

# RURAL CLIMATE DIALOGUES

# STATE CONVENING

SEPTEMBER 2016

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This is a report on the process, findings, and outcomes of the Minnesota Rural Climate Dialogues State Convening which addressed the challenge: *How might rural communities and statewide organizations work together productively to best address extreme weather and a changing climate?*

# EXECUTIVE SUMMARY

**Minnesota's rural communities face disproportionate risk from the direct impacts of a changing climate and by efforts to mitigate those changes.** Much of the activity to build a new climate-resilient economy will occur in rural areas, including through renewable energy generation, reinvigorated local and regional food economies, and changes to land use patterns. Despite their importance, rural communities have too often been overlooked in climate conversations, and policy discussions have tended to emphasize urban and suburban perspectives.

Building on previous citizen-driven Rural Climate Dialogues in **Stevens County, Itasca County, and Winona County**, the **Institute for Agriculture and Trade Policy** and the **Jefferson Center** convened a state meeting of rural Minnesota citizens, state agency representatives, and nonprofit organizations on September 8–9, 2016 in St. Paul. Rural residents were selected from each of the three Dialogue communities. Participating agencies and organizations included: MN Department of Agriculture, MN Pollution Control Agency, MN Department of Transportation, MN Department of Commerce, MN Environmental Quality Board, MN Board of Water and Soil Resources, MN Department of Employment and Economic Development, MN Department of Natural Resources, among others.

Each of the three Rural Climate Dialogues produced a separate action plan detailing how their community could respond to climate change. A common priority among all three communities was the need to strengthen connections between local efforts and state agencies and programs. At the State Convening, rural participants from the three communities identified their shared climate action priorities and presented these to state agencies. Top priorities included: pursuing the transition toward a clean energy future; strengthening infrastructure like roads, housing, and other utilities to be more climate resilient; improving the stewardship of rural land by adopting more sustainable agricultural practices and promoting watershed-based planning and management strategies; and integrating ecotourism and education to drive community-level change.

State agency staff presented on a number of key climate issues for rural Minnesota including clean energy and energy efficiency, climate-friendly agriculture, resilient transportation infrastructure, and health impacts of climate change on rural citizens who work mostly outdoors. Each presentation included details on a wide range of state agency programs designed to address some of these challenges, including opportunities for rural communities to access funding and other state resources.

**Rural citizens and state agency staff strategized together on key priority next step actions within existing programs in the areas of land use** (e.g. soil health, water quality, ecotourism), **infrastructure** (e.g. stormwater, transportation planning), **and energy** (e.g. clean energy, energy efficiency). **The State Convening also identified areas where change is needed, including building a state program navigator for local government officials, encouraging more rural-focused research on climate resilience, sharing best practices between rural communities, and creating an ongoing space for state agency staff to engage constructively with rural citizens.**

# THE LINK BETWEEN RURAL COMMUNITIES AND CLIMATE

Climate variability, increases in temperature and precipitation, and more frequent extreme weather events are expected to have widespread impacts on the provision of services from state, regional, local, and tribal governments. Emergency management, energy use and distribution systems, transportation and infrastructure planning, and public health will all be affected. But these impacts will look different for rural Minnesotans than for others in the state. The delivery of services and programs needs to reflect these differences.

Rural residents earn less on average than urban residents and spend a higher percentage of their income on transportation and energy. Rural communities tend to have higher poverty rates, more persistent long-term poverty rates, and higher child poverty. Absent a clear plan, these issues will likely be exacerbated by climate change *and* by efforts to address climate change. This is especially true when considering solutions and policies that could increase energy, transportation, or other costs. Yet rural communities are critical to addressing climate change for the country as a whole, including through renewable energy deployment, reinvigorated local and regional food economies, and changes to land use patterns.

The inclusion and engagement of rural America on climate change is critical for our country's future. Rural America encompasses nearly 75 percent of the land area in the United States. It is home to nearly all of the nation's energy production, including oil drilling, fracking for natural gas, coal power plants, wind turbines, and solar farms. The rural landscape is comprised of forests, farms, and rangelands that can capture carbon when managed appropriately; land and resources for wind, solar, and other renewable installations; and most importantly, the 14 percent of the country's residents who live in rural America and steward these resources and opportunities.

Despite this significance, rural communities have often been overlooked in climate conversations. Political debate and policy changes have tended to emphasize urban and suburban perspectives. In many rural communities, incomplete information and limited public participation have prevented sound, publicly-supported policy from emerging.

But it doesn't have to stay this way. Rural residents and communities can develop innovative solutions to local and regional challenges, ensuring rural Minnesota remains vibrant and prosperous. To appropriately include and engage rural America, we must first understand how climate change is affecting rural communities differently. At the State Convening, the participants shared their own experiences and heard from a number of state experts who highlighted additional impacts. The following includes an overview of these impacts and the efforts rural residents are pursuing to address them.

*"I found it very useful knowing what other agencies are doing - there are few good forums for that."  
— Marcie Weinandt, MN Department of Agriculture*

## PUBLIC HEALTH

Minnesota is experiencing an increase in heavy rainfall events and flooding, increasing the likelihood of private well contamination. According to the Minnesota Department of Health, well contamination, and a lack of testing and treatment, has implications for 1.1 million private wells users across the state, most of whom live in rural areas.

Lyme disease is also increasing in frequency as a result of larger tick populations, which are thriving due to warmer winters. This will have long-lasting health impacts, particularly for those in northern and southeastern rural counties whose occupations require them to be outdoors. Warming temperatures will also increase pollen production and lengthen allergy seasons, thereby exacerbating respiratory and other illnesses.

On average, Minnesota has experienced higher dew points and more dew point-driven heat waves. The increasing severity and frequency of heat waves can prove fatal. Furthermore, data suggests rural areas may be hit harder by extreme heat than urban communities as a result of having a greater percentage of jobs that require people to be outdoors, fewer “cooled” spaces, and fewer public services delivered over a greater area.

## SIGNIFICANT CLIMATE TRENDS IN MINNESOTA

### Temperature

- Average temperature is increasing at a rate of 2°F/century.
- Average minimum temperatures are increasing faster than average maximum temperatures, with the mean values of nighttime minimum temperatures increasing at twice the rate of the mean values of daytime maximums.
- Temperatures are increasing more in winter than in other seasons.

### Dew Points

- Greater frequency of tropical-like dew points.
- More heat waves are driven by high dew points rather than just high temperatures.

### Precipitation

- Minnesota has seen 2.6 inches more rain per year over the past century.
- Minnesota has seen a 37% increase in the amount of precipitation falling in the heaviest 1% of all events.





## EMERGENCY MANAGEMENT

Rural America's infrastructure challenges will likely worsen as a result of climate change. Destinations are further apart in rural areas, making transportation infrastructure (i.e. roads and bridges) critical for accessing services, getting to work, and pursuing recreation. Warmer winters and higher minimum temperatures will likely increase the frequency of freeze/thaw cycles (ice freezing, melting, and re-freezing in cracks on the road), causing greater damage to roads. Extreme weather events will also make roads more frequently impassable. These problems will make getting to hospitals, schools, and other destinations more difficult, and could increase emergency response times. This is compounded by the decline in resources for emergency medical services. More than 60 rural hospitals have closed since 2010, and more than 650 are vulnerable to closing. Resource limitations also makes it more difficult to build schools, hospitals, transportation systems, and other infrastructure that can withstand extreme heat, cold, precipitation, and other weather events.

