

# Institute for Rural Partnerships Consortium First Annual Consortium Report

October 24<sup>th</sup>, 2023

## Overview

This report provides a progress report for the three Institutes for Rural Partnerships, at Auburn University in Alabama, the University of Wisconsin - Madison, and the University of Vermont. The report begins with an update on collaborative consortium activities, followed by individual Institute updates on stakeholder engagement and communication, and partnership development.

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## Introduction

The three pilot Institutes for Rural Partnerships are providing new and high-value opportunities for land grant institutions to bring research and faculty expertise to bear on critical needs in the rural economy. Through inclusive engagement of stakeholders, the universities are identifying challenges and potential solutions of relevance across the consortium, and for rural communities across the United States. Institute grants are funding innovative partnerships to advance technology, increase knowledge, and provide services to support vibrant and resilient rural communities. Each university has set the stage for ongoing engagement with rural stakeholders, continued support for impactful solutions, and knowledge-sharing among members of the consortium.

This first report highlights how the Institutes for Rural Partnerships are utilizing the funding support from NIFA to strengthen collaborations between three land grant universities and their communities, and also are addressing the challenges in rural America by developing solutions that are appropriate and at the same time impactful and modern.

## Consortium Collaboration

The three institute partners will meet regularly to share information about our work and to identify areas of common interest. We will convene annually around common themes. Per the three Institutes, areas for consortium collaboration include:

Institute	Consortium Activities
Auburn University	Technology can provide cost-effective and efficient solutions to the agricultural economy. We will share the outcome of our outreach to producers and processors on technology adoption, and also promising technological solutions that are appropriate for rural America with our consortium partners.
University of Wisconsin	We anticipate many opportunities to interface with work done by the other two campuses on aspects such as economics, mental health, health workers, tribal nations, and food security within rural areas. In our weather station work we plan on working with Auburn University and the University of Vermont to share our experiences in establishing the Wisconsin Environmental Mesonet (Wisconet), which could help them partner with state organizations (e.g. South Alabama, Vermont Electric Company, Baron Critical Weather Institute, Northern Vermont University) to better understand how expansion of weather station networks and development of products/tools using these data can support rural farmers and communities and support educational programs in K-12 schools to attract more students to STEM fields.
University of Vermont	Student engagement will be integral to our partnerships. Specifically, we plan to match student service-learning projects with communities in need of research and data. This model holds promise for boosting University engagement in communities, creating meaningful learning experiences, and increasing the

	<p>capacity of our small municipalities to respond to climate challenges. We will share our learnings and best practices around service learning with our consortium partners. Additionally, we are working with our research development specialists to build community partnerships for our faculty researchers early in their planning process. Use-inspired and community-based research brings applicable solutions to our rural communities.</p>
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## Stakeholder Engagement and Communication

In the first nine months of 2023, each consortium member has initiated robust stakeholder engagement to identify challenges unique to their region, promising solutions and opportunities for partnerships. Communication strategies are part of each university’s plans to remain connected and to share crucial information about their work.

### Auburn University

The Auburn Rural Partnership Institute (AURPI) developed a white paper for the poultry industry and another white paper for the forestry industry. Each white paper was then shared with the appropriate industry stakeholder (see below) during meetings between AURPI members and these stakeholders to appraise them of the goals and objectives of the rural partnership project.

- Alabama Poultry and Egg Association (APEA)
- Alabama Farmers Federation (ALFA)
- Alabama Forestry Association (AFA)

Representatives of the Auburn group also met with several owners of forestry operations and mills at the 2023 annual meeting of AFA. Other groups that the Auburn Institute reached include: EARTH group in Sylacauga (AL), an innovation center striving to encourage entrepreneurship in rural communities; and the Board of Directors of APEA.

Visiting a Peco poultry processing plant in Pochahontas, AR and a West Fraser sawmill (Opelika, AL) inspired a discussion of the strategy that the plants utilize for technology upgrades and the challenges associated with doing this, cybersecurity and data storage challenges, recruiting/retaining employees especially as they relate to technology versus manual approach to completing tasks, and interaction with surrounding businesses and municipalities.

