ULI Minnesota
Regional Council of Mayors

WHAT CAN I DO? WHAT CAN WE DO TOGETHER?

The Regional Council of Mayors named "healthy and resilient communities" one of its 2017 priorities, and underneath that identified topics of interest and concern including water supply and management, stormwater management based on "Atlas 14" data, renewable energy, and the infrastructure impacts of climate change. To address these subjects, ULI MN and the RCM developed a two-part agenda to span the April and May RCM meetings.

For the April meeting, the RCM identified well-known meteorologist turned climate change speaker, Paul Douglas, to provide an expert's view of climate change in the MSP region. The RCM was drawn to Douglas because of his previous skepticism of climate change and wanted to hear how his beliefs changed, why, and his insights into what will drive the movement to a greener economy. The event was held as a joint meeting of the RCM and the ULI MN Advisory Board which consists of regional leaders in real estate, land use, local government and from our sponsors. Attendance was also open to ULI's general membership and members of the public to further maximize impact.

The May meeting picked up the conversation with a panel focused on community-level strategies for addressing climate and weather challenges including climate adaptation plans, state/regional programs that help cities become more sustainable, and insights from a private sector company regarding its work to "green" its business. Mayor Chris Coleman of Saint Paul addressed his city's march toward sustainability, and reps from the Regional Indicators Initiative, GreenStep Cities, Xcel Energy, and Mortenson discussed strategies, programs, and solutions that communities can pursue.

This is a summary of the April and May meetings. For a detailed report, click here.

WHAT YOU NEED TO KNOW

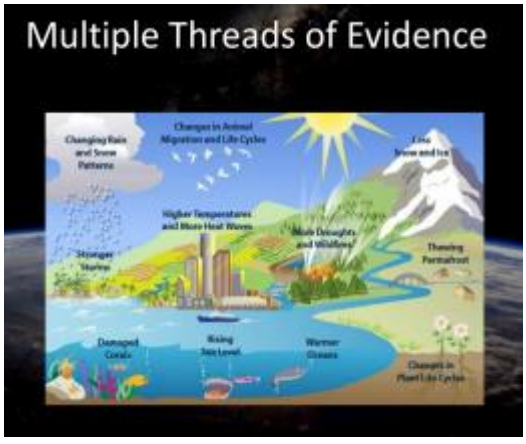
APRIL 10TH: METEOROLOGIST PAUL DOUGLAS

FROM SKEPTIC TO BELIEVER

- From the mid 80s through the mid 90s, Douglas was skeptical of climatologists forecasting changes to climate caused by greenhouse gas emissions.
- By the late 90s he was beginning to note the symptoms of a warmer climate translating into impacts on weather patterns and explained that his mind was changed by "an accumulation of coincidences."
- Changes he saw that aligned with predictions of climate change included longer summers, warmer winters, and more severe storms.

HOW GLOBAL WARMING AND CLIMATE CHANGE WORK

- The greenhouse effect is the process by which gases in the atmosphere like CO_2 trap radiation and keep the planet warmer than it would otherwise be if that radiation went out into space.
- Human activity has dramatically increased the amount of greenhouse gases in the atmosphere, changing its chemical composition and trapping more heat than it used to.
- The increased heat creates volatility in the climate and changes weather patterns. A certain amount of volatility and disruption is normal, but human activity is "putting gasoline on the fire."
- A planet that is two degrees warmer than normal means that humanity must adapt, and doing so is unpleasant. An eight-degree increase would mean we live on a fundamentally different planet than what we know today.
- Like in humans, seemingly small increases cause big shifts. A 98.6° body temperature is healthy while 101° is feverish or hyperthermic.



KEY IMPACTS OF CLIMATE CHANGE

- The hydrologic cycle is on fast-forward, increasing the frequency and intensity of precipitation. Flood patterns no longer align well to historical flood plain maps.
- Instead of river floods, there are more "drainage events" are floods in inland areas where outdated infrastructure cannot absorb rainfall of increased intensity and duration.