While many issues may get worse in the face of climate change, we must not overlook the many strengths rural communities hold that will enable them to thrive. As we transition and adapt to climate change, new economic opportunities will emerge. There is also strong social capital and community cohesion in rural communities, which allows them to move quickly on opportunities at a local level. We must account for these strengths and assess as a state how we can better support and empower rural communities to adapt to climate change.

## ENERGY COSTS & HOUSING

According to the USDA's Economic Research Service, rural areas have lower housing quality with lower energy efficiency on average. For instance, mobile homes, which are poorly insulated and notoriously energy inefficient, represent nearly 20 percent of rural housing. On top of this, mobile home owners often cannot access many energy efficiency programs due to restrictions on land leased communities, limited funding, and the overall difficulty of weatherizing mobile homes. This means that households with lower average incomes are paying a higher percentage of their income on energy, with less access to the programs that could reduce their energy demand.

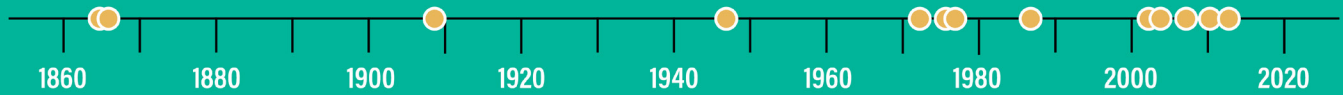
The burden of carrying insurance to cover the unforeseen damages to homes and property due to extreme weather events has also been an increasing concern for rural residents. The Insurance Federation of Minnesota reports that catastrophic claims—losses due to severe weather—in Minnesota have gone up dramatically; there have been two years since 2007 when claims have exceeded \$1 billion. The average homeowner's insurance premiums have gone up by 267% since the late 1990s, highlighting the increased risk climate change and extreme weather present for Minnesota.

*"I really appreciated the whole structure of the event – the makeup of who was in the room was incredibly valuable because it was personal, but also professional and it was relational between people who did not share the same backgrounds." — Brad Redlin, MN Department of Agriculture*

# LOCAL ECONOMIES

The growing frequency of tropical-like dew points exacerbates stress on livestock and requires farmers to adopt costly and energy-intensive environmental controls. Changes in precipitation patterns will also have economic impacts and alter irrigation, drainage, runoff, sediment, and shoreline management across our state's water bodies. These changes will likely require modification of fisheries management, crop production, and necessitate increased attention to soil erosion and flooding. There will likely need to be greater collaboration between city and county officials to manage runoff and water quality.

## Timeline of Minnesota's historical mega-rain events 1866-2014



### 1866-1965

#### Four mega-rains in 100 years

August 6, 1866

Killed 16 people in Fillmore County.

July 17-19, 1867

Known as the state's greatest flash flood, in central Minnesota.

July 20-22, 1909

Extensive across northern Minnesota, killed 2 children in Duluth.

September 9-10, 1947

More than 8 inches in five hours at Hibbing.

### 1966-1999

#### Three mega-rains in 33 years

July 21-22, 1972

Nearly 11 inches in 24 hours at Ft. Ripley, a state record at the time.

June 28-29 and July 1-2, 1975

Intense rain in northwestern Minnesota in two events.

July 23, 1987

9 inches at Minneapolis-St. Paul International Airport, a record.

### 2000-2014

#### Five mega-rains in 14 years

June 9-10, 2002

More than 12 inches in 48 hours in northern Minnesota.

September 14-15, 2004

More than 10 inches in 36 hours in Faribault and Freeborn counties.

August 18-20, 2007

15 inches near Hokah, state record for 24 hours.

September 22-23, 2010

More than 10 inches at Amboy.

June 19-20, 2012

7 inches in two days in Duluth, St. Louis River at record level.

*"Even if you thought you knew a lot about climate change, the information that we were all given, the experts that were provided, really gave you a chance to gain so much more knowledge and be able to have a dialogue with other people with all the information that you learned. We talk a lot more about climate change and I would say, previous to that, it might have come up once a year. Now, during any of these weather events, when you hear about flooding in other places it really does bring a lot more dialogue of: what can we do, how should we change things?"*

*I think once you start bringing that dialogue up, other people want to join in and they want to learn more about it. Everybody wants to be able to sit at the table with the same information."*

*— John Geleneau, Stevens County*



# THE RURAL CLIMATE DIALOGUE PROCESS

The Jefferson Center and the Institute for Agriculture and Trade Policy (IATP), seeking to advance productive conversations, on-the-ground solutions, and sound policy on climate change, facilitated three Rural Climate Dialogues (RCDs) hosted in Morris, MN in 2014; Grand Rapids, MN in 2015; and Winona, MN in 2016. The RCDs help rural communities think critically and plan strategically to address local challenges related to weather, climate, and resilience. The Rural Climate Dialogue process consists of three interweaving phases: relationship building and participatory networking, deliberative public engagement, and community-based action.

Prior to the dialogue, Jefferson Center and IATP staff visit the community multiple times to learn about local issues and get to know local leaders, decision makers, and residents. This phase includes direct engagement with high school students and teachers, helping students learn more about climate and extreme weather issues and discuss their own priorities for the community. These preliminary conversations and relationships set the foundation for the Rural Climate Dialogue event—a three-day Citizens Jury tasked with creating a shared, community-based response to changing weather conditions and extreme weather events.

The time-tested Citizens Jury method brings together a microcosm of the community to study an issue in depth and generate a shared community response. An 18-person Jury is randomly selected from a larger applicant pool to reflect the demographic, political, and attitudinal diversity within the community. Barriers to participation are addressed by providing participants with stipends for their time and reimbursement for transportation and childcare expenses. The Citizens Jury has the liberty, information, and resources to produce their own recommendations that respond to community needs, priorities, concerns, and values in order to maintain and strengthen the resilience and prosperity of their community. These recommendations serve as a starting point for community conversations and action to enhance resilience.





In contrast to forms of public engagement that focus on a one-way process of educating the public, deliberative public engagement aims to engage members of the public in a two-way conversation about important issues. Citizens are not just an audience to educate, but instead are experts in their own right whose values and situated knowledge are critical inputs into the policymaking process.

Opportunities for citizen engagement in policy development are often restricted to meet the needs and interests of the sponsoring organization. The transactional dynamic of this interaction rarely provides the highest-quality citizen input or results in the strongest policies. Because the Rural Climate Dialogues occur outside of these traditional channels, citizens are placed at the center of the conversation. This type of deliberative public engagement aims to create spaces where citizens can learn from experts and from one another, coming to collective decisions through face-to-face informed discussion.

