

Extreme Weather and Climate Services Roadshow – Central Sands

An initiative of the [Rural Partnerships Institute](#) at the University of Wisconsin-Madison

The Rural Partnerships Institute, in partnership with the Wisconsin State Climatology Office and Wisconet at the University of Wisconsin-Madison, hosted an Extreme Weather and Climate Services Roadshow on February 4th, 2026, in Wisconsin Rapids. This event is part of a project focused on improving extreme weather preparedness capacity in rural communities through education, engagement, and research. Approximately 20 participants attended the event, represented local residents, county and municipal government, and University of Wisconsin-Division of Extension staff.

Presentation Summary

Rural Partnerships Institute (RPI)

Jackson Parr, Climate Hazards Planning Educator with the [Rural Partnerships Institute](#) (RPI), described the project that supports the Roadshow series. RPI is developing data tools and resources to support agricultural management decisions, hazard mitigation planning, and other sectors critical to rural prosperity. The presentation also highlighted youth engagement, such as funding for rural school districts to participate in microclimate monitoring at the Upham Woods Outdoor Learning Center.

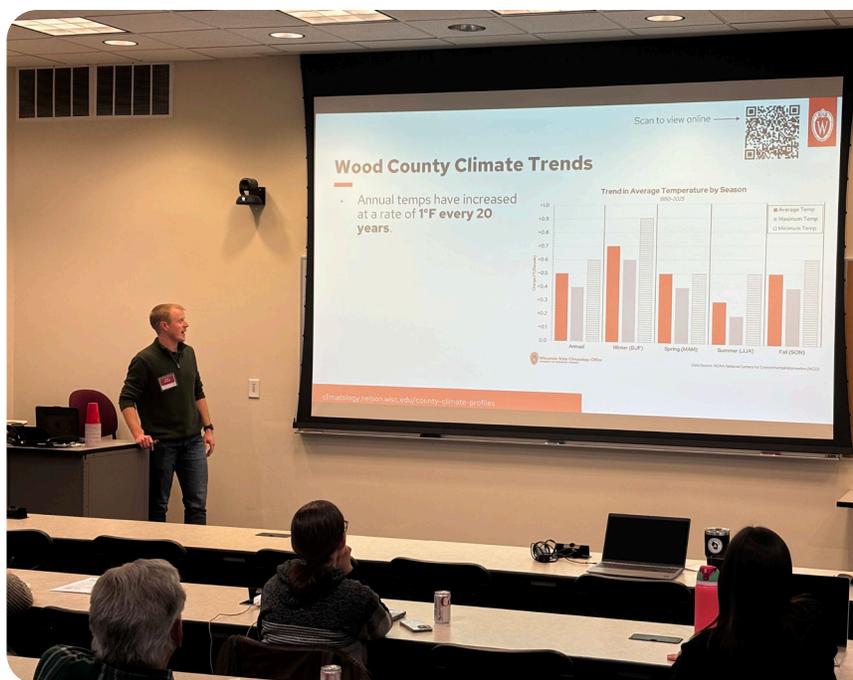
Wisconsin State Climatology Office

The [Wisconsin State Climatology Office](#) (SCO) outlined its mission to provide reliable weather and climate data to help stakeholders understand and apply complex information. Josh Bendorf and Amanda Latham, Climate Outreach Specialists with the SCO, discussed the statewide information, interpretation, and investigation conducted by the office. They also reviewed local climate trends for Wood County and the Central Sands Region. Bridgette Mason, Assistant State Climatologist, also discussed the partnerships with other state, regional, and national partners to improve information sharing, climate science, and education.

Annual temperatures in Wood County have increased at a rate of 1 degree Fahrenheit every 20 years. Seven of the ten warmest years on record for the county have occurred since 2000. Projections for the mid-century indicate that average annual temperatures will increase by about 4 degrees Fahrenheit. While annual precipitation has increased by one inch roughly every 13 years, the region is seeing more extreme swings. Winter and spring are projected to become 10 percent wetter by mid-century, while summers are projected to be 5 percent drier.

Wisconet - Wisconsin's Environmental Mesonet

Chris Vagasky, the Program Manager for [Wisconet](#), shared progress on the expansion of Wisconsin's environmental monitoring network. Wisconet is installing stations across the state to provide high-resolution and real-time data on soil moisture, soil temperature, and wind speeds. In the Central Sands region, these stations have been used to help agricultural producers with irrigation scheduling, nutrient management, and monitoring pests.



