



NORTH CENTRAL REGIONAL CENTER FOR RURAL DEVELOPMENT

Annual Report 2025





North Central Regional Center for Rural Development

OUR MISSION

To build the North Central Region's rural communities through cutting-edge research and Extension programs and innovative partnerships. To achieve this mission, we seek to engage research and Extension at all of the land-grant institutions across the North Central Region.

WHAT WE DO

North Central Regional Center for Rural Development (NCRCRD) is one of four Regional Rural Development Centers in the United States. NCRCRD's work links the research and educational outreach capacity of our region's 34 land-grant universities with our region's communities, local decision-makers, entrepreneurs, families, farmers, and ranchers to help address a wide range of development issues unique to our region.

NCRCRD promotes regional collaboration by elevating the research and Extension programs in our region; offering grant opportunities to support new and ongoing regional research, Extension, and integrated activities; building a North Central Region database to encourage regional exploration; and creating networking opportunities through webinars, conference development, and making introductions between our partners.

We approach our endeavors from three thematic areas:

CREATING RESILIENT COMMUNITIES AND ECONOMIES



The NCRCRD is committed to building a more resilient North

Central Region by improving the adaptive capacity of households, businesses, and communities through impactful research and outreach.

DEVELOPING LEADERSHIP AND CIVIC ENGAGEMENT



The NCRCRD is committed to working with partners to address

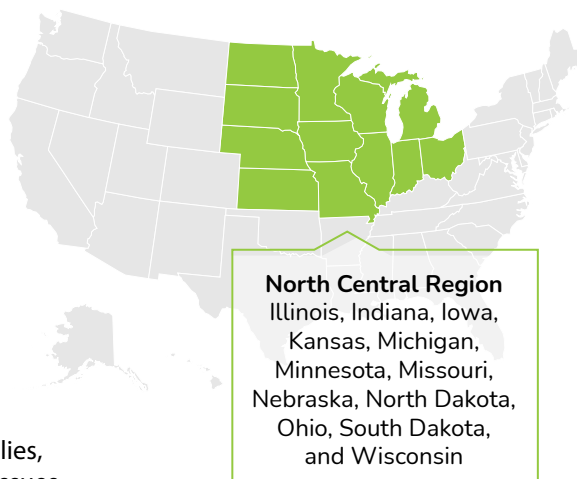
constraints and enhance the capacity for inclusive leadership and civic engagement in the North Central Region.

PROMOTING COMMUNITY HEALTH AND WELLNESS



NCRCRD's health initiatives focus on enhancing health and wellness in

rural communities across the North Central Region by raising awareness, engaging community members to improve public health, and building community partnerships.



OVER 50 YEARS OF ELEVATING RURAL COMMUNITIES

Since 1972, the nation's four [Regional Rural Development Centers](#) (RRDC), have played a critical role in elevating rural America through research, Extension education, and outreach.

NCRCRD moved to West Lafayette, Indiana in 2020 when Purdue University became the Center's new host. Prior to this move, NCRCRD was hosted by Iowa State University from 1972-2009 and Michigan State University from 2009-2020.



Elevating Rural Economies since 1972

Table of Contents

Director’s Message..... [2](#)

NCRCRD Board of Directors, Advisors, and Staff [3](#)

REGIONAL ACTIVITIES

NCR-Stat: A North Central Regional Database..... [4](#)

2025 Grants and Fellowships Awarded [6](#)

Impact: Grants Completed in 2025 [7](#)

NCRCRD Partnerships and Collaborations in 2025 [8](#)

Partnerships and Collaborations (continued) [9](#)

Elevating the Region's Research and Extension Programs [10](#)

Visits to Region’s Land-Grant Institutions..... [11](#)

NCRCRD’s Presentations and Publications [12](#)

THEMATIC ACTIVITIES

Creating Resilient Communities and Economies [13](#)

Developing Leadership and Civic Engagement..... [17](#)

Promoting Community Health and Wellness..... [18](#)

The North Central Regional Center for Rural Development receives core funds from the U.S. Department of Agriculture’s National Institute of Food and Agriculture (award #2024-51150-43726 and #2025-51150-45240) as well as from agInnovation North Central, the North Central Cooperative Extension Association, and Purdue University, College of Agriculture. Any opinions, findings, conclusions, or recommendations expressed in this publication are those of the authors and do not necessarily reflect the views of the U.S. Department of Agriculture or those of other funders.

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Director's Message

I want to express my sincere gratitude to our partners, board, advisory committee, and staff for their unwavering dedication. Thanks to your efforts, our programs and initiatives continue to deliver valuable resources, training, and support to the individuals, organizations, and local governments working to create positive change across the North Central Region (NCR). While this Annual Report summarizes the Center's accomplishments in 2025, it also reflects the resilience and innovation of the faculty and staff across our twelve states who confront the complex challenges rural communities face every day. We are honored to work alongside such determined and talented partners.

The Center's endeavors remained guided by our three thematic areas of creating resilient communities and economies; developing leadership and civic engagement; and promoting community health and wellness. These themes closely align with USDA's renewed focus on restoring rural prosperity by expanding economic opportunities for rural small businesses, strengthening the quality of life that keeps rural communities vibrant, and harnessing the land-grant research and Extension system to solve the real challenges facing rural America. Within these themes, the Center continued to focus on fostering innovation and collaboration, strengthening local economies, advancing rural workforce and small-business development, and improving livelihoods.

Collaboration and partnerships played an important part in our accomplishments. The Center had the honor of partnering with or supporting others on many unique projects. A few of this year's highlights stand out.

- We published a national baseline dataset in collaboration with our sister [Regional Rural Development Centers](#).
- With support from NCCEA, we delivered [regional and state-level reports](#) that give local leaders the data they need to make sound decisions.
- Through the NC1100 multistate project, NCRCRD strengthened rural small business and workforce development and began developing a curriculum on substance misuse and recovery-friendly workplaces to help rural employers build and retain a healthy workforce.
- NCRCRD also continued its focus on caregiving from 2024 with the funding of a regional [Childcare Working Group](#).
- Housing became a central focus, anchored by a seven-state [Rural Housing Working Group](#) which began in 2024, the development of an NCR-Stat Housing survey, and Fellow's research connecting housing to rural workforce retention.
- We advanced outdoor recreation as a strategy for economic diversification, contributing to the development of a [regional recreation dashboard](#) and an entrepreneur curriculum that helps communities turn recreation assets into new income streams.
- Throughout the year, artificial intelligence emerged as a cross-cutting theme in our grants, fellow projects, and webinars, informing work in rural healthcare, housing data, and Extension delivery. Look for the AI flag which identifies these efforts.
- In addition, our small grants program and webinar series continued to extend the Center's reach and translate research into practical resources for rural communities.

We remain committed to collaborating with all of you in 2026 to promote sustainable growth in our rural communities. In the year ahead, we look forward to advancing efforts — including the New Beginnings for Tribal Students project, our partnership with the Delta Regional Authority, and the Regional Rural Development Centers' shared focus on rural livability — that extend our reach to rural communities. Together, we can unlock the full potential of our region by combining knowledge, resources, and partnerships.

Best Regards,



Maria I. Marshall, Ph.D.

Professor, Jim and Lois Ackerman Endowed Chair of Agricultural Economics, Purdue University;
Director, North Central Regional Center for Rural Development; and Director, Purdue Institute for Family Business



Maria I. Marshall, Ph.D.
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NCR-Stat: A North Central Regional Database

The NCRCRD, in collaboration with our sister Centers, published the Baseline Survey 2024 for all four regions of the U.S. in 2025.



MULTI-REGION BASELINE SURVEY 2024

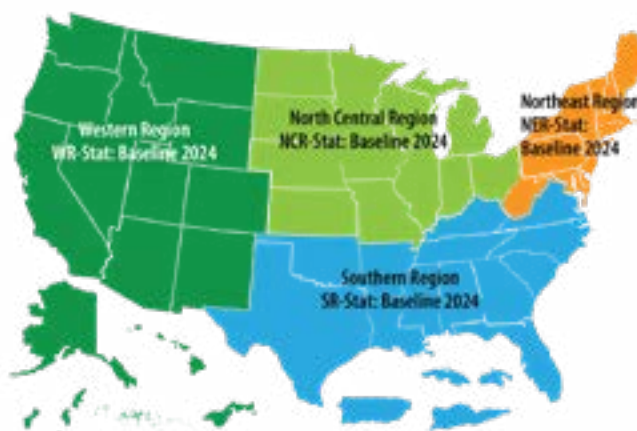
As a result of an innovative data initiative by the Regional Rural Development Centers, the survey was conducted by NCRCRD in each region and published in 2025.