In addressing issues as daunting as climate resilience, citizens may consider their role in the issue insignificant and their ability to take action minimal. However, the Rural Climate Dialogues create a unique dynamic, demonstrating significant increases in the participants' assessments of their own personal efficacy, knowledge, and willingness to act.

The community-driven recommendations produced in the Rural Climate Dialogues provide political leaders with a clearer and more nuanced understanding of the community's attitudes, ambitions, and ideas. As such, the Rural Climate Dialogues help develop and amplify an informed voice of the people so that regional, state, and national policymakers can take their needs into account when developing climate policy. Through the expansion of this project, we hope to build better climate change policy and stronger, civic-minded communities across rural America.



# CONNECTING CITIZENS TO POLICY: STATE CONVENING

After the three Rural Climate Dialogues were completed, a common theme emerged: many of the actions proposed by the participants depended on or would benefit from successful and responsive state agency programs. Because state agencies do not often have the opportunity to engage directly with rural Minnesotans, the voices and unique concerns of these communities are not fully reflected in agency policy or their promotion of existing programs. Given the chance to speak directly with rural community leaders and citizen jurors, agencies were eager to participate in a two-day State Convening with Rural Climate Dialogue organizers and participants.

In selecting rural residents to participate in the State Convening, the Jefferson Center and IATP recruited participants balanced across the three Dialogue communities, with roughly half citizen jurors and half community leaders identified through prior relationship-building. The participants comprised a cross section of Minnesota's rural residents, including lifelong rural residents, recent transplants, retirees, young farmers, public servants, small business owners, researchers, and more.

On the first day of the State Convening, participants from the three communities were asked to separate into three categories by interest and expertise: energy transition, infrastructure needs, and land stewardship. Each of the three groups identified how their communities were working to address each issue. The resulting lists of priorities, actions, and barriers in each category were then presented the following day to frame the discussion with agency and nonprofit representatives.

The Center for Rural Strategies, a Kentucky-based nonprofit, joined the State Convening to help participants think about and share their personal stories. Before agency representatives joined for the second day, the rural residents developed stories highlighting their ties to their community and their assessments on the urgency for action on climate resilience. These stories helped participants clearly share their interests and perspectives with agency and nonprofit representatives, condensing complex and lengthy personal histories of into smaller, more meaningful statements. We've included some of these stories as participant profiles throughout this report.

The second day of the State Convening featured presentations on state programs and efforts targeting climate and extreme weather, health, economic development, agriculture, and the environment. Participants had the opportunity to take notes and ask questions of presenters. In the afternoon, small group discussions focused on the topics of energy transition, infrastructure, and land stewardship. Each small group was made up of a combination of rural residents and state agency and nonprofit representatives. The groups identified existing programs which could support community efforts, program gaps and other oversights, possible methods for greater rural inclusion in state program development and execution, and ways to improve rural access and uptake of programs.



## PARTICIPANT PROFILE: SHONA SNATER

Seated in Southeastern Minnesota's Driftless Area, the Winona area is surrounded by bluffland carved during the last glacial period. The nutrient-dense, loess-heavy topsoil found here is highly desirable for agriculture, but its karst topography provides limited natural filtration, leaving the watershed especially vulnerable to agricultural, industrial, and residential contamination. The three institutions of higher learning in the area provide an influx of new residents and support a growing arts community.



A participant from the Winona County Climate Dialogue, Shona Snater, emphasized the challenges of sustainability in the Winona area. Action on land and water stewardship has moved slower than she would like, because “our average farmer is 56 years old, so trying to convince them to go into a more sustainable method of farming, which involves a lot more equipment purchasing and completely changing farming practices, is hard to do for someone who is looking to retire. It’s something, I believe, that people know needs to be done—it’s just that there may be a bit of delay before we can see new farmers coming onto the land that can invest in the land and start using more sustainable practices.”

For Snater, the question is now “what can an individual person do; and, to me, it doesn’t matter what your daytime job is: you could work for a mining company, whatever. I think it’s what you go home and do. If you can support your local co-op or go to the farmer’s market and support that local farmer, the fact is that you’re keeping that money in the community and it’s circulating right there. The more we can do that sustains the local communities, supporting your own local community and your own neighbors—I think that is the biggest change we really need to see to start turning things around.”

While Snater sees barriers to action on sustainability issues for farmers, she is troubled with younger citizens’ capacity to act on an individual level: “I think that a big concern now is that we have our young people so wrapped up in trying to find jobs and pay off student debt that we’re going to have a really hard time even having the time to focus on these issues.”



# TOP RURAL PRIORITIES, ACTIONS, & BARRIERS

Rural participants in the State Convening prepared for their discussion with state agency staff by reviewing each of the three community action plans and summarizing the priorities in each on the topics of energy, infrastructure, and land management. The following actions and obstacles are state rural priorities for climate change adaptation and mitigation, created by rural leaders and citizens from our three Dialogue communities.

## **TO PLAN FOR OUR FUTURE ENERGY TRANSITION, WE SHOULD...**

- 1. *Work closely with schools to educate students, and include them in conversations about weather, climate, resilience and renewable energy. Strategies for this include increasing environmental education offerings, developing robust outdoor recreation opportunities, exposing them to ongoing progress in the community (e.g. renewable energy and community gardens) and providing civic engagement opportunities for students in collaboration with community partners.***

### **ACTIONS**

- Identify teachers who could be leaders on issues
- Develop and improve educational standards to include renewable and conservation focused education
- Engage PTA/school boards on the importance of this issue
- Create a set of workshops for educators to attend on the state level, should get credit with continuing education units (CEUs)
- Conduct mini-dialogues to encourage civic engagement on this topic
- Organize and facilitate tours of clean energy and conservation sites

### **OBSTACLES**

- Conflicting community standards
- Pushback due to cost
- Complexity of teaching standards
- Lack of time teachers have to dedicate to developing new curriculum

- 2. *Improve communications between citizens, organizations, and agencies to inform people about current energy policies and potential policies, opportunities, financing options, and progress toward goals.***

### **ACTIONS**

- Develop a community website focusing on energy (like MorrisModel.org)
- Establish an interagency group to follow the Morris Model which includes students in towns with universities
- Increase the number of community meetings on extreme weather and energy

### **OBSTACLES**

- Local government pushback on dealing with the issue of climate change
- Difficulty identifying who is the organizing entity
- Not all communities have resources provided by universities



**3. Invest in installation of renewable energy and conservation measures in schools, institutions, and government buildings. This demonstrates leadership and a commitment to renewable energy. Our communities want to be energy producers instead of energy consumers.**

**ACTIONS**

- Identify financing mechanisms at business, municipal, and residential levels
- Create incentives for public institutions to adopt solar panels and wind turbines
- Collect data to demonstrate financial and conservation advantages for transitioning to renewable energy sources.