- 92% of increased warming is being funneled into oceans, causing polar sea ice to decline 40% since 1984 and sea levels to rise. Miami is now prone to flooding during a full moon when the tides come in high.
- More "weather whiplash." Some areas see much stronger and more frequent rainfalls, others are seeing longer and more severe droughts.
- Fourteen of the fifteen warmest years worldwide have occurred since 2000 at odds of 650 million to 1.
- 70K Americans and 5M people worldwide die prematurely each year because of air pollution. A third of American children suffers from asthma, allergies, ADHD or autism, and climate change is suspected as part of the increase.

"Climate change isn't sparking storms, but it's adding fuel to storms that are already formed."

ECONOMICS AND ENERGY SECURITY ARE REASONS FOR OPTIMISM

- The military recognizes climate change as a "threat magnifier," which can help increase political buy-in for the need to develop climate change solutions.
- Renewable energy technology has improved to the point that adopting it is a "no brainer." Unsubsidized solar power is now the cheapest form of new energy to produce.
- Battery costs for energy storage have fallen 50% since 2014 and wind costs have dropped 40%.
- Electric cars will soon travel 500 miles or more on a charge, and they will be cheaper and easier to produce due to fewer moving parts.
- Renewable energy and mitigating the consequences of climate change are a major economic opportunity. Solar energy already employs 2x as many people as oil, coal and natural gas combined.

CHALLENGES AND OPPORTUNITIES IN MINNESOTA

- All communities will need more resilient infrastructure. This includes, roads, the electrical grid, sewers, and more.
- Stormwater management will be a major challenge for Minnesota communities and is also an opportunity for the state to become a worldwide leader in developing solutions.
- Agriculture's important role in the state's economy means researching and developing flood and drought-tolerant crops is another place where Minnesota could lead.

WHAT CITIES CAN DO

- Lead by example. Convert vehicle fleets to electric, encourage more public transit and bicycling, and mitigate the urban heat island effect by planting more trees and vegetation.
- Embrace innovative solutions, particularly for managing water sources and rainfalls.
- Take advantage of the revolution in renewable energy and pass savings onto citizens. This demonstrates that effective solutions exist and helps build support for fighting climate change with the public.

"The situation is not hopeless and we are not helpless."

MAY 8TH: A SUSTAINABLE FUTURE AND CLIMATE ACTION PLANS

MAYOR CHRIS COLEMAN, CITY OF SAINT PAUL

- Cities are both big contributors to climate change and a vital part of the solution. Cities across the world are leading on climate change solutions for transportation, drinking water, agriculture and more.
- Saint Paul approached the challenge of climate change with two goals–reduce the city's emissions and save money. The city has seen over $1M in energy savings and an addition $1M in rebates from Xcel Energy.
- The City developed a "sustainable building policy" which requires a high level of environmental and sustainability commitment for city buildings including fire stations, police stations, rec centers and more.
- Private developers began striving to meet the city's green building standards despite not being required to do so.
- Saint Paul has expanded its use of renewable energy, getting 25% from community solar with a goal of moving to 50% in two years. The city has also begun purchasing electric vehicles and installing EV charging stations.

RECOMMENDED ACTIONS FOR CITIES

- Assess your biggest opportunities at the local level, whether it's embracing renewable energy or buying EVs.
- Create service continuity plans to be prepared for disruption in services due to extreme weather.
- Assess vulnerabilities, measure emissions, and develop strategies to mitigate them.
- Continue looking at the issue regionally through the RCM and pursue and advocate for regional solutions.

CLIMATE ACTION PLAN IMPLEMENTATION STRATEGIES

REGIONAL INDICATORS INITIATIVE / LOGOPEP

- The Regional Indicators Initiative (RII) helps communities measure their greenhouse gas emissions, evaluate their progress over time, and compare themselves with other regional communities.
- RII data show a 13% decline in overall greenhouse gas emissions since 2007, mostly due to grid improvements. So far, we are not seeing major gains due to conservation and efficiency efforts.
- Include climate planning in comp plan updates. LoGoPEP's energy planning workbook and guide can help. Cities should pursue solutions like Xcel Energy's programs and GreenStep Cities and advocate for statewide action.