The Baseline Survey 2024 was developed collaboratively by the NCRCRD, the Southern Rural Development Center, and Auburn University to explore essential topics related to household, business, and community well-being.

Building on the NCR-Stat: Baseline Survey 2022, the NCR-Stat 2024 survey features both adapted and expanded questions, introducing new topics like moving and staying behaviors and the recreation economy.

All four regional Baseline Survey 2024 datasets and a combined 4-Region dataset are open access and reside online in the Purdue University Research Repository.

- North Central Region – NCR-Stat: Baseline Survey 2024
- Northeast Region – NER-Stat: Baseline Survey 2024
- Southern Region – SR-Stat: Baseline Survey 2024
- Western Region – WR-Stat: Baseline Survey 2024
- 4-Region (all surveys) – 4R-Stat: Baseline Survey 2024



[Baseline Survey 2024
information and links
to datasets](#)



WORK PRODUCED IN 2025 UTILIZING THE FOUR BASELINE SURVEYS 2024 DATA

Reports

University of Missouri Extension – Business & Community. (2025). *Civic Muscle Index*. [Interactive Reports]. University of Missouri Extension. <https://civicismuscleindex.org/>

Wilcox, M., Bednarik, Z., Malone, D., Breidenbach, M. (2025). *North Central Region Household Survey Report*. North Central Regional Center for Rural Development. <https://ncrcrd.ag.purdue.edu/ncr-houshold-survey-reports/>

Wilcox, M., Bednarik, Z., Malone, D., Breidenbach, M. (2025). *[Individual NCR State] Household Survey Reports*. North Central Regional Center for Rural Development. <https://ncrcrd.ag.purdue.edu/ncr-houshold-survey-reports/>

Webinars

Bednarik, Z., Marshall, M., & Green, J. (2025, May 9). *Regional Pulse: Insights from the 2024 multi-region household surveys* [Webinar presentation]. North Central Regional Center for Rural Development. <https://youtu.be/ur657h1BMds>

Bednarik, Z., Wilcox, M. (2025, April 21). *Community satisfaction among urban and rural residents in Indiana* [Webinar presentation]. In Community well-being and quality of life: Focus on Indiana. Community Development Society.

Dashboards

University of Minnesota Tourism Center. (2025). *The Outdoor Recreation Dashboard*. University of Minnesota Extension. <https://prayash106.shinyapps.io/dashboard/>

Outreach

Bednarik, Z. (2025). *Digital healthcare adoption among rural older adults*. [Blog]. National Digital Education Extension Team & Southern Rural Development Center. <https://connect.extension.org/g/broadband-access-and-digital-skills/blog/digital-healthcare-adoption-among-rural-older-adults>

Bednarik, Z. (2025, March 25). *Baseline Survey 2024* [Lightning Talk]. Purdue University Community Development Extension.

Conference Presentations

Bednarik, Z., & Marshall, M.I. (2025, June 9-12). *NCR-Stat Datasets: Empowering Cross-Regional Research and Extension in Community Development*. [Conference presentation]. National Association of Community Development Extension Professionals 2025 Annual Conference, Charleston, WV.

Bednarik, Z. (2025, November 11-14). *The Role of Self-Employed Migrants in Rural Job Creation: Evidence from Three U.S. Regions*. [Conference presentation]. Regional Science Association International 2025 Annual Meeting, Denver, CO.

Bednarik, Z., & Marshall, M.I. (2025, December 3 & 5). *Using NCR-Stat Datasets to Strengthen Research and Extension in Community Development*. [Virtual conference presentation]. Purdue Extension Professional Development Conference 2025. Purdue University, West Lafayette, IN.

WORK PRODUCED IN 2025 UTILIZING OTHER NCR-STAT SURVEYS

NCR-STAT: CAREGIVING

Peer-reviewed Journal Articles:

Meinertz, N. R., Lee, J., Martinez, E. L., Brown, L., Byers, C., Richie, S., & Tutt, K. (2025). What Do Rural Caregivers Need? Implications of Formal Service Usage and the Role of Cooperative Extension Systems. *Journal of Human Sciences and Extension*, 13(2), 8. DOI: <https://doi.org/10.55533/2325-5226.1546>

Pojman, E., Becot, F., Bednarik, Z. and Henning-Smith, C. (2025). Does Caregiver Well-Being Differ by Rurality and State Policy Environment? Identifying a Well-Being Typology for Rural, Suburban, and Urban Caregivers. *Rural Sociology* 9 (3). <https://doi.org/10.1111/ruso.70015>

Conference Presentations:

Pojman, E., Becot, F., Bednarik, Z., and Henning-Smith, C. (2025) *Does caregiver well-being differ by rurality and state policy environment? Identifying a well-being typology for rural, suburban, and urban caregivers*. [Conference presentation]. Rural Sociology Society Meeting. Salt Lake City, UT.

Southard, E. and Becot, F. (2025) *Caregiving Along the Life Course Among Farming Households*. [Conference presentation]. Rural Sociological Society Meeting. Salt Lake City, UT.

Thesis:

Wolfe, K. (2025). *The Opportunities and Challenges in Providing Accessible and Quality Child Care in Rural Indiana*. [AgEcon Honor Thesis]. Purdue University. <https://ag.purdue.edu/departments/agecon/undergraduate-program/honors-thesis.html>

NCR-STAT: SMALL BUSINESS

Outreach Articles:

Malone, Jr., D. (2025, July). *Partners in Business, Partners in Life: A Snapshot of Couple Businesses in the North Central Region*. North Central Regional Center for Rural Development. <https://doi.org/10.22004/ag.econ.359031>

Wiatt, R. D. (2025, July). *Trends for Rural Small Businesses in the North Central Region: Owner and Small Business Demographics*. North Central Regional Center for Rural Development. <https://doi.org/10.22004/ag.econ.3592223>

Peer-reviewed Journal Article:

Shoopman, C. (2025). Embeddedness and Profitability: The Case of Small Businesses in the US Midwest. *Undergraduate Journal in Agricultural & Applied Economics*. Agricultural and Applied Economics Association (AAEA). DOI: <https://doi.org/10.22004/ag.econ.373436>

Conference Presentation:

Marshall, M.I., Lee, Y., and Wiatt, R. (2025 April). *Power Dynamics in Couples Working Together: Impact on Company Profitability and Perceived Performance*. Small Business Institute Conference Competitive Abstract, New Orleans, LA.

Thesis:

Shoopman, C. (2025). *Embeddedness and Profitability: The Case of Small Businesses in the US Midwest*. [AgEcon Honor Thesis]. Purdue University. <https://ag.purdue.edu/departments/agecon/undergraduate-program/honors-thesis.html>

NCR-STAT: BASELINE 2022

Peer-reviewed Journal Article:

Bednarik, Z., and Unay-Gailhard, I. (2025). Who Stays in Rural Areas? Understanding Gender Differences in Location Decisions Among Millennials in the United States. *Population, Space and Place: Volume 31* (Issue 6). <https://doi.org/10.1002/psp.70076>

Conference Presentation:

Bednarik, Z., & Unay-Gailhard, I. (2025, July 30 - August 2). Millennials' Decisions to Stay in Rural Communities: Exploring Gender Differences and Key Influencing Factors. [Conference presentation]. Rural Sociological Society 2025 Annual Meeting, Salt Lake City, UT.

Dissertation:

Hennes, S. (2025). *The creating entrepreneurial opportunities (CEO) program: a mixed methods case study* [PhD Dissertation]. University of Missouri--Columbia.

Purdue AgEcon Seniors Use NCR-Stat Survey Data for Honor Thesis

Purdue University Agricultural Economics December 2025 graduates, Kyla Wolfe and Clara Shoopman utilized NCR-Stat survey data for their theses.

Kyla Wolfe thesis titled, "The Opportunities and Challenges in Providing Accessible and Quality Child Care in Rural Indiana" examined child care access in rural Indiana. Working with co-advisors, Dr. Michael Wilcox, Associate Director of NCRCRD, and Dr. Zuzana Bednarik, NCRCRD Research and Extension Specialist, Wolfe analyzed data from the NCRCRD's NCR-Stat: Caregiving Survey to compare 178 child caregivers across rural and urban Indiana.

Clara Shoopman investigated small business profitability in the Midwest for her thesis titled, "Embeddedness and Profitability: The Case of Small Businesses in the US Midwest." Working with advisor Dr. Maria Marshall, Director of NCRCRD, Shoopman analyzed data from the NCR-Stat: Small Business Survey to examine responses from 1,287 small business owners across the North Central Region.