**OBSTACLES**

- Insufficient funding
- Rural inexperience or lack of skills relating to installation

**4. Increase community education with citizens and decision makers. With a more educated community, political decision makers will be moved to show leadership on renewable energy.**

**ACTIONS**

- Host workshops with state-level professionals
- Increase relevant cultural events (e.g. showing movies like 'Chasing Ice' with community conversations to follow)
- Harness and streamline existing trainings, and disseminate the information to other communities

**OBSTACLES**

- Insufficient funding
- Lack of political buy-in from leaders
- Lack of outside expert presenters available to visit rural communities if local experts don't exist

**5. Develop community resilience plans and goals. This can be incorporated into existing hazard mitigation processes. There are opportunities for consolidation with other planning. Identify common goals between institutions.**

**ACTIONS**

- Develop a statewide database with possible actions
- Develop document and goals for each community (Morris Model)
- Integrate plans and goals with hazard mitigation planning
- Create workshops for the community

**OBSTACLES**

- Insufficient funding
- Potentially time-consuming

*"I think we, the people, are the solution. What we do. What we learn. How we can be proactive. It's like paying it forward to our grandchildren into the future." — Kathryn Sublett, Winona County*

## **TO ENSURE OUR INFRASTRUCTURE IS RESILIENT TO CLIMATE CHANGE, WE SHOULD...**

- 1. Invest in and test new technologies for road infrastructure (e.g. permeable pavement) that have multiple benefits and improve long-term resiliency for our communities to improve quality of life and reduce maintenance requirements.**

### **ACTIONS**

- Identify new technology and planning for road use (road standards)
- Identify technology companies/state agencies/county officials/state & local politicians to demonstrate interest
- Obtain case studies from other communities experiencing similar climate conditions

### **OBSTACLES**

- Insufficient existing technology
- Risk of testing something new
- Obtaining funding
- Those who think it's not possible or practical to implement
- Being rural - having a test site far from metro area could be viewed as hindrance (transportation distance, etc.)
- Rural communities have lower population to spread cost of investment over population compared to metro areas, making investments in new technology more expensive in rural areas

- 2. Engage wholly in the community - utilize local newspaper and radio to bring awareness to climate change impacts on the community, and share ideas and solutions with elected officials. We can't make change without engagement, and we need participation to share solutions.**

### **ACTIONS**

- Organize new groups or join groups to have aggregated voice
- Be persistent: figure out how to reach elected officials
- Plan events to bring more people into discussion

### **OBSTACLES**

- Accessibility to elected officials
- Ideological disagreements: don't need to be an obstacle, but they can be
- Funding for airtime or publications
- Bridging generation gaps in media outlets - how to tailor messages effectively

- 3. Focus on energy efficiency and building standards for homes (especially low-income households and other vulnerable populations). This will reduce long-term costs and catastrophic damage from extreme weather events.**

### **ACTIONS**

- Engage community groups and educate them about available resources & technical assistance for weatherization
- Pass state legislation to allocate and prioritize funding
- Advocate for and organize to pursue legislation supporting energy efficiency
- Support existing groups working on housing, including low-income housing

## **OBSTACLES**

- Social/cultural beliefs that vulnerable communities shouldn't be subsidized, that there is less at stake for them and therefore don't care for their homes as much
- Identifying how to best spend scarce resources in order to get the biggest return
- Unsure who to talk to about standards and funding/resources/programs
- Programs need to be accessible but not penalize people for moving out of poverty

### **4. Improve coordination and long-term strategic planning for the delivery of public utilities (roads, sewer, water). This will help us save money by working better together.**

## **ACTIONS**

- Promote consistent policy at local and state levels
- Support longer-term planning (20+ years)
- Encourage agency by agency (department by department) coordination
- Create "coordinator" positions focused on comprehensive strategic planning

## **OBSTACLES**

- Getting agencies to work together
- Communication inefficiencies
- Cost-sharing and budgeting across agencies isn't easy

## **TO IMPROVE OUR MANAGEMENT AND STEWARDSHIP OF OUR RURAL LAND, WE SHOULD PROMOTE...**

### **1. More sustainable agricultural practices to improve our food security, improve water quality, strengthen our local economies, manage carbon effectively, and promote healthy soil.**

## **ACTIONS**

- Create policy geared toward best practices
- Promote these issues during local elections
- Educate the public (letters to the editor, etc.)
- Support local organizations working on these issues
- Subsidize vegetable growers like crop farmers. Reward what you want to see!

## **OBSTACLES**

- Farmers are independent people; legislating change leads to pushback and resistance
- Big agriculture/corporate pushback against sustainable goals that don't meet their interests
- Getting critical mass and other people interested in supporting sustainable practices
- Aging/retiring farmers resistant to investing in new technologies and practices

*"I work with children, and again, when you're talking about families who are living in poverty already, and how devastating that can be to families and kids who are already living paycheck to paycheck, or barely making it, and then something comes along like a flood or high winds, trees down, and they don't have the resources to be able to deal with that—from a mental health perspective, that's an added stressor in terms of how people cope." — Melissa Weidendorf, Itasca County*

- 2. Watershed planning and management as a way of developing a comprehensive strategy to manage the diversity of our landscapes. Planning at the watershed level will promote collaboration and idea sharing, encourage diverse interests to think about issues and work to solve them together, and identify solutions that are tailored for the watershed to maximize effectiveness and impact.**

#### **ACTIONS**

- Promote sustainable agriculture
- Improve tourism
- Develop different approaches for different types of watersheds (Boundary Waters vs. agriculture-heavy watersheds)
- Create awareness about watersheds

#### **OBSTACLES**

- Requires high-level policy change
- Requires collaboration between rural and urban interests (among others)
- Can be challenging to work with individual landowners - we need additional direct engagement of, and programs for, individual landowners

- 3. The GreenStep City approach to comprehensive sustainability because it encourages a comprehensive community framework for action, allowing communities to strategically select solutions based on specific community needs. GreenStep Cities could encourage new people to run for office and build political support for sustainability.**

#### **ACTIONS**

- Follow the Winona State University example, hiring a sustainability coordinator or other staff to coordinate sustainability actions and initiatives
- Select among options to pursue in your community - "get off the ground/build support"
- Inventory actions the community has already taken

#### **OBSTACLES**

- Leadership to take on this work
- Political waffling on sustainability
- Building community support

- 4. Ecotourism and other tourism opportunities that are adaptive to extreme weather and a changing climate to ensure that tourism remains an important driver of economic activities in our communities. Rural tourism also supports the education of the public, encourages people to appreciate our natural heritage, and connects people with their food.**

#### **ACTIONS**

- Encourage smaller scale/AirBnB-style tourism opportunities, this can be a community effort to recruit tourists
- Connect with communities with strong tourism sectors
- Develop and promote the business/economic case to be made for ecotourism (outfitters, etc.)

