, increase energy security, and create new jobs.

In late 2006, the League joined other groups in issuing a statement of principles on the importance of reducing climate change. The League also created a Climate Change Task Force to provide information and assistance to the national board and staff on issues pertaining to climate change. The Task Force also works to develop materials for use by League members at the local, state, and national levels.

In 2008, the League called on Congress to enact legislation to significantly cut the greenhouse gas emissions which cause global climate change and supported increased energy efficiency and a shift to clean, renewable energy. The League called for a moratorium on the building of new coal-fired electric power plants and supported requirements for utilities to produce a significant percentage of electricity from renewable resources.

The League supported the *Climate Security Act of 2008*, as well as amendments to strengthen the bill. This legislation provided for a cap and trade system, which would have cut greenhouse

gas emissions from electric power, transportation, and manufacturing sources. The emissions cap would be reduced over time to meet pollution reduction goals based on the best available scientific information. These emissions reductions could be traded on a market, set up by the legislation, allowing polluters to buy, sell, borrow, and trade emission allowances to ensure economic efficiency in the program. The League also urged elected officials to extend clean energy tax incentives. Though it passed the U.S. House of Representatives, the legislation was sidetracked in the U.S. Senate by special interests.

In December 2009, the League was thrilled to participate on the international stage, sending an official non-governmental organization delegation to Copenhagen, Denmark, for the U.S. Framework Convention on Climate Change. In March 2010, 19 League leaders from as many states were brought to Washington to lobby congressional leaders on strong climate change legislation. In addition, the Climate Change Task Force developed and promoted a Toolkit for Climate Action to assist Leagues and League members throughout the country in the fight to combat global climate change.



In the late 2000s, the League lobbied vigorously for comprehensive legislation to control global climate change by setting a cap on greenhouse gas pollution and by encouraging conservation and renewable energy. As part of an education and advocacy project on climate change, six state Leagues held forums with trips by the League president to speak at public events and meet with key senators and staff. In early 2010, the LWVUS president was honored with a *Sisters on the Planet Climate Leader Award* by Oxfam America for the League's grassroots work on climate change.

In 2012, when the EPA proposed the first-ever standards to control industrial carbon pollution from power plants, which causes global climate change and increases health problems, the League joined with its environmental and social justice allies in collecting the largest number of comments ever submitted in review of an EPA regulation. More than three million comments were submitted in support of the proposed rules for new power plants urging the EPA to take the next step and set carbon standards for existing plants.

With Congress unable or unwilling to act on climate change, in 2012, the League launched an initiative to urge President Obama to use his executive authority under the *Clean Air Act* to control carbon pollution from both new and existing power plants, which are the largest source of industrial carbon pollution in the U.S. The League strongly urged the president to lead the world in the right direction in the face of the greatest environmental challenge of our generation: climate change. With the proposed rules on new power plants in limbo and standards for new plants not yet proposed, the League used paid advertising, action alerts, and new media tools to urge the president to get the job done.

The League continued its strong advocacy on climate issues by supporting President Obama’s Climate Action Plan. In addition, the League voiced support for “putting a price on carbon” to compliment the regulatory effort. By demonstrating the political saliency of the climate change issue—and the effects on public health—League ads succeeded in discouraging the senate from taking up legislation that would undermine efforts to address climate change.

In the 2014-16 biennium, the League continued work to fight climate change by supporting regulations from the Environmental Protection Agency, fighting legislation to stop or hurt progress on climate initiatives, and pushing for the full rejection of the Keystone XL pipeline. The League continued support for the EPA’s *Clean Power Plan* and *New Source Pollution Standard* by participating in field hearings across the country and collecting comments from grassroots supporters in support of the regulations, all while working to fight legislation to overturn or weaken the regulations in Congress. The League strongly supported the People’s Climate March in New York City and the *UN Paris Agreement*, which was a historic international agreement that established a commitment to reduce carbon pollution and fight climate change. Finally, the League endorsed regulations from EPA to reduce the levels of ozone in the atmosphere and regulate methane in the oil and gas sector.