Left: Kyla Wolfe, between advisors Dr. Michael Wilcox and Dr. Zuzana Bednarik. Right: Clara Shoopman with thesis poster.

2025 Grants and Fellowships Awarded

NCRCRD grant opportunities support new and ongoing regional research, extension, and integrated activities and enhance the ability of the North Central Region's (NCR) thirty-four land-grant institutions to positively influence the quality of life in the region's rural areas.

FOUR GRANTS FUNDED IN 2025

3 Small Grants

The three projects funded by Small Grant in 2025 support the development and expansion of three existing Extension programs that address emerging issues of importance to rural areas in the North Central Region.

- **Smartphones, Smart Families: Fostering Child and Family Well-being for Rural North Central Region Households in a Digital Age**
Principal Investigator (PI): Allen Barton, University of Illinois Urbana-Champaign
Co-PIs: Bonnie Brewer, Kansas State University; Patrice Powers-Barker, The Ohio State University; Erin Ruggiero, The Ohio State University
- **Financial Caregiving Needs Assessment of Older Adults and Caregivers**
PI: Naomi Meinertz, University of Missouri
Co-PI: Marco Pantoja, University of Missouri
- **Addressing Household Food Waste in Rural Communities**
PI: Rachel O'Halloran, University of Missouri Extension
Co-PI: Carrie Elsen, University of Missouri Extension

1 Thematic Working Group

NCRCRD awarded its third thematic, multi-state working group in 2025 that focuses on rural childcare. Initiated by the North Central Quality Childcare Network (NCQC), the group will examine how Extension can best address the limited access to quality childcare in the region's rural communities. The working group consists of the NCQC membership which at the start of the grant included professionals from land-grant universities in nine states (Illinois, Indiana, Iowa, Michigan, Missouri, Nebraska, Ohio, South Dakota, Wisconsin).

PI: Kelsie Muller, Purdue University
CoPIs: Rae Baker The Ohio State University; Aileen Garcia, University of Missouri; and Amy Napoli, University of Nebraska

LEARN MORE: [NCRCRD 2025 GRANTS](#)
[NCRCRD FELLOWS](#)

TOTAL FUNDS AWARDED IN 2025:
\$148,874

FACULTY FELLOW 2025

Samuel C. H. Mindes, Ph.D.

Adjunct Assistant Professor, Rural Sociology,
Department of Sociology & Criminal Justice,
Iowa State University



*Samuel Mindes,
Ph.D.*

Housing, Identity, and Rural Resilience in the North Central Region

Mindes will build on his previous work as a 2024 NCRCRD Fellow by expanding two components: 1) analyzing the NCR-Stat: Housing and Food Security data that he designed with NCRCRD and 2) deepening his qualitative research in a rural Michigan community rich in amenities, where he identified crucial connections between housing challenges, identity, and place attachment, as the town emphasizes its tourism-oriented economy.

2025 UPDATE / FELLOW IMPACT

NCRCRD Fellow Advances Affordable Housing Research with AI-powered Data Collection and New MHC Database

In 2025 **Armin Yeganeh**, Assistant Professor of Construction Management at Michigan State University (MSU) and NCRCRD's 2023 Fellow, published two open access resources in 2025 which make significant contributions to advancing affordable housing research that he developed during his fellow project.

Yeganeh first developed a low-cost, replicable AI data collection method to accurately map manufactured housing communities (MHCs). And then used this process to produce an open access database and GIS map resource of all MHCs in the North Central Region.

- **Data collection methods:** In the 2025 Scientific Data Journal article, "[Aerial Imagery-Derived Dataset of Manufactured Housing Communities in the North Central United States](#)," Armin Yeganeh, with co-authors Maria Marshall, NCRCRD, & Noah Durst, MSU, detail methods used for collection and processing data with aerial imagery and computer vision techniques.
- **MHC dataset and map resources published:** Repository for [Aerial Imagery-Derived Dataset of Manufactured Housing Communities in the North Central United States](#).

Impacts of Grants Completed in 2025

Each of the five NCRCRD grants completed in 2025, sought to better understand or address North Central Region's rural challenges.

- Total dollars awarded for completed project: **\$161,357**
- Number of NCR states involved in the completed grants:
6 - Ohio, Minnesota, Illinois, Iowa, Nebraska, Indiana

GRANTS COMPLETED

Assessing Social Value of Nebraska Livestock Sale Barns to Assist with Community Well-Being and Resiliency

PI: Marilyn Schlake, University of Nebraska-Lincoln / Type: Small Grant

Partnering to Customize Building an Entrepreneur-Friendly Community Curriculum for the Outdoor Recreation Sector

PI: Gwynn Stewart, The Ohio State University Extension / Type: Small Grant

Rural Gentrification and Housing Disparities in the North Central Region

Fellow: Samuel Mindes, Ph.D., Iowa State University / Type: Faculty Fellow

Partners In Produce – A Food Distribution Project in East Central Illinois

PI: Krystal Hodge, University of Illinois / Type: Small Grant

Enhancing Rural Healthcare by Incorporating Generative AI and Machine Learning: Building Stronger Communication Networks

PI: Richard Johnson-Sheehan, Purdue University / Type: Small Grant



COLLECTIVE IMPACTS OF GRANTS COMPLETED IN 2025

as reported in PI's final grant summary

23
PRESENTATIONS

2
JOURNAL
ARTICLES

2
CURRICULUM

6
WEBINARS

7
MANUSCRIPTS

1
SURVEY
DEVELOPED

1
WORKSHOP

2
PODCASTS

3
WEBSITES

+ PROFESSIONAL DEVELOPMENT OPPORTUNITIES

NCRCRD grants awarded and completed in 2025 are detailed in the Thematic Activities Section on pages 13-21.

NCRCRD Partnerships and Collaborations in 2025

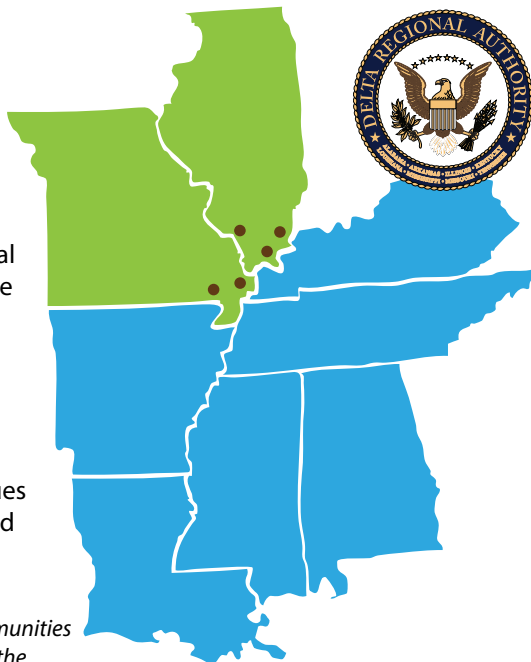
Collaborations in 2025 deepened our bonds with our partners and supported initiatives of importance to our region.

DRA PROPEL INITIATIVE

The Delta Regional Authority (DRA), a federal regional commission promoting economic development within an eight-state service region, is partnering with the North Central Regional Center for Rural Development (NCRCRD) and the Southern Rural Development Center (SRDC) on this initiative.

PROPEL provides targeted support and resources to help communities increase capacity and alleviate challenges on issues such as public infrastructure and business development.

Map: Five North Central Region communities in Missouri and Illinois participate in the DRA Propel Initiative.



North Central Region Partner Institutions:

- University of Illinois Extension
- University of Missouri Extension

North Central Region Communities Involved:

Illinois

- Eldorado
- Mounds
- Murphysboro

Missouri

- Sikeston
- Poplar Bluff

North Central Region Activities:

- Technical assistance with grant proposals
- Needs assessments through interviews, walking audits, and listening sessions
- Community-specific capacity-building activities

PARTNERSHIP DEVELOPS & DELIVERS SUCCESSION PLANNING TRAINING WORKSHOP

The Center partnered with North Carolina State University, the Southern Rural Development Center, Purdue University Institute for Family Business, and Mississippi State University to produce the five-part series, **Who Will Fill My Shoes? Succession Planning for Land Owners, Farmers, Forest Owners, and Family Businesses Workshop**. The workshop was held twice in 2025 — in the spring and fall.

The workshop was designed to train Extension educators, consultants, legal professionals, and other professionals who can teach individuals, families, businesses, and forest owners more about the fundamentals and core components of succession planning. It covered both soft and hard skills and included comprehensive handouts with the goal of empowering landowners to develop and implement their succession plan.

