Climate Crisis Series Forum #2: Why Local Governments Matter

Speakers:
Sherrie Gruder, Sustainable Design Specialist, Energy Program Manager
Ralph Petersen, Ph.D., UW–Madison Space Science and Engineering Center and former NASA and NOAA scientist
Stacie Reece, Program Coordinator, City of Madison Sustainability
Keith Reopelle, Director, Dane County Office of Energy and Climate Change

Wednesday, November 6, 2019
6:30 p.m. Doors open
7- 8:30 p.m. Program

Capitol Lakes Health Center Auditorium
333 W. Main Street, Madison

Planning Committee: Carol Barford, Meg Gordon, Georgiana Hernandez, Sue Ann Larson, Pat Levin, Pat Patterson, Ralph Petersen, Pam Pfrang, Mary Ploeser, Steve Ploeser, Caryl Terrell, Margy Walker.

The event is free and open to the public. The Capital Area Regional Planning Commission (CARPC) is a promotional sponsor.

Free parking in the lot across from the Capitol Lakes main entrance at 333 W. Main Street.

For more information visit the League’s website at www.lwvdanecounty.org or call 608-232-9447.
Why Local Governments Matter
LWV Of Dane County
2019-20 Public Issues Forums: Climate Crisis Series – Forum #2

Discussion Questions

1. What are the most important things you learned about local governments’ role in addressing the climate crisis?
2. What important action steps are our local governments missing (or avoiding)? What would these steps accomplish and why are they not getting attention?
3. How can you work with your local governments to push for climate-friendly policies and actions?
4. What can local governments do to address public health issues arising from climate change?
5. Do you have ideas about how the League can have greater impact regarding climate change mitigation and adaptation that reaches beyond Dane County?

Actions You Can Take

- **Explore the League’s 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.

- **Begin writing letters to the editor to express your concerns and ideas about the climate crisis.** Citizens’ Climate Lobby has an excellent web page that walks you through the steps to write a compelling letter. You can find that web page [here](#).

- **Sign up for an Observer Corps training session** sponsored by LWV Of Dane County. Observers consistently attend meetings of selected committees to monitor compliance with the Wisconsin Open Meetings Act and to observe the business of the meeting. Some of the committees and commissions focused on the environment include: the Publics Works and Transportation Committee (county); the Transportation Policy and Planning Board (city); the Committee on the Environment (city); the Capitol Area Regional Planning Commission (county and city); and the Environment, Agriculture & Natural Resources Committee (county). You can get more information about the Observer Corps [here](#).

- **Study the positions of and vote for** candidates in local, state and national elections who make it a priority to enact policies that will help to mitigate the climate crisis.
League Position on 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 Principles and Position on the Role of Government

Regardless of the issues, the League believes that government policy, programs and performance must meet these criteria:

- Competent personnel with clear responsibilities
- Coordination among agencies and levels of government
- Adequate financing
- Effective enforcement
- Well-defined channels for citizen input and review

The League’s position on government promotes an open government system that is representative, accountable, responsive and capable of making decisions. A full description of the position can be accessed [here](#).

National and Wisconsin League Land-Use Positions

At the national level, the League has stated its recognition that “land is a finite resource, not just a commodity and believes that land ownership, whether public or private, implies responsibilities of ownership.” Further, “Each level of government must bear appropriate responsibility for planning and managing land resources.” And, “...citizen participation must be built into the planning and management of land resources at every step.” In addition, the Wisconsin League has many land-use positions that underlie and reinforce the validity of those held by LWV Of Dane County. A full description of these positions can be accessed [here](#).
How Wisconsin’s Local Government is Structured

The following is a summary of the Wisconsin Blue Book section on local government. The full text can be found here.

In Wisconsin, there are four overlapping kinds of local government, which together are classed as “general purpose districts.” The State has granted these districts various powers to regulate activities, levy taxes and provide services. The first level of local government in Wisconsin is its 72 counties, which act as administrative subdivisions of the State. Counties are governed by boards of elected supervisors, with either a county executive (elected, with veto powers) or county administrator (appointed, no veto powers) to act as the chief administrative officer. In addition to the county executive (if any) and supervisors, the sheriff, district attorney, clerk and treasurer are also elected county officers. Counties have authority over local land use, roads, recreational programs and social services, except within cities and villages. Dane County has 29 departments including Veterans’ Affairs, Office for Equity and Inclusion, Land & Water Resources, University Extension, Henry Vilas Zoo, the Airport and the Alliant Energy Center, but the biggest is Human Services, at over one-third of the County’s nearly $600 million annual budget.