LWVUS joined with LWVOR to file an amicus brief in the U.S. District Court for the District of Oregon in the case of *Juliana et al v. United States*. Together, the brief reiterates the League’s support for the 21 young people from across the United States who have filed a landmark constitutional climate change lawsuit against the federal government, via the Eugene, Oregon-based organization, Our Children’s Trust.

In 2017 and 2018, the League opposed efforts by the 115<sup>th</sup> Congress and the Trump administration to roll back key agreements and regulations to combat climate change. This includes the withdrawal of the United States from the *Paris Climate Agreement*, the plan to gut the *Clean Power Plan*, the rollback of the clean cars standards and methane regulation, and the approval of the Keystone XL pipeline.

## Background on Climate Change

### Causes of Climate Change

To understand the fundamental physical causes of climate change, let's first think about your first mug of steaming hot coffee of the day, fresh off the stove. What do you experience as you put your hands close to the mug, even before you touch it? You feel warmth. This sensation of heat is real and is due to radiation that the mug is emitting invisibly into the air. When your hands intercept some of that radiation, they feel warm. The amount of radiation in turn depends on the temperature of the mug – as it cools, you feel less radiation.

The earth's surface and atmosphere act much the same way. The earth's surface is heated by absorption of the sun's radiation (much of it being visible light), with a small fraction of that radiation also absorbed in the atmosphere. Because the earth's surface is warm, it also emits radiation, thus preventing itself from overheating. However, because the earth is cooler than the sun, it radiates at much longer wavelengths than the wavelengths of the radiation we receive from the sun.

Here is where the difference in the wavelengths of the radiation plays an important role: The atmospheric gases are nearly transparent to the shortwave solar radiation, but certain naturally-occurring gases in the atmosphere absorb some of the outgoing longwave (infrared) radiation from the earth's surface. Those gases, in turn, radiate in all directions, including upward to space and down toward the surface. Thus the earth's surface is receiving radiation from both the sun and from certain gaseous components of the atmosphere. This is referred to as the "Greenhouse Effect". If the earth's atmosphere had none of the "greenhouse gases" that return some of the upward directed infrared radiation back to the surface, the earth would be considerably colder. Life as we know it would not be possible without those gases.

Over the past centuries, the mixture of atmospheric gases has stayed essentially constant, with CO<sub>2</sub> and water vapor being primary absorbers. As a result, the earth's temperature has stayed fairly constant. The recent increase in greenhouse gases has disrupted the atmosphere's natural temperature control mechanism. The increasing concentration of atmospheric greenhouse gases is resulting in more of the infrared radiation being absorbed and therefore more being re-radiated back to the earth's surface, thus raising its temperature. To make things worse, the warming of the two-thirds of the earth covered by oceans has also led to an increase in the amount of water vapor being pumped into the atmosphere – increasing yet another efficient absorber of infrared radiation, as well as making us less comfortable during summer and increasing the likelihood of heavy precipitation events.

### Past Temperature Changes

The global average surface temperature has increased by nearly 2 degrees Fahrenheit since 1900. Much of the increase has occurred during the past 40 years. These estimates are based on measurements from thousands of weather stations, ships and satellites. They are confirmed by other observations, such as changes in the extent of global snow and ice covers, and changes in the blooming time of plants. Temperature records have been extended back for several centuries using proxy indicators. For example, the width of the annual growth layer (ring) of certain trees is a reflection of the temperature during that growing season. Another example is the pollen record deposited in a lake or bog. Past vegetation, and thus past climate, can be

reconstructed by taking a sediment core and analyzing the changes in pollen types going down the core.

The changes in the average annual temperature of the United States since 1900 are similar to those for the globe but not identical. Global average temperatures changes are smaller than regional changes because of the moderating effect of the oceans.