Primary authors of the workshop include Renee Wiatt, Purdue Institute for Family Business, Purdue University and NCRCRD; Kurt Smith, North Carolina State University; and Rebecca Smith, Mississippi State University Extension in partnership with Southern Regional Center for Rural Development and North Central Regional Center for Rural Development.

Participant Evaluation:

Evaluation results collected after the fall workshops indicate strong participant satisfaction, increased knowledge of succession planning concepts, and a high likelihood of future implementation of the curriculum and materials.

Survey response indicated:

96% agreed or strongly agreed that they **gained new knowledge concerning succession planning**.

99% agreed or strongly agreed that they **know where to find resources** to assist with succession planning.

91% agreed or strongly agreed that they **feel confident sharing the material with their communities**.



Partnerships and Collaborations (continued)

NCRCRD AND NEW BEGINNING FOR TRIBAL STUDENTS — 2025 UPDATE

In 2024, the NCRCRD was awarded a USDA-NIFA five-year cooperative agreement to provide technical assistance for the evaluation of the New Beginnings for Tribal Students (NBTS) program. NBTS awards competitive grants to land-grant universities to provide programs that have identifiable support specifically targeted for Tribal students and their academic success. NBTS aims to help increase the retention and graduation rate of Tribal students attending 1994, 1862, and 1890 land-grant universities.

In the Center's second year, Zuzana Bednarik, NCRCRD's project manager for this grant, preformed an evaluation based on survey data which NCRCRD collected from 21 project directors and 55 students, that documented the strategies, challenges, outcomes and successes of the NBTS-funded initiatives.

SUSTAINABLE AGRICULTURAL SYSTEMS FOOD SHOCKS MEETING

On April 28-29, 2025, NCRCRD hosted the [Sustainable Agricultural Systems \(SAS\) Food Shocks](#) team for an "All Hands Meeting" in Indianapolis, IN. The SAS Food Shocks meeting brought together the transdisciplinary team of researchers, educators, and Extension experts involved with the 5-year USDA NIFA funded grant that is focused on developing more resilient food systems for coping with multiple natural disasters. NCRCRD members in attendance at the meeting included Maria Marshall, Renee Wiatt, and Shelly Surber.

The SAS Food Shocks grant is led by Michigan State University. For this grant, NCRCRD along with other entities at Purdue University, are developing and testing a curriculum to help farmers in the Midwest better prepare for multiple natural disasters.



Attendees of the Sustainable Agricultural Systems Food Shocks grant meeting, April 28-29, 2025 in Indianapolis, IN.



ENCOURAGING COLLABORATIONS: SUPPORTING, SHOWING UP, AND SHARING IDEAS

NCRCRD conference support in 2025 focused on encouraging collaboration and facilitating partnerships among land-grant institutions through conference development (CD), presentations (P), and outreach (O).

2025 Conferences:

- 2025 National Association of Community Development Extension Professionals (NACDEP) Annual Conference (CD, P, O)
- 2025 Community Development Society (CDS) Conference (CD)
- Rural Sociological Society 2024 Annual Meeting (CD, P, O)
- The First Americans Land-Grant Consortium (FALCON) Annual Conference (CD, P, O)
- Regional Science Association International 2025 Annual Meeting (P)

Elevating the Region's Research and Extension Programs

NCRCRD WEBINAR SERIES

The 2025 NCRCRD Webinar Series offered **eleven webinars** that continued to promote regional work of researchers, Extension professionals, and stakeholders.



NCRCRD Webinar Series

2025 Topics: We continue to provide topics that relate to the Center's three thematic areas and which elevate the work of North Central Region (NCR) rural development Extension programs and research, integrated work of multiple NCR institutions, and NCRCRD-funded grant projects. This year was distinguished to include:

- 3 co-hosted webinars with partner organizations
- 3 webinars presented by NCRCRD grant recipients
- And the distinct honor of hosting University of Missouri's inaugural announcement and introduction of their online Civic Muscle Index!

2025 METRICS

Our metrics indicate the webinar series continues to be an effective avenue for regional engagement.

- **High ratings given in post-webinar attendee surveys in 2025.**



4.46 stars

Overall attendees' rating for the 2025 Webinar Series.



4.54 stars

Likelihood of attending another webinar.

- **Total registrations in 2025 grew significantly (+56.8%) with 1,954 registrations for eleven webinars. This boosted the year's average registrants per webinar to 178.**

Year	No. of Webinars	Total Registrants	Average Registrants Per Webinar
2025	11 webinars	1,954	178
2024	11 webinars	1,246	113
2023	10 webinars	1,230	123
2022	10 webinars	1,046	105

- **Total views of NCRCRD webinar recordings grew 26.1% from 2024's total views.**
- **Number of hours NCRCRD webinar recordings were watched: 242.1 hours (a 51.8% increase from 2024).**
- **Number of NCRCRD YouTube channel subscribers grew 43% in 2025.**

CONNECT: [NCRCRD WEBINAR SERIES](#) | [NCRCRD YOUTUBE CHANNEL](#)

NCR COMMUNITY DEVELOPMENT EXTENSION IMPACT REPORT

NCRCRD continued to host and provide logistical support to the region's Community Development Extension program leaders for their monthly meetings.

NCRCRD also facilitated the compilation and reporting of the [North Central Region Community Development Extension 2025 Impact Report](#). The 2025 report presents the common impact indicators of 13 NCR Extension programs.



UPDATE

COMMUNITY DEVELOPMENT EXTENSION LIBRARY

The [Community Development Extension Library](#) provides a national repository for Extension professionals to share and discover programs and resources that support a comprehensive, logical, and theoretically sound community development process.

Created in 2023 with the support of an NCRCRD small grant and in partnership with NACDEP. The CD Extension Library is maintained by NCRCRD and supported by the Regional Rural Development Centers.

In 2025, file downloads increased even though total visits were down.

Year	Total Visits	File Download
2025	102,053	9,470
2024	103,604	7,110
2023	82,651	3,937

Visits to Region's Land-Grant Institutions

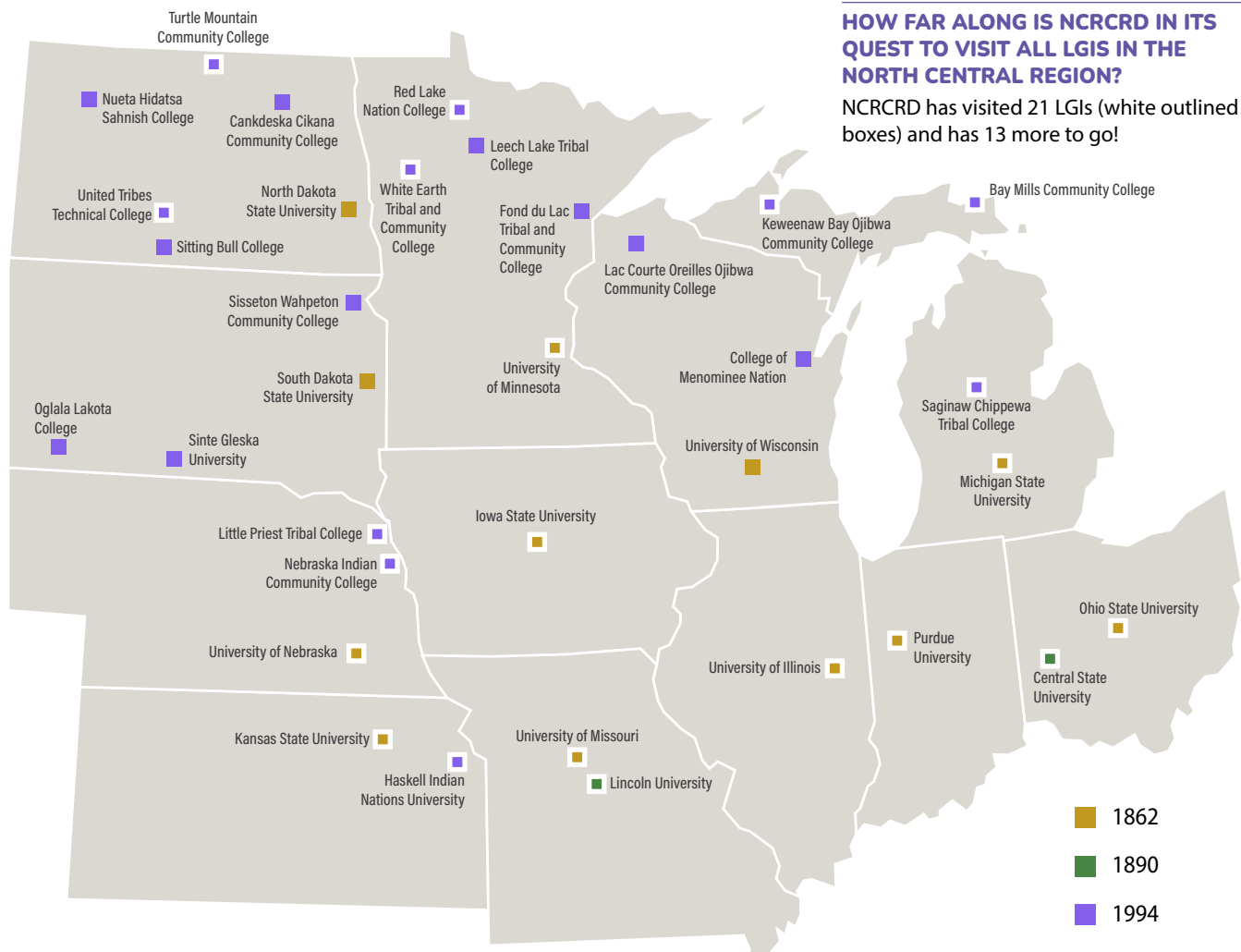
NCRCRD Directors continue to visit the region's land-grant universities and colleges to learn their strengths and how best to support them.