GREENSTEP CITIES

- Minnesota GreenStep Cities is a voluntary challenge, assistance and recognition program for accelerating sustainability actions.
- Contains 29 distinct best practices and 170 best practice action. For each best practice action, cities report the steps they took, the outcomes of that action, and who in the city is responsible for each one.
- Cities can use reporting and data from GreenStep participants to get ideas for their own communities and then reach out to those cities for help or support.

PLANS FOR RENEWABLES AT XCEL ENERGY

- Xcel is expanding the role of renewable energy in its portfolio planning as it plans to retire almost all its baseload fleet, including coal, natural gas, and nuclear plants.
- Technology improvements, especially for wind energy, have driven down the cost of renewables, and Xcel is using its wind energy acquisitions as a hedge against future cost increases for natural gas.
- Two programs for cities and individuals to take advantage of: Partners in Energy and Renewable Connect for Residences or Renewable Connect for Businesses

RENEWABLE ENERGY AT MORTENSON

- Mortenson has been doing wind energy projects for more than two decades and solar farms since 2009. The company also made a commitment to no longer build "dirty" energy projects like coal plants.
- Community education is important for making Mortenson's renewable projects succeed. They created two children's-style books to help make the case. See "Discover Renewables" to learn more.
- Three important innovations and trends in renewable energy: improved energy storage, advanced microgrids to protect businesses from grid disruptions, and community solar gardens expanding access to solar power.

COMING UP

The next meeting of the Regional Council of Mayors will be Monday, June 12th from 11:30 a.m. to 1:30 p.m. in the Seattle Room at Dorsey & Whitney, 50 South 6th Street, Minneapolis, MN.

MAY 8TH ATTENDEES

MAYORS

Mary Giuliani Stephens	City of Woodbury (Co-Chair)
James Hovland	City of Edina (Co-Chair)
Mike Maguire	City of Eagan (Chair, Housing Initiative)
Elizabeth Kautz	City of Burnsville (RCM Founder)
Sandy Martin	City of Shoreview (Past Chair)
Doug Anderson	City of Lakeville
Kirt Briggs	City of Prior Lake
Chris Coleman	City of Saint Paul
Molly Cummings	City of Hopkins
Jerry Faust	City of St. Anthony
Kathi Hemken	City of New Hope
Marvin Johnson	City of Independence
Peter Lindstrom	City of Falcon Heights
Dan Lund	City of Newport
Julie Maas-Kusske	City of Maple Plain
Marty Schneider	City of Long Lake
Terry Schneider	City of Minnetonka
Jake Spano	City of St. Louis Park
Mike Webb	City of Carver
Lisa Whalen	City of Minnetrista
Ken Willcox	City of Wayzata
Gene Winstead	City of Bloomington
Scott Zerby	City of Shorewood

GUESTS

Phil Muessig, GreenStep Cities; John S. Adams, University of Minnesota; Jean Kane, Colliers; Rick Carter, LHB; Max Musicant, The Musicant Group; Mark Donahue, Mortenson; Sandra Kresbach, American Technical Education Association; Susan Schmidt, The Trust for Public Land; Jennifer O'Rourke, Metropolitan Council; Katie Rodriguez, Metropolitan Council; Anne Hunt, City of Saint Paul; Ani Backa, Xcel Energy; PJ Martin, Xcel Energy; Kevin Schwain, Xcel Energy; Mark Casey, St. Anthony; Jay Lindgren, Dorsey & Whitney; Diana McKeown, Clean Energy Resource Teams/Great Plains Institute; Deb Barber, Metropolitan Council; Jim Erkel, Minnesota Center for Environmental Advocacy; Jim Walston, Lindquist & Vennum; Burke Murphy, Corporation for a Skilled Workforce; Gilbert Achay, Blue Cross; DJ Forbes, The Trust for Public Land; Ellen Sahli, Family Housing Fund; Peter Dahl, HGA; Mike Ericson; City of Centerville; Kristin Mroz, Environmental Quality Board; Diane Norman, RSP

ULI MINNESOTA

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