#### **OBSTACLES**

- Managing problems and managing resources associated with heavy tourism (e.g. overfishing at Mille Lacs Lake)



**5. Education that encourages and supports people to act in their communities, so rural Minnesotans can educate others and drive change in their communities.**

**ACTIONS**

- Develop effective online tools to support education (e.g. website)
- Work with community-level media to increase exposure and education
- Talk to high schools and students
- Develop community service programs (e.g. high school-led program to remove invasive species)
- Develop community education classes
- Host hikes or bird watching outings
- Host a Jefferson Center-style dialogue/Citizens Jury

**OBSTACLES**

- Limited resources
- Limited space in newspapers and some censorship of the topic
- Polarization

**6. Eliminating the use of pesticides and fertilizers on our lawns, to improve water quality, protect wildlife and wildlife habitat, preserve natural landscapes, and even protect bugs as unique food items.**

**ACTIONS**

- Support public education which includes:
  - What happens to pesticides and fertilizers when it rains and the concept of pesticide drift
  - General environmental impact
  - Effects on humans and health
- Support legislation/policy on the use of fertilizers and pesticides
- Promote natural alternatives and natural landscaping

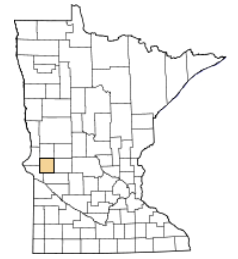
**OBSTACLES**

- Lobbying and political pressure
- Businesses based on pesticide/fertilizer use



## PARTICIPANT PROFILE: TROY GOODNOUGH

The Morris area, located in West-Central Minnesota, is expansive prairie land largely devoted to conventional agriculture, its horizon increasingly dotted with wind turbines. This intimate community is also home to a nationally-recognized liberal arts university, the University of Minnesota – Morris, which has helped drive a shift to the use of alternative energy and sustainability in the community.



The work done by a range of community members in the last decade has transitioned the community to a “renewable energy community,” according to Troy Goodnough, Campus Sustainability Coordinator at UM – Morris. “Seventy percent of campus electricity comes from wind; we’ve got two 1.65 megawatt wind turbines that, between the renewable energy standard in the state, provide energy to 2000 people, which is a remarkable story.” He cites the mentality that allowed for Morris’ renewable energy success as one which sought to discover “how do we capture and build local wealth around the resources that we have?”

While Goodnough’s work and that of others has dramatically changed the energy climate in Morris area, he has seen an increase in damaging extreme weather events. “My roof was totaled along with most of the people in my community when we had two back-to-back hail storms. Right after the last one, I walked out and a 91-year old lab scientist, Harley Hanke, was across the road and I said ‘Harley, have you ever seen anything like this before? He shook his head and essentially said he didn’t know what is going on here. His mind is sharp as a tack. We’ve seen hail events, now what we’re seeing now is that when the rain comes, it comes in larger rain events. On a more personal level, the town in Northeast Wisconsin that my mom and I both played in as we were growing up just had an unprecedented water event, and a relative of ours was swept away and killed in that flash flood.”

Goodnough’s connection with the outdoors extends beyond harnessing renewable energy or weathering hail storms. He is proud to be the Senior Patrol Leader for his son’s Boy Scout troop, but laments the outdoor activities of his childhood are changing. “I’m not sure I’m going to get cross-country skis for my son because the winter just really isn’t there. The way my son will experience Minnesota isn’t going to be the same way I experienced it as a kid.”



# STATE AGENCY RESOURCES

Adaptation and mitigation efforts allow communities to proactively reduce the need for emergency management and disaster relief. However, such proactive efforts require planning. Rural communities have fewer planning resources than their urban counterparts. While 73% of metropolitan counties have land use planners, only 29% of rural counties not adjacent to a metropolitan county have one or more planners. In general, rural governments have to do more with less.

This limits rural communities' ability to adequately develop and implement resiliency planning and puts greater responsibility on elected leaders, other public officials, and citizens themselves to know and understand what state resources are available to their community and how to access them.

To support that information exchange, dialogue participants heard from a number of state agencies, who described how various programs and policies relate to rural concerns about climate change.

There are a number of policies, programs, and targets guiding Minnesota in addressing climate change.

The **Environmental Quality Board**, which provides coordination across state agencies on priority environmental issues that are multi-jurisdictional, outlined the international agreements, federal actions, and state policies that are guiding the state's goals for reducing emissions and energy use.

The **Interagency Climate Adaptation Team** (ICAT), a collaboration of state agencies working to adapt to the changing climate and increase resilience in Minnesota, is working to coordinate more closely with rural communities on adaptation, local and regional responses to extreme weather events, and increased community involvement in energy, infrastructure, and land use issues. Participating agencies are addressing climate-related challenges by evaluating current systems, assessing vulnerabilities, and coordinating programs.

## Agency and Organization Participants:

- Minnesota Department of Agriculture
- United States Department of Agriculture
- Minnesota Board of Water and Soil Resources
- Minnesota Department of Commerce
- Minnesota Department of Employment and Economic Development
- Minnesota Environmental Quality Board
- Minnesota Department of Natural Resources
- Minnesota Pollution Control Agency
- Minnesota Department of Transportation
- Center for Energy and Environment
- Clean Energy Resource Teams
- Climate Generation
- Great Plains Institute
- Saint Paul Port Authority
- Region Nine Development Commission
- University of Minnesota Extension

*"There was a strong desire for communities to have opportunity to access resources presented to them in a collected form that can be digested as more of a menu to consider."*

— Michelle Gransee, MN Department of Commerce



The **Minnesota Department of Transportation** (MnDOT) is taking a regional approach to identifying climate-related challenges and performing a system-wide vulnerability assessment.

The **Board of Water and Soil Resources** (BWSR) has a Climate Adaptation Program which works directly with organizations and landowners to support landscape resiliency, invasive plant removal, and improved agricultural practices. BWSR's approach, which hinges on restoring and maintaining diversity, can be more easily accessed by utilizing their Landscape Resiliency Toolbox.

The **Minnesota Department of Commerce** provides technical assistance for residents who are seeking energy efficiency improvements by assisting in energy audits or aiding in updating to more efficient lighting, appliances, insulation, and more. In addition to offering assistance to residents, the Conservation Improvement Program (CIP) can be accessed by commercial or industrial users to transition to high-efficiency (HE) boilers, chillers, and rooftop units, HE lighting and lighting control systems, and HE motors. Through the Weatherization Assistance Program, income-eligible households may qualify for further assistance to make efficiency improvements. Through the Local Energy Efficiency Program (LEEP), cities, counties, K-12 school districts, and park districts can access state-assisted energy studies to be used in cost-effective energy savings projects.

Working in partnership with the MN Department of Commerce and others, the **Clean Energy Resource Teams** (CERTs) provide technical assistance and support statewide collaboration. They have staff across the state to help connect people to technical resources, host events or tours, create education guides, and provide seed grant funding. CERTs provides assistance to residents, farms, businesses, and local governments.

Managed by a public-private partnership, **GreenStep Cities** is a continuous improvement program helping cities achieve their sustainability and quality of life goals. The program is based on 29 best practices tailored to Minnesota and encourages cost savings, energy use reduction, and civic innovation. The program helps cities realize multiple environmental, social, and financial benefits by making it simpler to find and implement proven, cost-effective actions. It also opens up special opportunities for funding and technical assistance.