DIRECTORS VISIT IOWA STATE UNIVERSITY

In May 2025, the Center's team consisting of Maria Marshall, Director, Michael Wilcox, Associate Director, and Zuzana Bednarik, NCRCRD Research and Extension Specialist, traveled to Ames, Iowa to visit with Iowa State University Extension professionals and researchers. The meeting was to introduce the Center's services and opportunities but more importantly, to learn about Iowa's programs and specialties. This trip was part of NCRCRD's goal to visit, learn, and build relationships with the 34 land-grant institutions in the North Central Region.



NCRCRD Directors Maria Marshall and Michael Wilcox presenting information about the Center during their visit to Iowa State University.



NCRCRD's Presentations and Publications

In addition to the NCR-Stat outputs on page 5, NCRCRD also produced the following in 2025.

CONFERENCE PRESENTATIONS

Marshall, M.I., & Bednarik, Z. (2025, November 11-14). *Embedded resilience: How social relationships sustain small businesses in crisis* [Pre-conference workshop presentation]. Rural Livability Pre-conference Workshop, Regional Science Association International 2025 Annual Meeting, Denver, CO.

Lee, Y, Marshall, M.I., & Wiatt, R. (submitted September 2025). *Preserving Family Legacy: BIPOC Perspectives of Small Business Succession Planning*. [Conference abstract submitted]. American Council on Consumer Interests Conference 2026.

Marshall, M.I., Lee, Y., & Wiatt, R. (2025 April). *Power Dynamics in Couples Working Together: Impact on Company Profitability and Perceived Performance*. Small Business Institute Conference Competitive Abstract, New Orleans, LA.

Mukembo, S.C., Nabisaalu, J.K., & Marshall, M.I. (2025). *Trust and community embeddedness: Entrepreneur's wellbeing as a pathway to small business financial performance in the North Central Region of the United States*. United States Association for Small Business and Entrepreneurship, 2025 Conference, Las Vegas, NV.

Marshall, M.I., Wiatt, R., & Lee, Y.G. . (2025 April). *Planning to Exit: A Cross-Racial Analysis of Small Business Owner Decision-Making*. Small Business Institute Conference, New Orleans, LA.

Marshall, M.I., (2025, June 12). *The Staying Power and Stickiness of Collaborations: Defining the Foundations of Enduring Innovation* [Panel discussion, virtual]. National Academies of Sciences, Engineering, and Medicine, Board on Agriculture and Natural Resources Workshop — Fulfilling the Public Mission of the Land Grant System: Building Platforms for Collaboration and Impact. <https://www.nationalacademies.org/event/45203-06-2025-fulfilling-the-public-mission-of-the-land-grant-system-building-platforms-for-collaboration-and-impact>

Wilcox, Jr., M D., (2025, June 12). *Bridging Access and Co-Learning: Institutional Perspectives* [Panel discussion, virtual]. National Academies of Sciences, Engineering, and Medicine, Board on Agriculture and Natural Resources Workshop — Fulfilling the Public Mission of the Land Grant System: Building Platforms for Collaboration and Impact. <https://www.nationalacademies.org/event/45203-06-2025-fulfilling-the-public-mission-of-the-land-grant-system-building-platforms-for-collaboration-and-impact>

Wiatt, R., Barker, T. & Borgman, M. (Ed.). (2025, November 13). *Cross-Sector Collaboration for Food Systems Resiliency: An Innovative Framework for Vulnerable Communities, Food and Farm Businesses*. [Conference presentation]. National Ag Marketing Summit: Improving Community Economies, Indianapolis, IN.

WORKSHOPS

Wiatt, R., Smith, K., & Smith, B. (2025, January/February and November). *Who Will Fill My Shoes: Succession Planning for Landowners, Farmers, Forest Owners, and Family Businesses*. Southern Rural Development Center. <https://srdc.msstate.edu/succession-planning-curriculum>

PEER-REVIEWED JOURNAL ARTICLES

Liang, C. & Marshall, M.I. (2025). Examples of Theories and Data Sources in Conducting Research of Rural Entrepreneurship. In C. Liang & T. Lyons (Ed.), *De Gruyter Handbook of Rural Entrepreneurship* (pp. 183-202). De Gruyter. <https://doi.org/10.1515/9783110791396-010>.

Marshall, M.I. (2025). Small Business Disaster Recovery in the United States. *Annual Review of Resource Economics*, 17, 361-380.

Stoll, A., Marshall, M.I., Wiatt, R., & Feng, Y. (2025). Exploring Consumer Willingness to Pay for Food Safety in Produce: A Focus on Small vs. Large Farms. *Journal of Food Protection*, 88(8):100564. DOI:10.1016/j.jfp.2025.100564.

Archila-Godínez, J. C., Kotanko, C., Wiatt, R., Marshall, M.I., & Feng, Y. (2025). Consumers' Food Safety Expectations and Risk Perceptions of Produce From Small and Medium-Sized Farms. *Journal of Food Science*, 90(9), e70527.

Yeganeh, A., Marshall, M.I. & Durst, N. (2025). Aerial Imagery-Derived Dataset of Manufactured Housing Communities in the North Central United States. *Sci Data* 12(1515). <https://doi.org/10.1038/s41597-025-05875-z>.

Liu, J., Winkler, J. A., Ross, R. B., Viña, A., Frank, K. A., Konar, M., Liang, C., Marshall, M.I., Nichols, S., Robinson, J.M., Varshney, L.R., Whipple, J.M., Wu, F., Beverly, B., Knipe, D., Knipe, R., Naik, S., Ripmaster, C., & Todey, D. (2025). Building sustainable and resilient agri-food systems under multiple shocks. *Frontiers in Sustainable Food Systems*, 9(1690853).

OUTREACH

Wierzbowski, C. & Speicher, S. (Hosts). (2025, March 27). Having hard conversations about farm succession with Renee Wiatt. [Wiatt, R. interviewed]. *FarmHouse* (Ep. no. 48) [Audio Podcast]. Lancaster Farming. <https://www.lancasterfarming.com/country-life/family/having-hard-conversations-about-farm-succession-with-renee-wiatt/article-d7adcd8d-5b7e-4acc-a891-912e70fec72b.html>.

Cramer, R. (2025, November 24). Small businesses feel more uneasy ahead of the holidays after a year of slow sales and high costs. [Wiatt, R. interviewed]. *NPR, Kansas City (KCUR)*. Harvest Public Media. <https://www.kcur.org/news/2025-11-24/small-businesses-main-street-survey-rural>.

WEBINARS (CO-HOSTED)

Becot, F., Henning-Smith, C., Bjornestad A., & Ruskowski, S. (2025, October 1). *The Landscape of Mental Health and Financial Support for Midwest Farmers* [Webinar]. The Regional Rural Development Centers. <https://youtu.be/PUxoTDZHKk8?si=fdhAWTSTM-JVINJo>.

Green, J., Curtis, K., Brant, K., Upendram, S., Kelly, P. (2025, February 27). Future Directions for Rural Population Research to Inform Extension: Listening Sessions Findings [Webinar]. North Central Regional Center for Regional Development and the Southern Rural Development Center. <https://youtu.be/8Of8tUc6C6Y?si=yNSQJoENW-Y6XG6H>

Creating Resilient Communities and Economies

Thematic Activities, 2025

Building a more resilient North Central Region by improving the adaptive capacity of households, businesses, and communities through impactful research and outreach.