### University of Wisconsin- Madison

The University of Wisconsin has identified the following organizations and communities in partnership development:

- K-12 school districts in rural counties
- Family farms including one in Clark County, WI
- Apple and cherry growers in Door County
- Extension agents and other agricultural representatives
- Tribal college representatives

- Extension area directors
- Extension educators
- Local public health staff in rural areas of WI
- The City of Superior
- Statewide mental health professionals
- The Wisconsin Tribal Conservation Advisory Council
- Great Lakes Intertribal Food Coalition (GLIFC)
- Great Lakes Indian Fish and Wildlife Commission (GLIFWC)
- Tribal partners including the Ho-Chunk Nation, Menominee Nation, Manoomin Stewardship Team, including the Fond du Lac Band of Lake Superior Chippewa, the 1854 Treaty Authority, and the St. Louis River Alliance.

Wisconsin is scheduling public presentations and interviews with the following entities:

- An invited presentation at Wisconsin Potato and Vegetable Growers annual conference
- WFRV TV (Green Bay) news story from Peninsular Agricultural Research Station
- UW-Madison Division of Extension's Badger Crop Connect webinars, presenting on drought conditions as part of the SCO's membership in the Wisconsin Drought Task Force
- The Country Visions Cooperative annual conference near Green Bay, WI
- Agriculture-oriented outlets such as Successful Farming, Dairy Star, and Wisconsin State Farmer
- Spectrum 1 news report from Arlington Agricultural Research Station
- Midwest Farm Report interviews
- Milwaukee Journal Sentinel article (6/15/2023)
- Deep Roots Radio
- Wisconsin Public Radio (news story and WPR morning show appearance).

### University of Vermont

UVM's Institute, in partnership with the University's Office of Engagement, has been conducting statewide stakeholder outreach, mostly in-person but also through surveys and online meetings since January 2023. Municipal leaders, regional economic and community development officials, community groups, small businesses, non-profit organizations, farm and food producers have been asked the following questions:

1. What issues are you identifying in your rural community?
2. What are some promising solutions to those challenges?
3. How would you like to engage with UVM?

In addition to reviewing thousands of stakeholder comments, we scanned results of community meetings held by partner organizations, including but not limited to the Vermont Futures Project, Vermont Council on Rural Development, Regional Development Corporations, and Regional Planning Commissions. Key themes that have emerged from stakeholders include:

- Lack of capacity at the municipal level to respond to climate-caused disasters
- The need for data among community and economic development planners at all levels
- The desire to retain young people in Vermont
- Research needs to support housing development
- Capacity-building for downtown and village centers

- Lack of support for technology product development and start-up support.

UVM continues to engage its statewide network through our in-person presence at gatherings, participation in state-level convenings of economic development leaders, and on-going communications through monthly newsletter and a new website that will go live on November 10. Our diverse Board of Advisors includes representatives from higher education, workforce development, philanthropy, business, municipalities, and community and economic development leaders.

## Partnership Development

Each consortium member is building partnerships to connect University resources with organizations addressing rural needs in their states.

### Auburn University

We seek to develop technology solutions and market intelligence that will help producers and processors of agricultural and forest products improve their competitiveness and sustainability. As a first task, we will hold Industry and Stakeholder semi-structured interviews with an initial focus on the forestry industry. This focus was driven by the interest and recruitment that occurred during our meeting with the Alabama Forestry Association (AFA) in Montgomery on July 21, 2023.

Following the completion of the forestry interviews (which will be around August 2024), we will start the poultry industry interviews and concluding these poultry interviews around August 2025. The findings from these interviews will continue to inform our other tasks and objectives. We will then conduct a study of technology in each industry. A literature review of technology in the poultry industry is complete and will be presented to our group during one of our biweekly meetings in October/November, 2023. A similar literature review of technology in forestry has just been initiated. In addition, we are at the beginning stages of developing implementation plan regarding technology and cybersecurity issues.