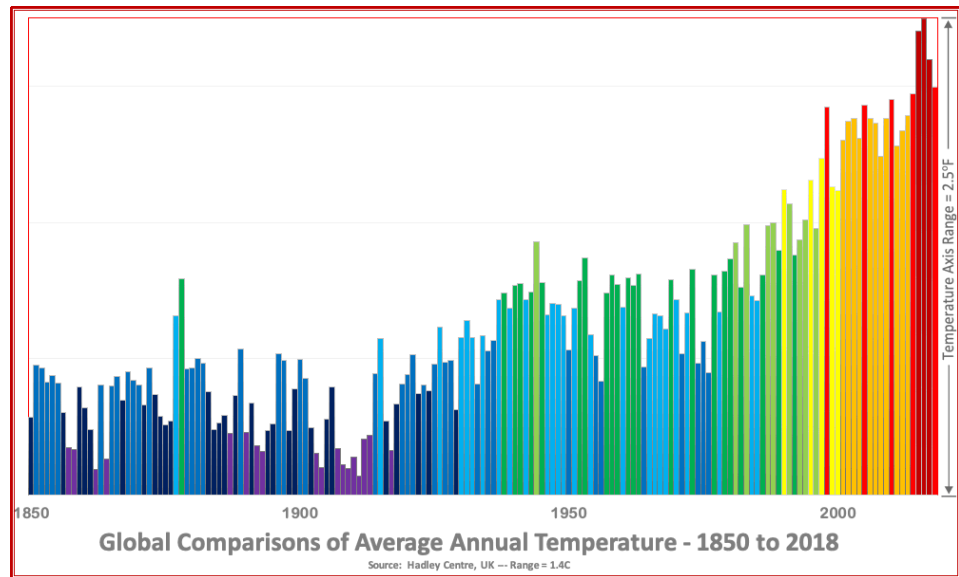
Furthermore, global changes in

temperature result in changes in global circulation patterns that can change the frequency of cold and warm air masses affecting a given region.

Over the contiguous United States, the annual average temperature has increased by 1.2 degrees Fahrenheit for the period 1986–2016 relative to 1901–1960. During the past 20 years, the number of extremely warm days has exceeded the number of extremely cold days. The length of the frost-free season has increased and the frequency of cold waves has decreased since the early 1900s. The frequency of heat waves has increased since the mid-1960s.

Temperature trends differ somewhat even within the United States. A certain atmospheric circulation pattern known as the North Atlantic Oscillation, for example, causes cold winters in eastern North America. A persistent pattern of high pressure in the circulation of the West Coast has been associated with a recent multiyear California drought. El Nino events (a pool of warm water in the eastern Pacific) are associated with warm winters over the Great Lakes region. More than 95% of the land surface of the United States has experienced an increase in annual average temperature since 1900. This warming was greatest and most widespread in winter.

Wisconsin has experienced a change in temperature that is consistent with the global trend. The statewide average annual temperature has increased by 1.1 degrees Fahrenheit since 1950, but the greatest warming (2.5 degrees Fahrenheit) occurred across the northwestern portion of the state. Statewide, winter and spring temperatures rose more than summer and fall temperatures. This has resulted in a decrease in ice-cover duration for Wisconsin's lakes, an earlier occurrence of the last day of frost, and an increase in the length of the growing season. There have been fewer extremely cold days per year.