GRANTS AWARDED IN 2025

NCR Small Grant

Addressing Household Food Waste in Rural Communities

Principal Investigator: Rachel O'Halloran

Organization: University of Missouri

State: Missouri

Project Abstract:

Rural communities have less access to community waste management resources than urban centers, including food waste. Food waste is a significant contributor to landfills throughout the United States paying into environmental and community concerns. The 'Freeze It!' program developed by the University of Missouri Extension provides rural communities with education on household level interventions to limit food waste through family meal management. Limiting household food waste saves consumers money on their grocery budget, reduces strain on solid waste management districts to collect and transport food waste, and supports efficient food systems. By educating rural residents on reducing food waste through family meal management, this project seeks to reduce the volume of food waste produced, support healthy meal habits, and develop sustainable procedures for the 'Freeze It!' program. To deliver 'Freeze It!' additional outcomes data, training for instructors on securing local funds, and the development of program management protocols are needed.

Awarded: \$23,953 / one-year grant / September 30, 2025

WEBINARS IN 2025

Including the History of Redlining in Extension to Contextualize Local Housing Policy Decisions (1/24/25)

Presenter: Craig Carpenter, Assistant Professor, Department of Agricultural, Food, and Resource Economics, Michigan State University

North Central Region Outdoor Tourism Listening Session (3/25/25)

Presenters: Gwynn Stewart, M.S., Assistant Professor, Community Development, College of Food, Agriculture and Environmental Sciences, Ohio State University Extension, Noble County; Xinyi Qian, University of Minnesota, Tourism Center Director & Extension State Specialist Tourism Center; and Zuzana Bednarik, Research and Extension Specialist, NCRCRD.

Artificial Intelligence Use in Extension: Insights from Ohio (8/27/25)

Presenters: Brian Raison, Professor, The Ohio State University, Department of Extension; Sudarshan Adhikari, Graduate Associate, The Ohio State University, Department of Extension; Thomas Blaine, Associate Professor, The Ohio State University, Department of Extension



CONNECT: [NCRCRD WEBINAR SERIES](#)
[NCRCRD YOUTUBE CHANNEL](#)

GRANTS COMPLETED IN 2025

NCR Small Grant

Assessing Social Value of Nebraska Livestock Sale Barns to Assist with Community Well-Being and Resiliency

Principal Investigator: Marilyn Schlake, University of Nebraska-Lincoln

Project Summary:

This project modified the framework of an Australian research study for Nebraska livestock sale barns, a significant rural economic entity. The team used a mixed-methods study to identify the social value of sale barns and explore implications for individual and community well-being and resiliency. The findings help establish the value of rural business entities or organizations beyond the traditional economic focus. Research findings identified social connections that enhance belongingness and connectivity, providing potential avenues for improving Extension program delivery. This research explored community social capital through the lens of social value, or how social connections translate into actions with tangible outcomes impacting individual livelihoods and community well-being.

Project Goals:

- Exploration of a measurement tool, along with research questions and protocols, which incorporate and expand social capital applications within the context of the community and further research opportunities around social value.
- Write research report, available in print and online.
- Dissemination of research findings through interdisciplinary team networks to reach affected stakeholders, such as community developers, health providers, Extension, and community leaders.
- Creation of research briefs for health educators and service providers to enhance awareness of new potential delivery options.
- Dissemination post-grant through conference presentation at multiple professional associations and an NCRCRD webinar presentation.
- Application for funding to expand the focus and scale of research of other social and economic business entities across the north central region.

Project Accomplishments:

- Successfully conducted research at four unique Nebraska livestock sale barn locations. The team worked with rural sale barns in the north central region, two in the western region, and one sale barn located adjacent to the city of Lincoln, a metropolitan city of to explore potential differences between rural sale barns and an urban-adjacent sale barn.
- Online research report, [Beyond the Auction: Social Impacts of Nebraska's Livestock Sale Barns](#)
- Dissemination is underway and ongoing.

Dissemination of Findings:

- Creation of a research awareness campaign through social media, press releases, and podcasts.
- Presentations:
 - NE Extension Beef Team via monthly Zoom call. Reports provided to local Extension offices.
 - NE Cattlemen's meeting in Kearney
 - Women in Ag conference in Kearney, February 2026
 - Virtual Presentation, World Social Capital Conference, Dubai – March 26, 2026
 - North Central Regional Center for Rural Development 2026 webinar (not yet scheduled)
 - National Association of Community Development Extension Professionals, 2026 conference
 - National Association of County Agricultural Agents, 2026 conference
 - Post-grant presentations are planned or anticipated within the coming year.
- The creation of research briefs for health educators and service providers to enhance awareness of new potential delivery options is pending. Will work with Extension, beef team, to explore educational opportunities and if additional briefs are needed.
- Application for funding to expand research is pending due to changing environment of federal grants and the timing of project completion. Reaching out to stakeholders in Nebraska.

Impact Statement:

As of this reporting date, we are starting to disseminate the report and begin promotions. The dissemination is timed to Nebraska's cattle industry calendar (late fall and early winter), so we are just now moving into that phase. We estimate 320 direct contacts through the various planned presentations. Indirectly, copies of the report will be shared at all venues, extension offices, sale barns, and [available through the website](#). Podcasts reach approximately 6,000 through the Center for Ag Profitability and Rural Prosperity Nebraska. We will have more counts as we capture data in 2026.

Outputs:

1 JOURNAL ARTICLE	1 WEBSITE
1 MANUSCRIPT	2 PODCASTS
8 PRESENTATIONS	2 WEBINARS

GRANTS COMPLETED IN 2025

NCR Small Grant

Partnering to Customize an Entrepreneur Friendling Community Curriculum for the Outdoor Recreation Sector University or Institution

Principal Investigator: Gwynn Stewart, The Ohio State University

Project Summary:

Utilizing strategic planning and education as well as grant writing curriculum and/or in broadband development, in U.S. Forest Service areas, the curriculum seeks to support rural gateway communities in creating resilient economies through enhancing the outdoor recreation economy. Utilizing an Extension Building an Entrepreneur Friendly Community curriculum that provides resources, training and tools to develop community capacity to better understand and support the local entrepreneurial economy, the team customized the curriculum for Outdoor Recreation (OR) gateway communities, as well as with a list of potential Outdoor Recreation grant resources. Readers will gain insights on the tools to develop an action plan for fostering local business growth while also learning strategies to position their community as an environment that nurtures and supports entrepreneurial success. The Building an Entrepreneur-Friendly Community program provides the resources, training, and tools to develop community capacity to better understand and support the local entrepreneurial economy in the Outdoor Recreation sector.

Project Goals:

- Customized curriculum to the Outdoor Sector with a new Session 0 introduction, grants resource and case studies as well as entrepreneur interviews.
- Conference abstracts / presentations accepted to: National Association of Community Development Extension Professionals Conference (June 2025 – Charleston, WV); CD Society Conference (July 2025 – New York); Poster presentation to National Extension Tourism Conference (Oct. 2025, New Hampshire) and pending ESP Webinar (still in review as of May).

Project Accomplishments:

- Customized curriculum to the Outdoor Sector with a new Session 0 introduction, grants resource and case studies, as well as entrepreneur interviews.
- Conference abstracts / presentations accepted to many conferences and :
 - National Association of Community Development Extension Professionals Conference (June 2025 – Charleston, WV);
 - CD Society Conference (July 2025 – New York);
 - Poster presentation to National Extension Tourism Conference (Oct. 2025, New Hampshire)
 - ESP Webinar (in review as of this report).

Training Provided:

The team utilized the Your Economy dataset and had training on it with the University of Wisconsin. The team also utilized the Ohio State Extension Learning and Organizational Development team to assist with coordination of adding the curriculum to an online format utilizing Scarlet Canvas. The LOD team provides training on best practices for this type of format. Neil Lindscheif from University of Minnesota shared a variety of tips on Artificial Intelligence to the OSU team members as well.

Dissemination of Findings:

- National abstracts/presentations:
 - National Association of Community Development Extension Professionals Conference (June 2025 – Charleston, WV);
 - CD Society Conference (July 2025 – New York);
 - Poster presentation to National Extension Tourism Conference (Oct. 2025, New Hampshire)
 - ESP Webinar (in review as of this report).
- In addition, state specific dissemination included
 - Ohio — 3 rural Ohio community Lunch & Learns in Monroe, Morgan, and Noble Counties.
 - Minnesota — the University of Minnesota Tourism Center's Research Showcase.

Impact Statement:

The outcome of the grant is the development of the [Outdoor Recreation Sector additions to the Building Entrepreneur Friendly Communities curriculum](#). This includes the curriculum overview document, a Module 0 session with 5 sections (PowerPoints, recordings, handouts) as well as video interviews with three entrepreneurs and two case studies (one in Ohio and one in Minnesota).