More than 1,200 Towns - Wisconsin towns (1,249 towns) are subdivisions of its counties and comprise the non-incorporated, often less-populous areas. Towns are required to provide services such as road maintenance and fire protection, and may also provide law enforcement, garbage collection and policymaking on local matters. Towns are administered by elected boards of 3-5 supervisors, including a chair who presides over the board. Other officers, such as treasurer, clerk, constable, assessor and surveyor may be elected or appointed. Annual town meetings, in which all eligible voters may vote on binding resolutions such as tax levies and bond issues, are distinctive features of towns. At annual meetings, towns may elect to exercise “village powers” such as land use regulation; towns are otherwise subject to county land use policies.

Cities and Villages - Cities (190) and villages (412) are incorporated to serve locally concentrated populations within towns. The incorporation process includes a petition to the circuit court and the Wisconsin Incorporation Review Board and culminates in a referendum in the affected territory. Each city is governed by a common council of elected alders, and an elected mayor. Ten cities have appointed a city manager instead of a mayor. The mayor does not vote on resolutions except to break a tie but does have veto power over the council as well as the general responsibility to oversee city officials (both elected and appointed) and employees. Villages are governed by village boards, including a village president. Ten villages also have appointed village managers to carry out administrative functions. State statutes authorize cities and villages to provide services just like towns and counties do, but they are also empowered to conduct their
own affairs and to make local policy without specific authorization from the state. The boundaries of authority between a city or village and the state are not universally explicit, but the general understanding is that these districts can exercise authority unless specifically prohibited by the state. This is the opposite of counties and towns, which can only do what is authorized by the state. In addition to this “home rule,” cities and villages have the power to annex territory from towns. Annexation is initiated by a petition of landowners within the affected territory. The town that loses territory has no power to prevent the annexation but can challenge it in court.

Committees and Commissions Focused on the Environment and Natural Resources - Within Dane County and the City of Madison, there are numerous government committees and other groups that focus on the environment and natural resources. These include the Public Works and Transportation Committee (county), the Transportation Policy and Planning Board (city), the Committee on the Environment (city), the Capitol Area Regional Planning Commission (county and city), and the Environment, Agriculture & Natural Resources Committee (county).

Wisconsin’s Smart Growth Law: A Foundation for Climate Action Planning

Wisconsin enacted statutes for land use planning known as the Smart Growth Law (SGL) 1999 WI Act 9. This was in response to statewide trends of rapidly expanding urban areas, shrinking farmland, dense development along coastlines and sharply increasing vehicle miles traveled. The law is based on similar laws in the state of Oregon and other states. The SGL included overarching goals of including citizens’ voices in future land use planning, and protecting the quality of life, natural resources and culture of Wisconsin. The SGL required each Wisconsin city, village and town (if exercising village powers) to create and adopt a comprehensive land use plan by 2010, and to ensure that subsequent zoning, mapping, annexation, land acquisition and subdivision regulations are consistent with its plan.

SGL required that each plan integrate nine elements:

1. Issues and opportunities
2. Housing
3. Transportation (must be consistent with State transportation plan)
4. Utilities and community facilities
5. Agricultural, natural & cultural resources
6. Economic development
7. Intergovernmental cooperation (especially between adjacent municipalities)
8. Land-use
9. Implementation (including evaluation and updates)
SGL plans required majority approval by the elected governing body, not an appointed commission, of each municipality. The SGL included appropriation for grants to support local planning tasks. Over 90% of the communities required to complete a SGL plan have done so, and over 300 other communities have made plans as well, even though it was not required. More information on these efforts can be found here.