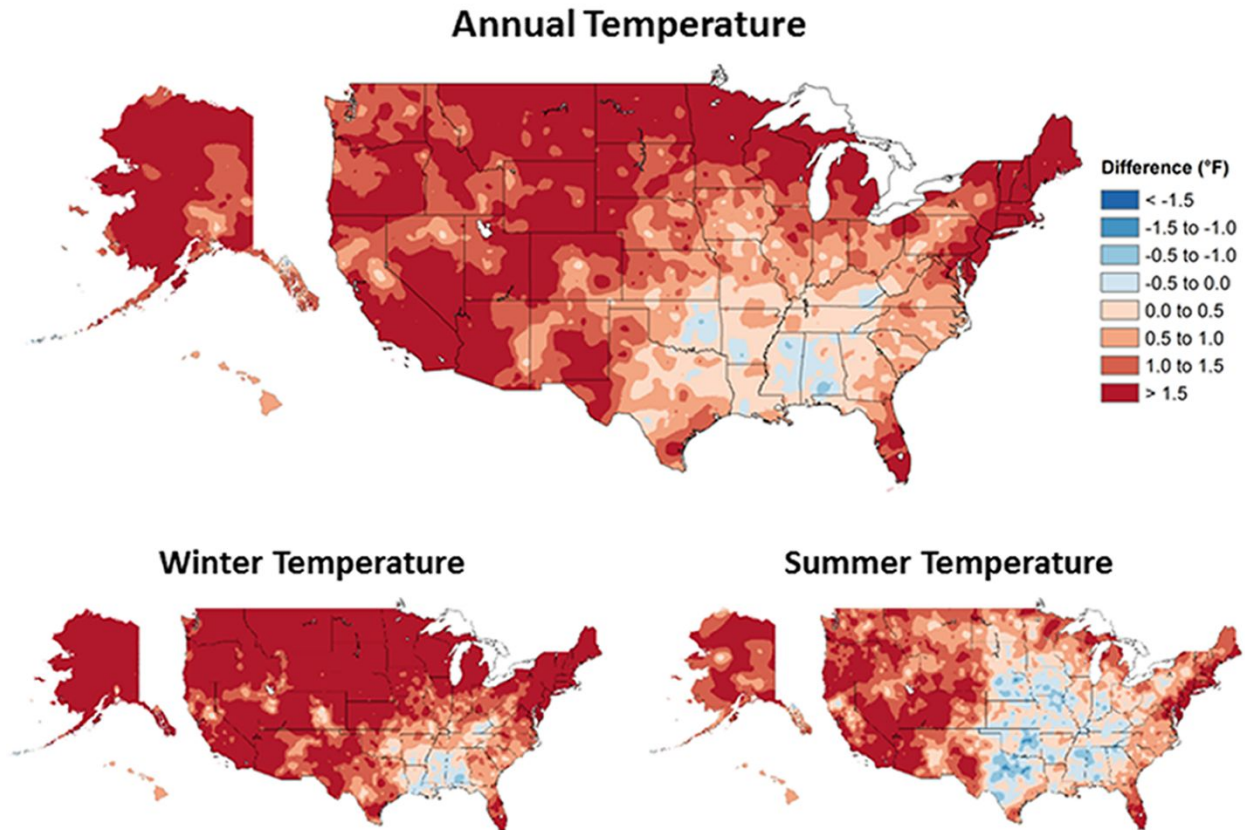


Fig. 1 Observed changes in annual, winter, and summer temperature (°F). Changes are the difference between the average for present-day (1986–2016) and the average for the first half of the last century (1901–1960 for the contiguous United States, 1925–1960 for Alaska and Hawai’i). (Source: Fourth National Climate Assessment, Volume I, Chapter 6).

### Projected Climate Changes

A number of national and international assessments have concluded that the global warming of the past 40 - 50 years was due primarily to the human-induced increase in greenhouse gases. The magnitude of future temperature changes is largely a function of the magnitude of future greenhouse gases emission.

Regardless of the magnitude of future greenhouse gases emission, the annual average temperature over the United States is projected to increase by about 2.5 degrees Fahrenheit over the next few decades. Heat waves are projected to become more intense and the number of days below freezing will decrease. Changes in precipitation are more difficult to predict because of difficulties in predicting changes in circulation patterns and shifts in storm tracks. Wisconsin’s average annual temperature is projected to increase 4 – 9 degrees Fahrenheit from the 1980s level by the 2050s\*, with the northwestern portion of the state warming the most. This warming is projected to be greatest in winter. Precipitation is projected to increase in winter while changes in summer precipitation are uncertain.