Outputs:

2 CURRICULUM	3 WEBINARS	2 WEBSITES
7 PRESENTATIONS	PROFESSIONAL DEVELOPMENT	

GRANTS COMPLETED IN 2025

NCRCRD Faculty Fellowship

Rural Gentrification and Housing Disparities in the North Central Region

Fellow: Samuel Mindes, Ph.D.

Project Summary:

The fellow project combined qualitative and quantitative sociological research to investigate rural housing disparities in the North Central Region (NCR). This mixed methods research project involved two interrelated components.

- 1) Designing a regional housing survey based on my work with the NCR Housing Working Group. The group's regular virtual meetings offer an opportunity to identify critical issues relating to housing and related topics in the region. Food security was added as a secondary scope. Survey development commenced during Spring 2024 with the assistance of an undergraduate student researcher. The survey was pretested in the undergraduate methods course I taught during the Spring 2024 semester. The survey was finalized in Summer 2024 but administered in late 2025/early 2026 due to overlap with other Center surveys and then delayed again due a federal funding gap. Mindes will create reports based on his analysis of the survey in his second Fellowship ending in 2026.
- 2) The qualitative research component involved ethnographic research in amenity-rich rural Lake Michigan communities with recent histories of gentrification, seasonal residential patterns, and economic development among growing disparities. Data was gathered using various qualitative methods, such as interviews, observation, focus groups, and visual methods, including over 19 hours of audio data. Data collection focused on investigating how residential patterns and economic development efforts affect placemaking, place attachment, and community attachment among long-term, recent, and temporary residents. Data collection took place across several trips to the region during Summer 2024 (totaling roughly six weeks in the field). Findings from the qualitative research helped inform the regional housing survey and my future research and extension efforts.

Project Goals:

- Design and develop a regional housing survey for the North Central Region. This will be a large, multi-state survey on the region's rural housing.
- Collect qualitative data on gentrification and rural housing in an amenity-rich rural community in Michigan. The qualitative data collected will include observations, interviews, and focus groups in a "Great Lakes Beach Community" to examine the impacts of amenity tourism on local housing, development, and governance

Project Accomplishments:

- Designed and developed the NCR-Stat: Housing & Food Security Survey in cooperation with NCRCRD. The Center began conducting the survey in late 2025/early 2026 and the open access data will be released in 2026.
- Collected and transcribed qualitative data on gentrification and rural housing in an amenity-rich rural community in Michigan. Began analysis, writing, and output preparation, which included two academic conference presentations in 2025.

Training Provided:

An undergraduate student from Iowa State University assisted this project and gained hands on experience with survey development.

Impact Statement

The housing survey developed will offer extremely valuable information about two critical issues: housing and food security. These challenges are understudied and increasingly important to populations in the region in rural, suburban, and urban areas. The dataset will be particularly valuable because it will provide individual-level data, enabling researchers to examine how housing and food insecurity relate to demographic, geographic, economic, and social factors, and to investigate how these issues are often intertwined for households.

The dataset will be a tremendous resource for researchers in economics, sociology, public health, and community development, among other fields, and will provide policymakers, university extension services, and community organizations with valuable data, helping shape efforts to support populations in the North Central Region.

Outputs:

1 SURVEY DEVELOPED

2 PRESENTATIONS

PROFESSIONAL DEVELOPMENT

Developing Leadership and Civic Engagement

Thematic Activities, 2025

The NCRCRD is committed to working with partners to address constraints and enhance the capacity for inclusive leadership and civic engagement in the North Central Region.

WEBINARS IN 2025

Strong Communities Start Here: Introducing Missouri's Civic Muscle Index (10/28/25)

Presenters: Claire Wolff Rippel, Director, Community Development & Regional Economic Development Education, University of Missouri Extension and University of Missouri St. Louis; Angela Johnson, Assistant Director and Lead Research Project Analyst, University of Missouri Extension Center for Applied Research and Engagement Systems; and Jamie Kleinsorge, Assistant Director and Senior Project Coordinator, University of Missouri Extension Center for Applied Research and Engagement Systems



Civic Engagement: The Good, the Bad and the Learning (9/24/25)

Presenters: Jody Horntvedt, Extension Educator, Leadership & Civic Engagement, University of Minnesota Extension, Abbey Guggisberg, Extension Educator, Leadership & Civic Engagement, University of Minnesota Extension, and Kathy Quick, State Specialist, Leadership & Civic Engagement, University of Minnesota Extension

CONNECT: [NCRCRD WEBINAR SERIES](#)
[NCRCRD YOUTUBE CHANNEL](#)

DEVELOPING LEADERSHIP AND CIVIC ENGAGEMENT GRANT REPORTS

There are no reports to share in this thematic area for 2025 as NCRCRD did not award any grants in this thematic area in 2025; nor were any grants completed during this time.

Promoting Community Health and Wellness

Thematic Activities, 2025

NCRCRD's health initiatives focus on enhancing health and wellness in rural communities across the North Central Region. The Center increases the quality of life for individuals and communities by raising awareness, engaging community members to improve public health, and building community partnerships.

GRANTS AWARDED IN 2025

NCR Small Grant

Smartphones, Smart Families: Fostering Child and Family Well-being for Rural North Central Region Households in a Digital Age

Principal Investigator:

Allen Barton, University of Illinois, Urbana-Champaign

Co-Principal Investigators:

Bonnie Brewer, Kansas State University

Patrice Powers-Barker, The Ohio State University

Erin Ruggiero, The Ohio State University

State: Multiple

Project Abstract:

Rapid technological advances have led to pronounced changes throughout society, including within the home. Given this pervasive reach and well-documented effects on individuals' health and well-being, few topics are more germane — and more in need of unbiased, evidence-based resources — than technology use within families. The current project, in response, will provide rural families in the North Central Region (NCR) with timely, practical resources to help navigate household technology use. Specific aims of the project are: (1) to create and disseminate a Smartphones, Smart Families Survival Kit, (2) to develop a series of informational resources on pertinent technology-related issues families are facing, and (3) to evaluate the reach and impact of project resources. With smartphone ownership in rural areas now at similar levels as urban areas, the current project provides an important opportunity to develop and disseminate resources to improve the well-being of children, families, and their rural NCR communities.

Awarded: \$39,941 / one-year grant / September 30, 2025

WEBINARS IN 2025

Director Experiences Operating a Rural Child Care Center in Indiana (4/23/25)

Presenter: Jenn Finders, Assistant Professor, Human Development and Family Studies, Colorado State University

RRDC Webinar: The Landscape of Mental Health and Financial Support for Midwest Farmers (9/30/25)

Presenters: Florence Becot, Nationwide Insurance Early Career Professor in Agricultural Safety and Health, Penn State; Carrie Henning-Smith, Associate Professor, Division of Health Policy & Management and Co-Director, Rural Health Research Center, University of Minnesota; Andrea Bjornestad, Associate Professor/Extension Specialist-Mental Health, South Dakota State University; Sarah Ruskowski, Research Technologist, Penn State.

Food Security, Access, and Health Outcomes in Rural America: Challenges and Policy Pathways (11/19/25)

Presenters: Krystal Hodge, Assistant Professor, Department of Food Science and Human Nutrition, University of Illinois Urbana-Champaign and Bhagyashree Katare, Berdine Martin Food Economics Associate Professor, Department of Agricultural Economics, Purdue University.

Did the Rural Health Infrastructure Break Down During the Pandemic? Evidence from the 2020 Meatpacking Plant COVID-19 Outbreaks (12/5/25)

Presenters: Thomas P. Krumel, Jr., Assistant Professor, Department of Agribusiness and Applied Economics North Dakota State University

CONNECT: [NCRCRD WEBINAR SERIES](#)
[NCRCRD YOUTUBE CHANNEL](#)

GRANTS AWARDED IN 2025

NCRCRD Working Group

Rural Childcare Working Group: North Central Region Quality Childcare Network

Principal Investigators: Kelsie Muller, Purdue University
State: Multiple

Project Abstract:

Families in rural communities have limited access to quality childcare for their children compared to urban families. Many rural communities are childcare deserts — communities lacking sufficient childcare. Access to high-quality childcare not only impacts families and children but also communities and employers. Quality childcare supports the success of local businesses, parental participation in the workforce, and children's long-term success. Started in April 2023 with three members and now including 12 members from seven states, the North Central Quality Childcare (NCQC) Network is a cohort of Extension professionals from the North Central Region who are interested in increasing the quantity and quality of childcare opportunities. We plan to provide professional development and networking for Extension professionals on how to increase local access to high-quality childcare. With this grant, we would 1) solidify the presence of the NCQC Networking group, 2) conduct a comprehensive literature review and assessment of how North Central Extension is addressing the need for quality childcare, and 3) provide professional development through webinars and resources to increase the skills and knowledge needed to expand childcare access in rural communities. Establishing a strong networking group will have ongoing benefits in supporting resilient communities that contribute to the well-being of children, families, and all community members, which will have both short- and long-term impacts on workforce development and are well aligned with the 2025 goals and priorities of NCRCRD.