The non-profit organization 1000 Friends of Wisconsin (1KF) and the Wisconsin Chapter of the American Planning Association were the lead organizations in supporting adoption of the Smart Growth Law, along with the Wisconsin League, environmental groups and local government associations. 1KF was the major watchdog for implementation of this law and for fighting efforts to end the modest grant program to help local governments and other attacks to repeal the law.

However, SGL was weakened soon after it went into effect in 2010, as described here. In May 2010, WI Senate Bill 601 (enacted as 2009 Wisconsin Act 372) backpedaled multiple aspects of SGL: it changed SGL’s status to a “guide” rather than a “regulation”; it only required strict adherence to SGL in the passage of new ordinances, not in application of existing ones; and it allowed communities to delay implementation until they received planning grants. Although these changes were significant, municipal planning was still expected to be generally “harmonious” with SGL.

Hundreds of SGL plans are currently in place and are regularly updated after the decennial U.S. Census. The SGL laid a strong foundation for further sustainability and climate action planning.

How our Local Governments are addressing the Climate Crisis: A Few Highlights

DANE COUNTY

A Nationally Recognized Leader in Climate Change Mitigation - Dane County was featured in a September 2019 report, How We Respond, published by the American Association for the Advancement of Science. The report shines a spotlight on the response to climate change by 18 communities across the United States. The report highlights how these local communities are using scientific information to reduce greenhouse gas emissions and/or to mitigate the impacts of climate change. Dane County was profiled for its efforts to capture methane emissions and to increase its use of clean energy. You can read the profile of Dane County’s efforts here to learn
how the county is capturing methane emissions from landfills and cow manure to create electrical and natural gas, how it is expanding its use of solar panels to generate clean energy, and how it is creating its Climate Action Plan. (The full report is chock full of inspiring stories from communities across the country and includes a rich range of resources for individual and community action. We encourage you to delve into the full multimedia report here.)

**Investing in Land and Water Management** - In May 2019, with the passage of Resolution 044, Dane County made a historic investment with its purchase of 160 acres of property from Acker Middleton Farms, Inc. for Pheasant Branch Conservancy. A key aim of the property acquisition is to make the area more resilient to flooding by restoring the property to natural prairie, which will improve infiltration and reduce sediment and phosphorus runoff. You can read more about the property purchase here, as well as LWV Of Dane County's statement of support for Resolution 044 here.

**Piloting an Agroforestry Demonstration Project** - This year, Dane County also launched an agroforestry demonstration project intended to benefit both farmers and the environment. The project includes installation and maintenance of two areas at Silverwood Park that demonstrate “polyculture” farming. Installation of an 18-acre row-cropping area at the park entrance will show farmers how to plant grain, beans, or other typical crops, interspersed with fruit and nut trees. The second installation at the north end of the park will demonstrate riparian buffers that trap run-off water, conserve soil and produce harvestable crops at the same time. You can read more about this agroforestry pilot project here.

**CITY OF MADISON**

**Moving Toward 100% Renewable** - In 2017, the City of Madison adopted City goals of 100% renewable energy for all city operations by 2030 and for the entire Madison community by 2050. The actions and investments the City is taking to reach these goals are described in its “100% Renewable Madison” report, which readers can access here.

**Investing in Solar** - As part of its 100% Renewable plan, the City of Madison has partnered with BluEarth Renewables and OneEnergy Renewables to install five new solar array projects that are expected to increase in-state solar capacity by 15 percent. The five solar projects will add 40,000 solar panels to the region. It is anticipated that the panels will produce enough electricity to power 2,500 average Wisconsin households. The project design includes the establishment of more than 50 acres of pollinator-friendly habitat.

**FITCHBURG, MARSHALL, MIDDLETON, MONONA, STOUGHTON, SUN PRAIRIE AND WAUNAKEE**

**Developing Customized Energy Plans** - In early 2019, seven area cities and villages began partnering with a consulting energy research firm, Slipstream, to develop customized energy plans to reduce emissions by increasing their use of renewable energy. With the support of a $200,000 grant from the state Office of Energy Innovation, Fitchburg, Marshall, Middleton, Monona,
Stoughton, Sun Prairie and Waunakee began working with Slipstream to develop plans to reduce their carbon footprints. Middleton, Fitchburg, Marshall and Monona have all passed resolutions setting goals to eliminate fossil fuel use in some or all parts of city operations. Middleton’s goal is to have 50 percent of the city’s electricity for municipal operations come from renewable sources such as wind or solar by the end of 2019. Fitchburg has set a goal of using only renewable electricity sources for municipal operations by 2030.