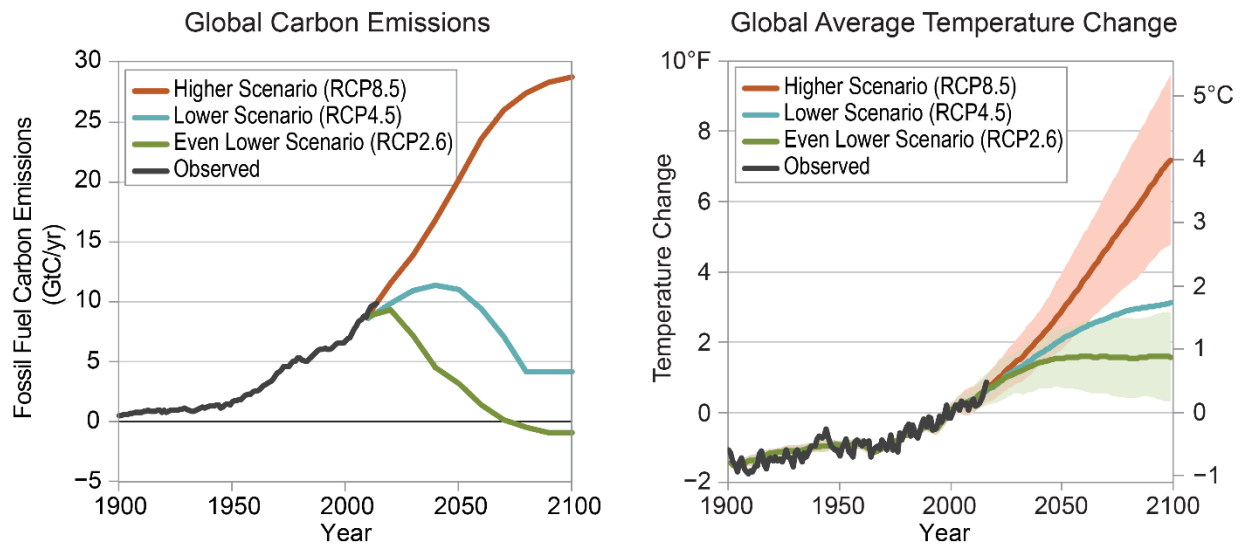


Fig. 2 Observed and projected changes in global average temperature (right) depend on observed and projected emissions of carbon dioxide from fossil fuel combustion (left) and emissions of carbon dioxide and other heat-trapping gases from other human activities, including land use and land-use change (Source: Fourth National Climate Assessment, Volume II) \*\*

Because it takes time for the earth’s climate system to fully respond to an increase in greenhouse gas concentrations, the amount that is already there is projected to result in at least an additional 1.1 degree Fahrenheit of warming over this century. Even a significant reduction in emission (RCP 2.6) would result in a 0.4-2.7 degree Fahrenheit warming for the period 2080-2099 relative to 1986-2015 (Fig. 2). “Because of the slow timescale over which the ocean absorbs heat, warming that results from emissions that occur during this century will leave a multi-millennial legacy.” (Source: Fourth National Climate Assessment. Volume II, Chapter 2)

\*\*“assuming continued reliance on fossil fuels, with carbon emissions remaining on a steady upward trajectory over the next few decades and carbon dioxide levels in the atmosphere rising from 390 parts per million today to 550 parts per million by the mid-2050s” (Source: Wisconsin’s Changing Climate: Impacts and Adaptation. 2011)

\*\*The primary scenarios used in this assessment are called Representative Concentration Pathways (RCPs) and are numbered according to changes in radiative forcing (a measure of the influence that a factor, such as greenhouse gas emissions, has in changing the global energy balance of incoming and outgoing energy) in 2100 relative to preindustrial conditions: +2.6 (very low), +4.5 (lower), +6.0 (mid-high) and +8.5 (higher) watts per square meter. Some scenarios are consistent with increasing dependence on fossil fuels, while others could only be achieved by deliberate actions to reduce emissions.” (Source: Fourth National Climate Assessment. Volume II)

Sources and further readings for this section on climate change:

“Climate Change: Evidence and Causes”, U.S. National Academy of Sciences and the Royal Society (2014). This is a readable resource on climate change causes, mostly in the form of questions. Access it [here](#).

“Fourth National Climate Assessment. Volume I”  
 Chapter 2: Physical Drivers of Climate Change  
 Chapter 6: Temperature Changes in the United States  
<https://science2017.globalchange.gov>

“Fourth National Climate Assessment. Volume II”  
Chapter 2: Our Changing Climate  
Chapter 21: Midwest  
<https://nca2018.globalchange.gov>

“Wisconsin’s Changing Climate: Impacts and Adaptation” (2011). Wisconsin Initiative on Climate Change Impacts. University of Wisconsin-Madison.  
Chapter 1: Climate Change in Wisconsin: Past, Present and Future.  
<https://www.wicci.wisc.edu/publications.php>

NOAA – National Centers for Environmental Information: Global Time Series  
(Click [here](#) for a nice interactive graph of the annual global temperature anomalies.)