The Minnesota Agricultural Water Quality Certification Program from the **Department of Agriculture** offers producers regulatory certainty and financial and technical assistance by pairing a producer with conservation professionals to develop site-specific solutions to improve water quality.

State agency staff and other experts presented at the State Convening, discussing their work in Minnesota. Presenters included:

- Will Seuffert – Minnesota Environmental Quality Board
- Paul Moss – Minnesota Pollution Control Agency
- Mark Seeley – University of Minnesota Extension
- Brenda Hoppe – Minnesota Department of Health
- Kelly Asche – Center for Small Towns, University of MN - Morris
- Michelle Gransee – Minnesota Department of Commerce
- Lissa Pawlisch – Clean Energy Resource Teams
- Philip Schaffner – Minnesota Department of Transportation
- Philipp Muessig – Minnesota GreenStep Cities
- Dan Shaw – Minnesota Board of Water and Soil Resources
- Brad Redlin – Minnesota Department of Agriculture

Many of the powerpoint presentations can be found at:

[ruralclimatenetwork.org/content/state-convening](https://ruralclimatenetwork.org/content/state-convening)



# NEXT STEPS FOR RURAL MINNESOTA AS IDENTIFIED BY COMMUNITY MEMBERS AND STATE AGENCIES

Dialogue participants spent the second day discussing their priorities with state agencies and learning about relevant state programs. These interactive discussions between agency staff and rural citizens produced a set of possible next steps around the three rural priority areas of land use, infrastructure, and energy.

## LAND USE

### **Soil Health**

- Connect USDA Natural Resource Conservation Service (NRCS) soil health programs and state and local watershed districts.
- Identify more partners to invest in soil health, including the crop insurance industry, food and beverage companies, and the recreation industry.
- Publish a Minnesota Soil Health Report, which assesses progress on improving soil health in the state.

### **Water Quality**

- The state needs more outreach and opportunities for farmers and landowners to become part of the MN Agricultural Water Quality Certification Program. The program supports farmers improving water management on land in production through practices that also build climate resilience.
- Improve residential water use by addressing issues like water softeners, lawn fertilizers, and supporting actions like rain gardens that help retain water.

### **Tourism**

- Tourism programs, including through the University of Minnesota's Tourism Center, have the potential to educate visitors and can highlight local actions and responses to climate change.

### **Community Stewardship**

- Responses to climate change require a greater understanding of community assets, including land, community events, and a greater connection to local institutions like schools, hospitals, and businesses.

## INFRASTRUCTURE

### **Stormwater**

- Reviews of stormwater treatment in smaller towns.
- Outreach and education to city engineers on options for redesigning stormwater infrastructure in light of climate-related events.
- Better local data to show how smaller-scale projects build upon each other to create a larger impact within a community watershed.
- Improve interaction between rural citizens and government agencies and planners on projects related to water quality, zoning, and land management. Agencies need to better communicate about programs, including how they can be accessed and program accomplishments.
- Increased support for the Clean Water Legacy Fund.

## **Transportation Planning**

- More coordination is needed among different levels of government and organizations involved with transportation planning.
- Citizens often don't understand road jurisdictions (federal, state, county) or where and when community input is needed. Community engagement needs to be improved before projects are underway.
- Road conditions could be better mapped, given increasing weather-related wear and tear. Making this data more available to the community would help set priorities and improve community engagement. The public could contribute to data collection.
- There needs to be greater investment in human-powered transportation, particularly walking and biking.

## **ENERGY**

### **Clean Energy Transition**

- Expand the CERTs program within rural communities around the state.
- Use the GreenStep Cities program as a way for small communities to start building a community energy plan.
- Increase education about clean energy options for communities, including in the high schools.
- Convene more multi-stakeholder discussions around clean energy development in the community to set long-term and short-term goals.
- Increase understanding and access to the Property-Assessed Clean Energy (PACE) program. Improved case studies on finished projects can show energy savings.

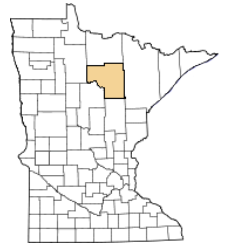
## **PROGRAM GAPS**

***The State Convening aimed to examine how rural priorities could be met by existing programs. However, the discussion highlighted some gaps where there is either no program or little connection between the program and rural communities. Some identified needs include:***

- *State program translator* – Many state programs are difficult to navigate and/or difficult to find. A community-friendly resource of agency programs and contacts would address this challenge.
- *Rural-focused research on climate resilience* – Rural communities face unique challenges in terms of transportation, natural resource-based economies, and high energy use. The State Convening highlighted the lack of good research on the impact of climate change on the health of rural workers, among other topics.
- *Best practice sharing* – Citizens from the three communities benefited from talking with each other. Rural communities working on climate resilience must be better connected to exchange best practices and learn from each other. The Morris Model, which emerged following the Morris Dialogue, is an example of a good practice that could be shared.
- *Continued connection between state agencies and rural communities* – State agency staff expressed the value of direct engagement with rural citizens in a constructive environment, where they could learn about their priorities. There needs to be continued space for state agency staff to get feedback from rural citizens, and vice versa, in an environment that is not confrontational or politically charged.

## PARTICIPANT PROFILE: CALEB TOMMILA

Near to the headwaters of the Mississippi River, Grand Rapids is located in Itasca County, home to more than a thousand lakes. Grand Rapids originated as a logging town and, to this day, both the North Woods community and its tourist industry enjoy the access to forested lands, bodies of water, and trails weaving between the two.



Caleb Tommila, a participant in the Grand Rapids Rural Climate Dialogue, grew up in Itasca County. Tommila spent 14 years working in the paper mills, which is an enormous economic driver in the region that has recently seen some changes: “the paper industry is one of the things being affected by climate change. The trees are not growing back as fast and our ash trees are dying because they don’t have the cold winter days to kill off those ash borers anymore. What used to be walking trails you can now drive three cars down, side by side. What used to be forested with patches here and there you can see for miles now, because it’s all been cut, and isn’t coming back like it should.” Tommila adds that paper mills face added expenses in replacing their declining lumber resources by shipping in lumber from Wisconsin: “there’s some definite changes that need to be done economy-wise for the area to continue to thrive.”

This past summer, Itasca County experienced a destructive hail storm, its powerful winds downing trees. Tommila recently sold a plot of land in the area, and the new owners lost “almost ninety percent of their trees in one storm. Basically, anything that’s bigger than two inches in diameter is gone. It was either uprooted or snapped off. My grandmother has lived in the area her whole life. She’s eighty-some years old, never seen anything like it. She doesn’t have a tree left on her property, because it was all older growth. I cried even though we don’t own it, just looking at the pictures. I don’t know what to say other than I’m devastated. That stuff ain’t coming back in my lifetime. The couple we sold it to is a couple years older than us. It ain’t coming back in their lifetime. Basically, our little forested paradise is gone.”