MUNICIPAL COLLABORATIONS

Creating Resilient Communities through Collaboration - In an effort to combine resources and knowledge and accelerate community actions to mitigate the effects of climate change, in August of 2019, elected officials, administrators and staff from 23 cities, towns and villages across Dane County teamed up to address climate change. Madison Mayor Satya Rhodes-Conway said the Sustainability Leaders Collaborative is recognition that local governments can be more effective at creating resilient communities by working together. Read more about the Collaborative here.

A Primer on Local Climate Impacts and Government Climate-Related Resources

Climate Change Effects on Local Temperatures - It is now widely recognized that adding CO₂ to our atmosphere is disrupting the millennia-old balance between heating of the earth’s surface during the daytime and the continuous release of heat into space during both day and night. Incoming visible solar radiation heats the earth and the release of Infra-Red (IR) radiation through the atmosphere cools it down. Adding CO₂ to the atmosphere also causes it to absorb more of the outgoing IR, producing warming aloft. Part of that energy is then redirected back to earth, resulting in surface warming. Oceans cover two-thirds of the earth’s surface and though slower than over land, oceans are warming and their evaporation rate is increasing. This in turn is putting more water vapor (an effective absorber of CO₂) into the atmosphere—contributing to increased precipitation and more warming.

Figure 1 (left): Comparison of Global Annual Average Temperatures from 1850 to present. Data from the UK Hadley Center. Temperature axis range is 2.5°F (1.4°C). Cubic curve fitting full data set shown as dark line. Figure 2 (right): Annual Average Temperature Observations from 1895 to present for Madison. Data is from the National Weather Service. Temperature axis range is 10.0°F (5.6°C). Cubic curve fitting full data set shown as dark line.
Direct evidence of the effects of climate change in Wisconsin can be easily accessed from many sources, including the Wisconsin State Climatologist, the Midwest Regional Climate Center (MRCC) and the Wisconsin Initiative on Climate Change Impacts (WICCI) websites. Temperature histories from global analyses of historical climate and weather records in Figure 1 can be contrasted with similar histories from Madison’s surface observations shown in Figure 2.

Of note when comparing local Madison to global data: Madison’s annual temperature range is larger than for the globe, as are its year-to-year temperature changes. This is due in large part to Madison’s distance from oceans and their modulating effect on shorter-term temperature changes. Most important, though, is the overall temperature trend (summarized by the cubic curve). Both plots show a similar shift from nearly steady temperatures during the early 1900s to progressively increasing temperatures in more recent decades. Also of note, the period of increasing temperatures may have been slightly delayed in Madison and that, though most years since 2000 warmed; a few years still show the effects of prolonged cold events.

Detailed records of freeze and thaw dates for the past 170 years for Lake Mendota, one of the best observed and most studied lakes in the world, offer further tangible evidence. Unlike surface temperature reports, freeze-thaw dates are free of many non-climate-related environmental changes, such as station location and urban heat-island effects. However, as with local temperature trends, these records also show substantial year-to-year variability.

The plot of the 3-year average length of open water shown in Figure 3 confirms that, while the impacts of climate change were stable during the first half of the 20th century, the length of time that Lake Mendota is ice-free each year has increased over the past 50 years by more than 20 days.

Figure 3: Three-year running average of number of ice-free days on Lake Mendota for July-June periods surrounding winters for years from 1855 to present. Dotted like shows linear trend, while curve shows 4th order fit over full period. Vertical axis shows number of ice-free days.

**Availability of Federal Climate Services** - The National Oceanic and Atmospheric Administration (NOAA) is responsible for all U.S. operational weather-related satellite observations and research into improving our understanding and forecasts of weather and climate. It is the parent agency of the National Weather Service (NWS), which is tasked with providing weather, water and climate forecasts, warnings of hazardous weather and flooding potential, as well as other weather-related products, to organizations and the public for the purposes of protection, safety, and general
information. NWS has shared responsibility for global oceanic aviation, marine forecasts and space weather products. It is responsible for surface (including climate), balloon-borne and radar observations across the United States.