### **Adapting to Wisconsin’s Changing Climate: Science and Collaboration.**

This online brochure produced by Wisconsin Institute on Climate Change Impacts (WICCI) gives readers an overview of how climate change is affecting the state of Wisconsin.

Access the report [here](#).

## **Impact of Climate Change on Public Health**

### **Overview**

Climate change affects public health directly by increasing the incidence of illness and death from existing health threats. It affects public health indirectly by increasing the exposure to existing health threats and by decreasing food security. Entirely new health threats may also emerge. Some populations are more vulnerable than others. Children, older adults and people with poor access to information and resources, for example, are at higher risk than others. A prominent direct effect is the increase in heat strokes and the incidence of cardiovascular and respiratory diseases that are expected to result from the projected increase in heat waves and extremely high temperatures. Most vulnerable is the aging population concentrated in urban areas where the ‘urban heat island effect’ amplifies the projected warming. The shifting distribution of vectors carrying diseases in response to shifts in temperature and precipitation patterns is a prime example of an indirect effect.

The climate change projected for Wisconsin is expected to result in an increase in heat-related deaths and also in an increase in cold-related deaths due to poor travel conditions. Smog, which increases the risk of respiratory diseases, is expected to increase along the southern shores of Lake Michigan. The projected increase in heavy rainfall, especially in southeastern Wisconsin, is expected to increase the health risk resulting from flood-related waterborne illnesses, injuries and drowning. The range of ticks could be shifting northward and environmental conditions might become more favorable for mosquitoes carrying the West Nile virus.

### **Resources to Learn More about Climate Change Impacts on Public Health**

The next sections of the Study Guide offer readers many different resources to explore issues of climate change and its effects on public health.

- **Video and Online Resources**

**Climate Change is affecting our Health. Is there a Cure?**

Jonathan Patz. YouTube. TEDxOshkosh

*Summary description from TedxTalks:* Public health is being impacted by climate change via many pathways - from alterations in infectious disease transmission to water-source compromise, malnutrition, air pollution, and other factors. This [talk](#) includes recent analyses that show how mitigating global warming provides extensive health opportunities, as well as major savings in healthcare costs. Jonathan Patz, MD, MPH, is Professor & John P. Holton Chair in Health and the Environment at the University of Wisconsin-Madison, where he also directs the Global Health Institute.



**Climate Change and Human Health: Impacts and Pathways to Resilience.**

*Summary description from Arizona Public Media:* Climate change induced impacts on human health are myriad; they range from direct effects, such as heat related mortality during extreme heat events, to indirect effects on infectious disease transmission systems. Predicting the degree of impact climate change will have on a specific health outcome becomes more difficult as the pathways become more indirect. Both top-down and bottom-up actions must be taken now to mitigate current and future health threats. Kacey Ernst is an Associate Professor of Epidemiology and Biostatistics in the College of Public Health at the University of Arizona. She is also a Graduate Interdisciplinary Program affiliate in Global Change, Entomology and Arid Lands. Access the video [here](#).



**National Climate Assessment 2014. Health Impacts.** Global Change.gov/report.

*Introduction to the report:* "Climate change presents a global public health problem, with serious health impacts predicted to manifest in varying ways in different parts of the world. Public health in the U.S. can be affected by disruptions of physical, biological, and ecological systems, including disturbances originating in the U.S. and elsewhere. Health effects of these disruptions include increased respiratory and cardiovascular disease, injuries and premature deaths related to extreme weather events, changes in the prevalence and geographical distribution of food- and waterborne illnesses and other infectious diseases, and threats to mental health." Access the report [here](#).