When asked to describe what, if any, effect the Rural Climate Dialogue had on Tommila, he noted that while he keeps up on news and understood that worldwide the climate was changing, “before I was a part of these events, I really didn’t think there was anything I could do about it. I was always just one of those who thought, ‘It’s too big of an issue. It’s happening. My hands are tied.’ Where, from these events, I realize that there are things we can do, even me personally, my community. It is a global issue, but there are community, individual issues too that can be dealt with. Everybody has the impression that climate is something we’re always going to be reactive to, never proactive to, so how do you answer, or deal with, that question?”



# Appendix A

## Community Resilience Actions Undertaken or Planned

Stevens County public officials, in conjunction with Otter Tail Power, are pursuing renewable energy, energy efficiency and a redesigned local economic development model that will include local renewable energy. The Morris City Council has signed a “Climate Protection” technical assistance partnership with Saerbeck, Germany to explore other ways to deploy clean energy locally. The City of Morris was awarded the “2016 Clean Energy Community Award for their work developing the [“Morris Model”](#) which incorporates clean energy and conservation goals into their community planning efforts.

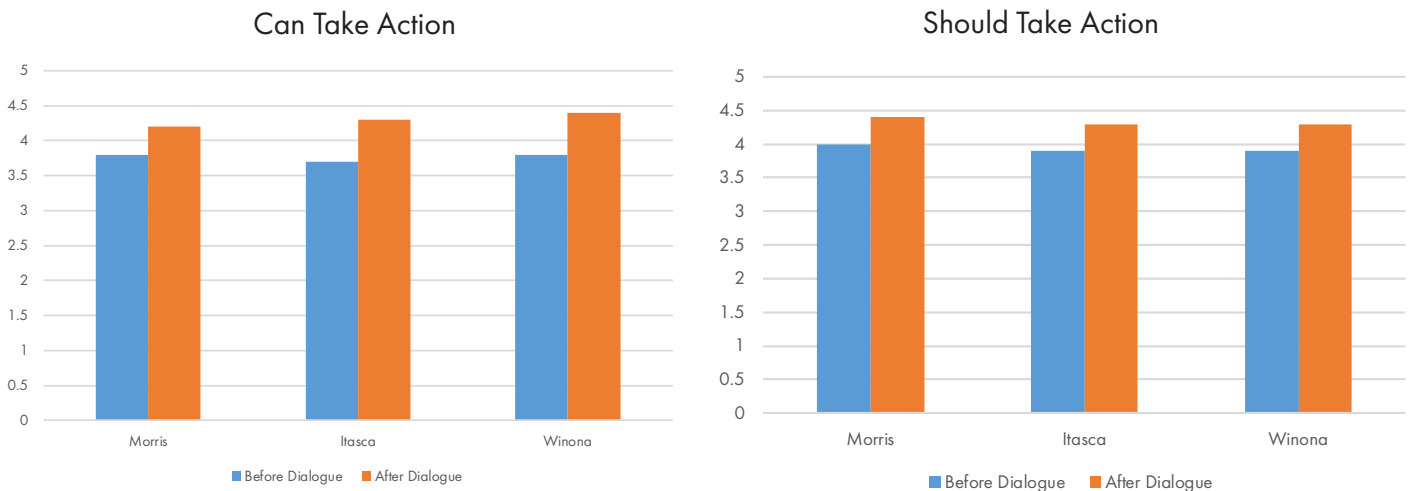
Winona County community members recently received a Minnesota Pollution Control Agency grant to implement pilot projects that reflect the recommendations from the climate dialogue, including energy efficiency and community education. The Sustain Winona committee, in collaboration with IATP and the Jefferson Center, are moving forward with a GreenStep Cities program. Winona is considering becoming part of the ‘Partners in Energy’ program through Xcel and the City/County are utilizing the Property Assessed Clean Energy Program and are steps away from buying 100% solar energy to power government buildings.

The Itasca Clean Energy Team and the Grand Rapids Public Utilities Commission are currently assessing community support for either a community solar garden or a forest-derived biomass facility.

# Appendix B

## Rural Climate Dialogue Evaluations Social Change Outcomes

The independent evaluations conducted as part of the Rural Climate Dialogues process indicated participants in each rural community felt a greater sense of empowerment and importance in creating a community more resilient to climate change after participating in their community’s dialogue. These values were measured on a scale of 0–5, 0 representing strong disagreement and 5 representing strong agreement.





# Appendix C

## *Overview of Selected Minnesota State Agencies, Boards & Organizations for State Convening Participants*

[Board of Water and Soil Resources](#) - Assists local governments to manage and conserve water and soil resources under their stewardship, with an emphasis on private lands. Provides financial, technical, and administrative assistance.

[Department of Agriculture](#) - Protects the public health and safety regarding food and agricultural products.

[Department of Commerce](#) - Chief regulator for the banking, energy, insurance, real estate, residential construction, securities, telecommunications industries and also operates Minnesota's Unclaimed Property.

[Department of Employment and Economic Development](#) - Supports the economic success of individuals, businesses and communities by improving opportunities for growth.

[Department of Health](#) - The state's lead public health agency, responsible for protecting, maintaining and improving the health of all Minnesotans.

[Department of Natural Resources](#) - Manages the state's natural resources. Hunting, fishing, state forests and parks, lakes, rivers and streams, boating and water safety, trails, snowmobiling, skiing, education, enforcement, wildlife management, lands and minerals and much more.

[Department of Transportation](#) - Provides a balanced transportation system. Responsible areas include aeronautics, highways, motor carriers, ports, public transit, railroads and pipelines.

[Environmental Quality Board](#) - Made up of 9 agency heads and 5 citizen members. Provides leadership and coordination across agencies on multi-jurisdictional and multi-dimensional environmental issues. Provides opportunities for public access and engagement.

[Interagency Climate Adaptation Team](#) - Initiated and coordinated by the Minnesota Pollution Control Agency in coordination with the Environmental Quality Board. Works toward a resilient, economically thriving, and healthy Minnesota that is prepared for both short- and long-term climate changes and weather extremes.

[Minnesota Pollution Control Agency](#) - Responsible for administering environmental permitting, compliance/enforcement, remediation and outreach programs to help Minnesota protect its environment.

[St. Paul Port Authority](#) - Promotes industry and commerce in the East Metro area through financing programs and other technical assistance.

## *An Overview of Selected Programs and Initiatives to Support Communities in Climate Change Adaptation and Mitigation*

### [Board of Water and Soil Resources \(BWSR\) Grants](#)

BWSR grants provide funding to local government units to deliver soil and water conservation services to their communities. Grants support and increase local capacity to implement programs and provide cost-share with landowners who install conservation practices on their land to benefit state water and soil resources.

### [Agricultural Water Quality Certification Program](#)

This program provides a voluntary opportunity for farmers and agricultural landowners to take the lead in implementing conservation practices that protect our water. Producers seeking certification can obtain technical and financial assistance to implement practices that promote water quality.

### [Livestock Investment Grants](#)

Livestock Investment Grants fund improvements to livestock operations, including assistance for producers who have suffered a loss due to natural disaster. Producers may also apply through this program to invest in equipment that will make their livestock more resilient, including sprinkler systems or fans for use in heat waves.