Josh Bendorf presents on Wood Count Climate Trends. Photo by Jackson Parr.

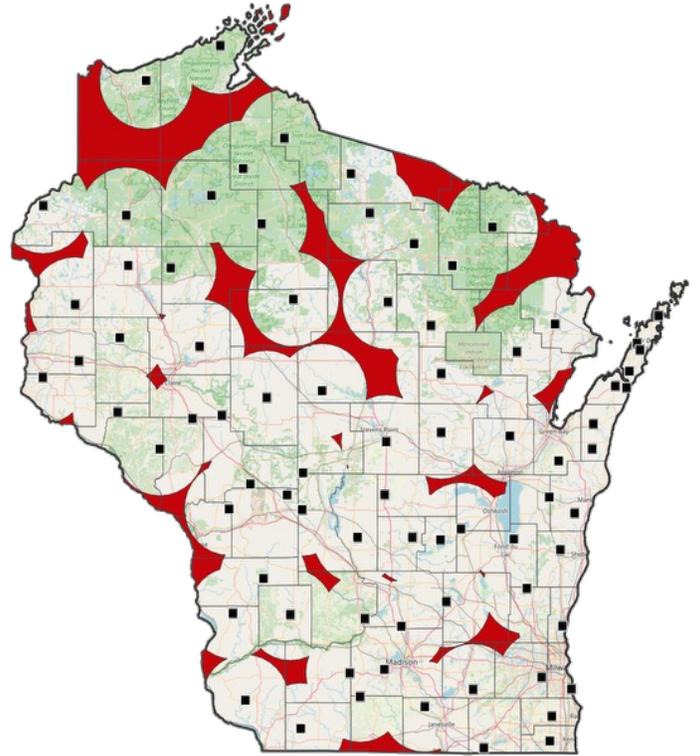
Breakout Groups and Participant Insights

The Roadshow featured breakout sessions where participants shared their personal and professional perspectives on extreme weather. These interactive discussions provided a way for the project team to understand how data and resources available through Wisconet and the SCO can better support the unique stakeholder needs of the region and its sandy soils.

Impacts and Events

Participants identified several key weather events and trends that have impacted them and their communities in the past decade.

- **Wind and Derechos:** Powerful wind storms have caused widespread power outages and property damage. Attendees described the 2019 derecho as having winds comparable to a hurricane, leaving a massive path of debris across the center of the state.
- **Sandstorms and Air Quality:** In the Central Sands, high winds combined with dry conditions can lead to significant dust and sandstorms. These events impact visibility on Interstate 39 and cause sand to accumulate inside buildings and equipment, which affects both health and property maintenance.
- **Precipitation Uncertainty:** Residents noted the difficulty of managing extreme swings between drought and excessive wetness. The wet spring of 2024 prevented many farmers from planting on time and led to an increase in pests. High groundwater tables have also caused localized flooding that can strain wastewater infrastructure and overflows home wells.
- **Biological and Agricultural Impacts:** Warmer and wetter conditions have increased pressures from pests and diseases. Participants also noted more frequent manure spills during sudden heavy rain events and damage to overwintering perennial crops like alfalfa during winters with low snow cover.



This figure shows current Wisconet stations, red representing areas of the state that are greater than 20 miles from the nearest station.

Opportunities for Research

Breakout discussions highlighted several opportunities for future research, including:

- **Planning for Uncertainty:** There is a need for strategies that help land managers plan for simultaneous extremes, such as managing for both flood and drought risk within the same growing season.
- **Groundwater Monitoring:** Attendees are interested in the relationship between weather, surface water, irrigation practices, and high groundwater tables that lead to flooding.
- **Forestry and Resilient Species:** Research is needed to identify which tree species can tolerate projected extreme events to provide a list of resilient options for local landowners and nurseries.
- **Predictive Models:** There is interest in improved predictive models for emergency management, public health and agriculture to understand and evaluate risks related to nutrient management and planting schedules.

Future Events

This event was part of a series of Roadshows hosted by RPI, SCO, and Wisconet across the state to understand regional needs. Other events included:

- **Northern Wisconsin:** Oneida County, December 2nd, 2025 ([Read Event Summary](#))
- **Driftless Region:** West Salem, January 21st, 2026 ([Read Event Summary](#))

If you would like to bring a Roadshow to your community, contact Jackson Parr, Climate Hazards Planning Educator at the University of Wisconsin-Madison Division of Extension, at jqparr@wisc.edu.