**Climate Change and Human Health information from Centers for Disease Control.**

Includes a diagram on interaction of climate change and health and short information articles on air pollution, allergens, wildfires temperature extremes, precipitation extremes diseases

carried by vectors, food and water born diarrheal disease, food security and mental health and stress related disorders. Click [here](#) for a description of the program and its resources.

### **“Has Your Doctor Talked to You about Climate Change?”**

This is an NPR story, hosted by Scott Simon. The World Health Organization calls climate change the greatest health challenge of the 21st century. So should physicians add climate change to the list of health challenges they talk about with their patients? Martha Bebinger with member station WBUR in Boston had a visit with one doctor who says the answer is yes. Click [here](#) to access the NPR story on their “Shots” blog.

### **Understanding the Link Between Climate and Health.**

Wisconsin Climate and Health Program, WI Department of Public Health. As noted in this short informational pamphlet: “Over the past 60 years, Wisconsin has generally become warmer and wetter, especially during the winter months. A warmer and wetter Wisconsin will affect our health.” Check out the implications [here](#).

**“Ask Mr. Green.”** A column in Sierra, the online magazine published by the Sierra Club. It provides hints about greener living and answers practical questions about food, household appliances and energy use. You can access the column [here](#).

### **● Madison Public Library Books on Climate Change**

Michael Brune, *Coming Clean: Breaking America’s Addiction to Iron and Coal* (San Francisco, CA: Sierra Club Books, 2010)

Daniel Callahan, *The Five Horsemen of the Modern World* (New York, NY: Columbia University Press, 2016)

Discusses climate change as one of the five perilous trends from which we suffer.

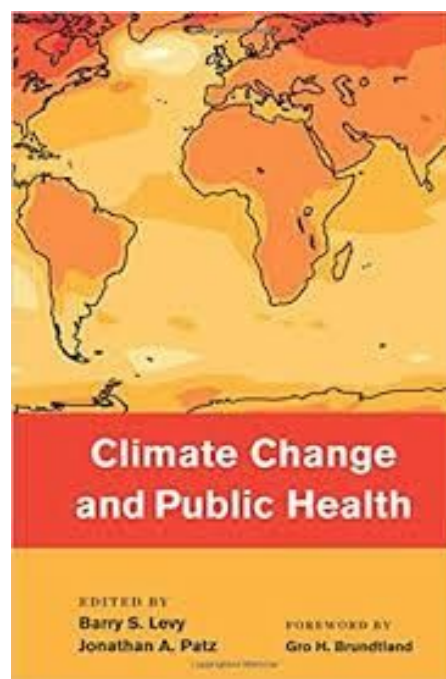
Allison Hawthorne Deming and Lauret E. Savoy, *The Colors of Nature: Culture, Identity, and the Natural World* (Minneapolis, MN: Milkweed Editions, 2011)

James Hansen, *Storms of My Grandchildren: the truth about the coming climate catastrophe and our last chance to save humanity* (New York, NY: Bloomsbury USA, 2009)

Why 350 ppm of carbon dioxide in the atmosphere is a goal we must achieve if our children and grandchildren are to avoid global meltdown.

Wenonah Hauter, *Frackopoly: The battle for the future of energy and the environment* (New York, NY: The New Press, 2016)

How fracking is creating zones across the American landscape where clean water is threatened and harmful radiation is released.



Steven Holmes, *Facing the Change: personal encounters with global warming* (Torrey, UT: Torrey House Press, 2013)

Offers a new opportunity for moving past denial and despair to awareness and action.

Gary S. Levy and Jonathan Patz, *Climate Change and Public Health* (New York, N.Y.: Oxford University Press, 2015)

Relates the effects of climate change to public health.

Patrick J. Michaels, *Climate Coup: global warming's invasion of our government and our lives* (Washington, D.C.: Cato Institute, 2011)

Essays on climate change and its effects on human health, economics and public education.

Paul Sabin, *The Bet: Paul Ehrlich, Julian Simon, and our gamble over Earth's Future* (New Haven, CT: Yale University Press, 2013)

The story of a legendary wager that emphasizes the conflicting values that underlie political choices.