### [Agricultural Best Management Practice \(AgBMP\) Loan Program](#)

The AgBMP Loan Program is a water quality program that provides low interest loans to farmers, rural landowners, and agriculture supply businesses. The purpose is to encourage agricultural Best Management Practices that prevent or reduce runoff from feedlots, farm fields and other pollution problems identified by the county in local water plans.

### [Clean Energy Communities Awards](#)

The Clean Energy Community Awards are an acknowledgment of the work done by Minnesota communities to further the state's clean energy goals by implementing programs, policies, and technologies that encourage energy efficiency, conservation, and renewable energy generation. The awards program is sponsored by the Minnesota Commerce Department.

### [Conservation Improvement Program](#)

The Conservation Improvement Program (CIP) is a statewide program funded by ratepayers and administered by electricity and natural gas utilities to help households and businesses use electricity and natural gas more efficiently. The goal is to conserve energy and reduce emissions by conducting energy audits, providing rebates on high efficiency appliances, and more.

### [Guaranteed Energy Savings Program](#)

The Guaranteed Energy Savings Program (GESp) has been established to promote awareness and implementation of energy efficient and renewable energy measures in public facilities by state and local governments, school districts, and institutions of higher learning that result in millions of dollars in annual energy savings while creating jobs, reducing energy consumption, improving facility infrastructure and reducing carbon emissions.

### [Local Energy Efficiency Program](#)

The Local Energy Efficiency Program helps local units of government and school districts identify, study, implement, and finance energy efficiency and recommissioning projects. LEEP makes it easy to identify site-specific goals, find high-quality firms to perform an investment grade audit, and gain access to low-interest lease-purchase financing. Participants gain access to Commerce's technical assistance through each state of the process, ensuring a comprehensive, cost-effective, quality project.

### [Made in Minnesota Solar Incentive Program](#)

Made in Minnesota is a solar photovoltaic (PV) and solar thermal incentive program for consumers who install PV and solar thermal systems using solar modules and collectors certified as manufactured in Minnesota. The program's annual budget includes \$250,000 per year for solar thermal rebates.

### [Weatherization Assistance Program](#)

This program provides free home energy upgrades to income-eligible homeowners and renters to help save energy. In qualifying households, an energy auditor may evaluate the home to determine if weatherization is needed. The auditor would look for opportunities to make the home more energy efficient by sealing air leaks, adding insulation and checking if the furnace is working properly.

### [Minnesota Business First Stop](#)

Minnesota Business First Stop streamlines the development process for complex business startups, expansions or relocations that involve financing, licensing, permitting, and regulatory issues that overlap multiple state agencies. Assistance with licensing, permitting, regulatory matters, and financial assistance make starting and adapting a business easier.

### [Climate and Health Training Modules](#)

These online training videos can be used by as educational pieces for public health professionals or the public. Modules include information on the public health impacts of extreme heat, changing water and air conditions, food security, and mental health.

### [Statewide Flood Mitigation Program](#)

The \$50 million statewide flood mitigation program helps make state roadways more resistant to future flood damage. The program was created after substantial statewide flooding in fall 2010. It means lower costs to repair damage from future floods, creating more sustainable transportation in the future. It also provides more value and safer communities to Minnesotans with reduced repair costs and less traffic disruption.

### [GreenStep Cities Program](#)

The GreenStep Cities program is a voluntary challenge, assistance and recognition program to help cities achieve sustainability and quality-of-life goals. The program is based upon 29 best practices. Each best practice can be implemented by completing one or more actions at a 1, 2 or 3-star level, from a list of four to eight actions. These actions are tailored to all Minnesota cities, focus on cost savings and energy use reduction, and encourage civic innovation.

### [Green Building Program](#)

The Green Building program helps communities find creative environmental solutions that are economically viable and meet social needs. By teaming up with state agencies, local governments, community groups, trade associations, building professionals, academic institutions, and citizens, the program advances sustainable building practices in Minnesota. Strategies include training, public education, policy development, and technical assistance for cities and counties, including grants.

### [Energy Savings Partnership](#)

The Energy Savings Partnership is a municipal leasing program with U.S. Bank that can offer reduced interest rate loans to all participants. Qualified participants include cities and counties, public schools and regional governmental entities. The program will result in savings to taxpayers and create jobs and energy savings for local governments and schools throughout Minnesota.

### [SunShot Initiative](#)

The SunShot initiative seeks to make solar energy cost-competitive with other forms of electricity by 2020 through research and development and technical assistance programs.

### [SolSmart](#)

SolSmart is a no-cost technical assistance program for local governments designed to drive greater solar deployment and help make it possible for more American homes and businesses to access affordable and renewable solar energy to meet their electricity needs.

### [Grow Solar Partnership](#)

This program works to leverage private, local, and state support to advance activities in the Midwest that 1) facilitate the adoption of solar permitting, planning, and zoning best practices by municipalities, 2) develop model finance arrangements for solar installations, 3) build workforce capacity to properly design, sell, and interconnect code-compliant PV systems, and 4) improve rules, standards and policies to provide a framework for sustainable solar market growth.

### [Property-Assessed Clean Energy Programs](#)

The property-assessed clean energy (PACE) model is a mechanism for financing energy efficiency and renewable energy improvements on private property. PACE programs allow local governments, state governments, or other inter-jurisdictional authorities to fund the up-front cost of energy improvements on commercial and residential properties, which are paid back over time by the property owners.

### [Clean Energy Resource Teams](#)

CERTs are a statewide partnership with a shared mission to connect individuals and their communities to the resources they need to identify and implement community-based clean energy projects. There are seven regional teams, each of which is guided by a local Steering Committee that sets regional priorities, identifies emerging energy issues and opportunities, and directs grant funding.

### [Regional Sustainable Development Partnerships](#)

The Regional Sustainable Development Partnerships connect greater Minnesota communities to the University of Minnesota in order to help solve problems and take advantage of new opportunities. As a part of University of Minnesota Extension, RSDP brings together local talent and resources with University of Minnesota knowledge and seed funding to drive sustainability in four areas: agriculture and food systems, tourism and resilient communities, natural resources, and clean energy.



# RURAL CLIMATE DIALOGUES

## INTERESTED IN LEARNING MORE?

If you would like to receive additional information about the Rural Climate Dialogues, the Institute for Agriculture and Trade Policy, or the Jefferson Center, please contact:

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The Jefferson Center is a nonpartisan organization committed to strengthening democracy by advancing informed, citizen-led solutions to challenging public issues through deliberation and community action. We're collaborating with governments, nonprofits, and others to unleash the power of citizens and solve today's toughest challenges. We focus on building powerful coalitions, creating meaningful opportunities for education and public deliberation, and empowering citizen-led action.



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The Institute for Agriculture and Trade Policy is a Minnesota-based nonprofit working locally and globally at the intersection of policy and practice to ensure fair and sustainable food, farm and trade systems and to foster vibrant, prosperous rural communities. We support rural communities through research, market development, and policy advocacy to address local challenges, including issues associated with extreme weather and a changing climate.

**THE MCKNIGHT FOUNDATION**

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