Planning is underway for additional projects, including:

- Technologies needed to advance the leading economic sectors in Alabama, the poultry industry, and the forest products industry.
- Predicting and preventing cyber-physical vulnerabilities in the agricultural and forest products sectors
- Managing water and wastewater and upcycling the waste streams from poultry and forest products processing facilities for beneficial use
- Development of new case studies that will result in new opportunities in agriculture and the forest product industries in Alabama and the rural South. This aspect of the project will depend on findings from our semi-structured interviews and the larger projects, but the team sees the potential for the following comparisons and case studies:
  - Peco in Arkansas, AL (rural and newer) versus Peco in Tuscaloosa (rural and older)

- West Fraser mill in Opelika, AL (newer and more technologically advanced) versus Industree Manufacturing Mill in Alex City, AL (older and less technologically advanced)

### University of Wisconsin- Madison

We are supporting projects with local partners and experts from multiple disciplines that explore novel solutions to the challenges rural communities face today. Leadership in the College of Agricultural and Life Sciences and the Division of Extension at UW-Madison held a series of meetings to engage with rural leaders and organizations, including the Wisconsin Counties Association, Wisconsin Towns and Municipalities Associations to identify domains presenting the greatest challenges and opportunities. The Wisconsin RPI advisory committee, in consultation with faculty and staff groups, identified the most promising topics for further development and a request for proposals was issued in March 2023. We received 26 pre-proposals requesting \$26M in funding. A request for full proposals was issued and 4 subproject projects were awarded \$4.4M of funding in June 2023. These four projects (described below) are beginning their work. In addition, we have hired an outreach program manager who has engaged members of rural and agricultural communities to identify workforce development needs and is developing outreach programs to address those needs.

We are also developing a comprehensive, statewide network of environmental (weather and soil) monitoring stations across Wisconsin called the Wisconsin Environmental Mesonet, using the data to inform farmers and others (3) and establishing a State Climatology office (4). In these objectives we have purchased supporting equipment using Wisconsin Alumni Research Foundation funds to begin infrastructure development of weather stations across the state. Seventeen stations are currently installed. We have developed the Wisconet website from the ground up (<http://wisconet.wisc.edu>); this provides a direct link to mesonet data including 5-minute updates (along with hourly and daily averages/totals) for meteorological variables (temperature, humidity, wind speed and direction, barometric pressure, precipitation, solar radiation) and soil temperature and moisture at five depths (5, 10, 20, 50, and 100cm). The SCO has launched a brand-new user-friendly [website](#), and has hired a part-time Communications Director to share results with the public. The SCO is actively publishing and posting monthly/seasonal summaries of weather and climate conditions in Wisconsin and developing an email distribution list to reach targeted stakeholders.

In the coming months, Wisconsin plans four additional projects related to our first objective of exploring novel solutions to rural challenges. Specifically:

- ***The Rural Livability Project*** will be identifying the key assets needed to sustain rural communities, and to find the best ways forward in developing community economic development policies and strategies to support rural livability. A team of economists will be identifying rural communities and helping them to identify their local challenges along with the assets that can be mobilized to support a stronger future.
- ***Promoting Family-Centered and Family-School-Community Mental Health Support for Children in Rural Wisconsin Communities***, we are beginning to build capacity for sustained and integrated family-centered and family-school-community mental health

support for children in rural Wisconsin communities. Researchers will identify and work with community partners over the next year in rural counties across the state. Beginning work will involve planning to enhance readiness, and we will begin to provide training to education and human service professionals, school staff and community members.