#### - To Share with Children

Nicola Davies and James Lovelock, *GAIA Warriors: urgent the fight is on!* (Somerville, MA: Candlewick Press, 2011)

This book takes a clear look at how and why earth's climate is changing and the ways we can deal with that.

Robert M. Hamilton, *What's Climate Change?* (New York, NY: Kidhaven Publishing, 2018)

The causes and effects of climate change presented in color pictures, fact boxes, and graphic organizers for young readers.

Mary Hoffman and Ros Asquith, *The Great Big Green Book* (London, UK: Francis Lincoln Children's Books, 2015)

This book offers action plans for saving our planet including saving water and energy, recycling, repairing, etc.

#### Additional Resources

##### Environmental Protection Agency

The Environmental Protection Agency contains much useful information about a wide variety of topics related to the environment, science and policy. Once the website comes up, look for the



tab entitled Environmental Topics. There are several informational tabs such as air, Chemicals and Toxics, Greener Living, Health, Land Waste Cleanup, and Water. [www.epa.gov](http://www.epa.gov)

### **Your ZIP Code Might Determine How Long You Live—and the Difference Could Be Decades**

A growing body of evidence suggests it may be a person's zip code that holds the most information about how long they'll live. Researchers from the New York University School of Medicine recently used data from NYU Langone Health's City Health Dashboard to find that 56 of the U.S.' 500 largest cities are home to people who can expect to live at least 20 fewer years than those in other neighborhoods, even if they're just blocks or miles away. Click [here](#).

- **Organizations Addressing the Impact of Climate Change on Public Health**

**The Wisconsin Environmental Health Network** (WEHN) is a group of healthcare professionals partnered with local environmental advocates, and conservationists working to inform healthcare professionals, the public, and policy makers about the effects of environmental toxins on public health. WEHN develops clinical tools, offers environmental health education for the public and physicians in training, and advocates for strong environmental regulation to protect human health. Website [here](#).

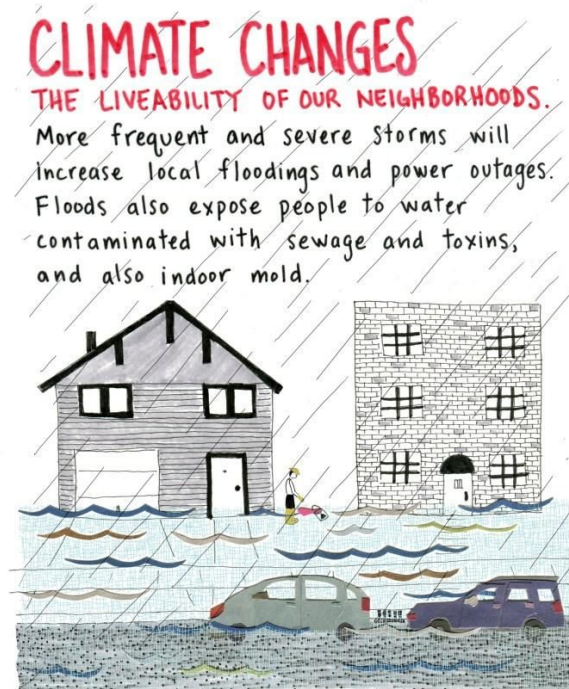
**Physicians for Social Responsibility Wisconsin Chapter**

PSR Wisconsin is an organization of health professionals and other concerned individuals who work to protect human life from the gravest threats to health and survival. PSR relies on the medical and public health expertise of its members to prevent nuclear war, to reverse our climate change trajectory and to stop further degradation of our environment.

<https://psr-wisconsin.org/climate-action>

**Wisconsin Initiative on Climate Change Impacts (WICCI)**

The mission of the Wisconsin Initiative on Climate Change Impacts is to generate and share information that can limit vulnerability to climate change in Wisconsin and the Upper Midwest. WICCI engages citizens; private and public decision-makers; and scientists from Wisconsin and the region in a collaborative network to develop scientific understanding of climate impacts; to identify vulnerability to climate change and climatic variability; and to enable better planning, investment, and other adaptation activities. To access the website, click [here](#).



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Illustrations credit

Artist: Mita Mahato

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