The annual cost of all of NOAA’s weather/climate related services is less than $10 per resident – the price of a Big Mac, Large Fries and a Large Shake. It is important to note that all NWS products and services are intended for use by the general public. As such, the NWS is prohibited from making specialized forecasts or products for specific users, whether they be individual businesses or specific local governments.

The Climate Prediction Center (CPC) is part of the NWS. It monitors and forecasts short-term climate fluctuations and provides information on the effects climate patterns can have on the nation. A list of operational NWS/CPC climate products are available at the Center. Two examples are the 3-month predictions of temperature and precipitation for the entire United States, which can be accessed here and here.

CPC also provides forecasts to the Department of Agriculture for monitoring and forecasting drought conditions over the United States. These products form the basis for most state and local water-related planking services, including not only agriculture but also water management and fire mitigation efforts. Access the site here.

Figure 4: Example of CPC Drought Monitor used by other federal and local agencies.

Other non-operational climate products are available through NASA and the Department of Energy, among others. A major federal interagency climate report is also made available every 4 years. The Fourth National Climate Assessment (NCA4), completed in November 2018, is a comprehensive and authoritative report on climate change and its impacts in the United States, available here.

Some Local Organizations Working on Climate Change

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. https://www.wicci.wisc.edu/about.php
Citizens’ Climate Lobby
Citizens’ Climate Lobby (CCL) is a non-profit, nonpartisan, grassroots advocacy organization focused on national policies to address climate change. CCL’s nonpartisan approach to climate education is designed to create a broad, sustainable foundation for climate action across all geographic regions and political inclinations. By building upon shared values rather than partisan divides, and empowering its supporters to work in keeping with the concerns of their local communities, CCL works towards the adoption of fair, effective, and sustainable climate change solutions.  
https://citizensclimatelobby.org/chapters/WI_Madison/

Sierra Club - John Muir Chapter, Four Lakes Group (Columbia, Dane, Dodge, Green, Iowa, Jefferson, Lafayette, Rock & Sauk Counties)  
The Mission of the Sierra Club is to explore, enjoy, and protect the wild places of the earth; to practice and promote the responsible use of the earth's ecosystems and resources; to educate and enlist humanity to protect and restore the quality of the natural and human environment; and to use all lawful means to carry out those objectives. In the area of climate change, the John Muir Chapter is active with two campaigns: Reducing Climate Change Threats through Moving from Coal to Clean Energy and Moving Beyond Oil to Clean Transportation. To get involved, visit the web site or contact Dave Blouin: 608-220-4040.  
https://www.sierraclub.org/wisconsin

350.org
350.org is an international movement of ordinary people working to end the age of fossil fuels and build a world of community-led renewable energy for all.  
https://350.org/get-involved/

Lastly, Be Sure to Check Out This Important News

Executive Order Creates a Climate Change Task Force in Wisconsin - On October 17, 2019, Governor Evers signed Executive Order #52 establishing a Climate Change Task Force on Climate Change at the Urban Ecology Center’s Riverside Park location in Milwaukee. The Task Force on Climate Change will advise and assist the governor in developing a strategy to mitigate and adapt to the effects of climate change for the benefit of all Wisconsin communities. Members of the task force will work closely with the Office of Sustainability and Clean Energy, created through Executive Order #38. The task force, which includes 31 individuals from across the state, will report their findings and policy recommendations to Gov. Evers by August 2020.

The establishment of the task force was highlighted in Lt. Gov. Mandela Barnes' weekly radio address on October 17, 2019. In his address, Lt. Gov. Barnes said, “When I was sworn in as the lieutenant governor, I vowed to focus my efforts on the core principles of equity and sustainability. This task force, along with the Office of Sustainability and Clean energy, will fall along those same lines. Through a lens of environmental justice, these 31 individuals from every part of our state are going to help do the work that will get Wisconsin to a carbon-free clean energy future. While the goal is 100 percent by 2050, I believe we can do it much sooner.” Access the radio address here.