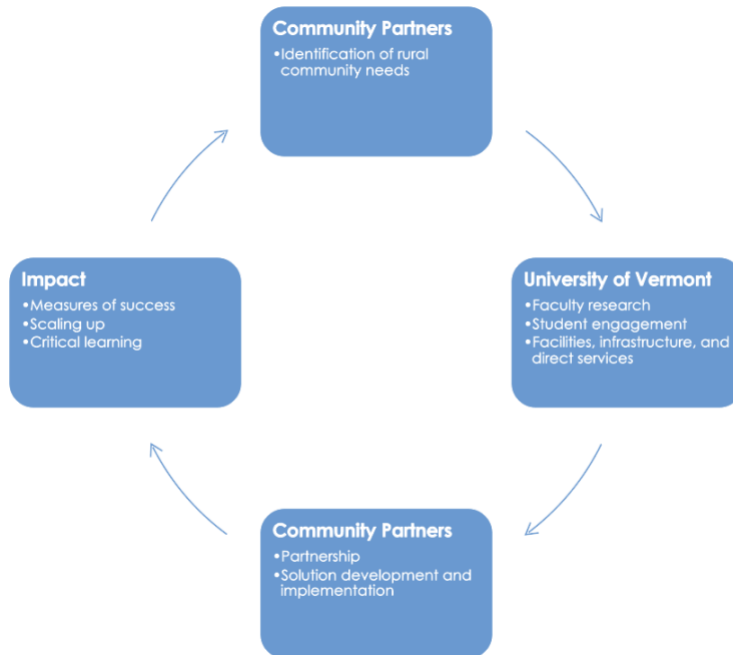
- ***Connecting Cultural Values and Indigenous Research Towards Food System Resilience***, we will begin work to engage tribal nations and a broad network of partners to co-create an understanding of high-priority, Indigenous-led research, education, and outreach projects to help Wisconsin Tribes sustain and expand food sovereignty in the face of the state's environmental challenges. Our 28-person team is focusing on five areas: Indigenous crops and livestock; community food systems and nutrition; wild rice; maple sugaring; and evaluation, communications, and public participation.
- ***Community Health Workers as a Bridge Between Extension and Rural Healthcare Systems to Support Whole Family Health and Well-Being***, the UW–Madison Division of Extension's Health & Well-Being Institute is establishing a network of Extension-based Community Health Workers (CHW), public health workers who are trusted members of a community, who can respond to emerging needs in rural communities using a whole family lens. In the next 12 months researchers will recruit, hire, and begin training of CHWs from rural and tribal communities in Wisconsin.

Within our Mesonet project we will continue to communicate with and reach out to rural K-12 school districts, environmental/nature centers, tribal communities, and rural landowners/farmers to identify sites for new mesonet station locations. We will begin exploration of how Wisconet can be used as part of educational activities at K-12 schools, engage summer apprenticeship programs, 4H and FFA groups. We plan to install another 20-25 stations, bringing total stations to approximately 40-45 by the end of 2024. We will hire a programmer to start the development of apps and other potential decision support tools to help guide farmer decision-making using new Wisconet data. These will be focused on growing degree day models for crop development and management of pest and disease for grain crops as well as specialty crops like potato, cranberry, cherry, and apple. In the SCO office we will refine our website to meet user needs and promote Wisconet, and initiate SCO electronic newsletter distribution of climate summaries.

### University of Vermont

The Institute began work toward its three core objectives in early 2023. At the time of its formal launch on November 10<sup>th</sup>, 2023, it will invite partnership proposals through a request for proposal (RFP) process.

We seek to provide engagement opportunities and partnerships with the University of Vermont for the benefit of our rural places. The Institute will bring financial and technical assistance, access to UVM research, faculty expertise, student projects and internships, and established UVM startup and engagement programs. We plan to establish a reciprocal exchange between communities that cement sustainable, mutually beneficial relationships that emphasize impacts on rural communities. This partnership model is visualized below.



We have three strategies that offer partnership opportunities to communities and organizations across Vermont.

**Strategy 1. Advance solutions to rural economic and community development challenges through partnerships grants.**

Capacity and seed grants will be available to fund partnerships that connect UVM resources with rural partners. Funds can support research, student internships and service-learning projects, UVM services (advanced computing, GPS, IP, etc.) in service of solutions to rural challenges.

**Strategy 2. Pilot services to rural communities through engagement initiatives.**

- Data Services – Expand existing economic and workforce development data services to support community partners in Vermont.
- Partnerships for Rural Capacity – Provide education, professional development and technical support to local Vermont governments.
- Student Engagement for a Resilient Vermont – Provide coordinated service learning partnerships between faculty and community organizations. Pilot in 2024 to focus on flood recovery.

**Strategy 3. Sponsor convenings to share knowledge, best practices, and create connections among partners.**

- RISE Summit- Our inaugural Research, Innovation, Sustainability and Entrepreneurship Summit drew over 900 participants from the region and set the stage for an annual convening around these critical rural development themes in 2024



- Coordinated flood recovery and resilience convenings that bring together state, federal, community, and university partners to build capacity for towns and communities looking to recover from the devastating July 2023 floods in Vermont
- Additional convenings around the nine solution areas identified in our grant

We look forward to our collaboration with NIFA and our USDA Regional Rural Development Centers (RRDC) partners, as well.

Respectfully submitted,

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