The working group is comprised of thirteen Extension professionals from land-grant universities in six states in the North Central region (Indiana, Michigan, Missouri, Nebraska, Ohio, and South Dakota). Each member brings experience and expertise in research and/or outreach focused on childcare and early childhood education.

Award: \$34,980 / 2-year grant / September 1, 2025

NCR Small Grant

Financial Caregiving Needs Assessment of Older Adults and Caregivers

Principal Investigator: Naomi R. Meinertz, University of Missouri
State: Missouri

Project Abstract:

Family caregivers often help older adults with their finances in later life (e.g., financial management, applying for Medicaid services). This responsibility limits a caregiver's ability to save for retirement and may exacerbate the negative consequences of caregiving, such as burden and depression, particularly for rural caregivers. Using a survey for caregivers and focus groups for older adults, this mixed method needs assessment aims to (1) identify knowledge gaps about family financial caregiving, (2) recognize whether and how families prepare for financial caregiving, and (3) understand the feasibility of a financial caregiving program in the North Central Region. These needs assessment results will inform the adaptation of the "Finances of Caregiving" program to help prepare families for financial caregiving by acknowledging the role of family relationships in finances. The pilot implementation and evaluation of the program will be supported by an application to the 2026 Rural Health and Safety Education grant.

Awarded: \$25,000 / one-year grant / September 30, 2025

GRANTS COMPLETED IN 2025

NCR Small Grant

Enhancing Rural Healthcare by Incorporating Generative AI and Machine Learning: Building Stronger Communication Networks

Principal Investigator: Richard Johnson-Sheehan, Purdue University

Project Summary:

This project focuses on how land-grant universities can support rural healthcare by improving communication networks. Through partnerships with clinics and hospitals, the team explores how telehealth, electronic health records (EHRs), and generative artificial intelligence (GenAI) can enhance efficiency, access, and quality of care.

Six Purdue honors students from the John Martinson Honors College collaborated on the project through fieldwork, interviews, and independent research. Their contributions have informed the team's emerging approach, which advocates integrating GenAI-enhanced narrative medicine to support patient-provider communication and strengthen rural health systems.

Project Goals:

- Assess communication challenges in rural healthcare clinics in North Central Indiana.
- Catalog communication practices, including telemedicine, EHRs, grant writing, and patient education.
- Analyze communication patterns to identify opportunities for GenAI and machine learning integration.
- Map communication nodes and referral pathways to locate points where telehealth and GenAI could be used to improve services.
- Develop a strategic plan to leverage GenAI, telehealth, and machine learning to enhance communication.
- Propose an enhancement plan for land-grant universities to support rural healthcare by training providers to use GenAI in their practices and to support patient interactions.

Project Accomplishments:

Funded initially by a \$36,000 grant from the North Central Regional Center for Rural Development and afterward by a \$75,800 Breakthrough Research Award from Purdue's John Martinson Honors College, the project used land-grant university resources to analyze persistent rural healthcare challenges.

Phase I accomplishments include:

- Extensive fieldwork, interviews, surveys, and site visits to document communication practices, infrastructure limitations, and provider needs.
- Identification of GenAI-enabled narrative medicine as a promising approach to contextualize patient experiences, improve empathy, and enhance trust and treatment adherence. We developed the basis for a strategic shift from generic technology adoption to integrating GenAI with narrative medicine.

- Development of a thematic analysis highlighting the compounded effects of rurality on healthcare delivery, communication barriers, and cautious optimism toward AI integration when paired with human-centered care.
- Producing detailed geographic network maps to pinpoint opportunities for AI-enabled improvements in care coordination and education.
- Compiling a catalog of digital communication tools in rural clinics alongside adoption challenges. This resource underscores areas where AI-integrated solutions could close technology gaps.
- Finally, Phase I resulted in a strategic plan for land-grant institutions to deliver low-cost, scalable interventions.

Training Provided: (6 undergraduates, 3 graduates, 1 post-doctorate)

- Students were involved in all the accomplishments listed in previous section plus they collaborated with researchers in:
 - Write a grant application for additional funding for Phases II and III. While the grant was not funded, the graduate and undergraduate students learned a great amount about planning and writing a grant.
 - Writing journal articles for peer-reviewed publications.

Dissemination of Findings:

Five journal articles. One of the articles is currently in press; four articles are in process.

Impact Statement:

Our connections and interviews with healthcare providers have begun a conversation about what Purdue might be able to do to improve rural healthcare in the North Central U.S. We believe that our move into AI-enhanced narrative medicine could be a game-changer for interactions between rural healthcare providers and their patients. Our network mapping has developed a model for identifying healthcare deserts and identifying underutilized land-grant university assets that could be activated. Our catalog of emerging technologies should help administrators and scholars identify what kinds of products and services could take advantage of AI as an emerging technology.

Outputs:

1 JOURNAL ARTICLE

5 PRESENTATIONS

4 MANUSCRIPTS

PROFESSIONAL DEVELOPMENT

GRANTS COMPLETED IN 2025

NCR Small Grant

Partners In Produce – A Food Distribution Project in East Central Illinois

Principal Investigator: Krystal Hodge, University of Illinois

Project Summary:

Food insecurity affects over 1 in 7 people in Coles County, IL. The University of Illinois – Extension builds partnerships with local organizations to address food insecurity. One such collaboration, Partners in Produce, distributed over 100,000 pounds of produce to East Central Illinois residents in 2023. Program challenges remain regarding produce delivery and sustainability, and the impact of these efforts on dietary intake and food insecurity among residents is unknown. This project will support Partners in Produce through produce delivery in Summer 2024, outcome evaluation, and development of a sustainability plan for 2025 involving collaboration from partner agencies.

Project Goals:

1. Develop a sustainability plan to address distribution challenges experienced in previous years.
2. Evaluate the impact of food pantry programs on participants.
3. Implement the sustainability plan
4. Evaluate the implementation of the sustainability plan to identify challenges and opportunities for improvement.

Project Accomplishments:

1. The project developed a food pantry network/coalition to increase collaboration and communication between food pantries. The distribution plan was developed in Spring 2025 and implemented during the growing season of 2025. In November 2025, a follow up meeting was held with food pantry directors to identify opportunities for improvement for next year.
2. Data were collected from 90 clients from 3 food pantries to assess satisfaction with produce options, selection and use of items, and opportunities for program improvement.
3. The sustainability(distribution) plan was implemented in the 2025 growing season. Most food pantries chose to drive to the auction (the auction may have been between 20- 80 miles away from the food pantries), with 4 choosing not to do so. There were discussions about there being a hub, or a location where those who were unable to go to the auction could go to pick up produce. This did not occur in 2025.
4. A follow up meeting was held in November to discuss the implementation and areas of improvement for next year, assuming funding will be available for purchases. The study collected from food pantry directors prior to the meeting and this information was discussed at the meeting.

Training Provided:

- Student helped in evaluation tracking in 2024 summer.
- Student helped distribute food while the distribution and sustainability plan was being developed.

Dissemination of Findings:

- Division of Nutritional Sciences Presentation 3/2025
- NCRCD Presentation November 2025
- Pantry Director Coalition Meeting
- Manuscript submission (2) developed; target submission to peer-reviewed journals – early 2026

To Do:

Identify additional opportunities for funding to support food purchases and distribution to pantries for whom the auction was less accessible.

Impact Statement

Since receiving this funding, Partners in Produce distributed 122,000 pounds of produce distributed in 2024 to 40 organizations, with 13.5% of this donated by vendors with assistance from students assisting with donations and tracking produce. In 2025, a distribution plan was developed for the 2025 growing season. In 2025, 109,953 pounds of produce was distributed. 98,623 purchased, 11,330 donated. Amount spent \$30,326.25, received from funding from Feeding Illinois and other donors. This project increased communication between food pantry directors, eliciting buy-in for a more involved role in receiving fresh produce through this collaboration and also establishing a network between directors that can be leveraged in the future.

Outputs:

2 MANUSCRIPTS

1 WEBINAR

1 WORKSHOP

1 PRESENTATION

PROFESSIONAL DEVELOPMENT



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