**Hatch NE2251 Tourism Resilience and Community Sustainability: Adaptation and Recovery of Rural Businesses and Destinations**

**NE2251 Objectives:**

1. Assess, inventory, and classify the impact of current and potential external shocks on rural tourism at the multi-state level
2. Investigate the resilience, adaptability, and recoverability of different components of the rural tourism system (i.e., suppliers, buyers, and destinations)
3. Identify, implement, and evaluate strategies for tourism businesses and destinations to cope with external shocks.

**Projected Outputs**

* Publications in scientific articles/reports Webinars/workshops
* Crisis recovery frameworks and theory development Inventory of tourism assets in rural areas under examination
* Assessment of tourism performance pre, during, and after crisis Creation of a rural tourism resilience index dashboard Graduate students engaged in multi-state projects
* Extension programs engaged
* New Extension programs developed

**Projected Outcomes or Projected Impacts**

* A better understanding of the role of the tourism industry in local and regional economy and how dependency on tourism sectors influences local/regional economic resiliency.
* Development of future funding proposals that promote collaborative research and extension activities on tourism resiliency and community sustainability in the U.S.
* Development of best practice toolkit for rural tourism responses to external shocks. Development of strategies to recover from externa shocks.

**Key Milestones**

* (2022):Apply for competitive funding to support objectives • Fine-tune the project objectives and methods with input from Extension specialists • Identify and recruit participating states and investigators • Recruit research participants • Identify agency/community partners
* (2023):Implement research activities for each objective • Disseminate practical findings through Extension research partners
* (2025):Continue with years 2023-2024 research activities • Continue extension and project results transfer • Disseminate outcomes through academic and practical outlets • Plan for next phases

# NE2251 Hatch Integrated Multistate Research Project 2023-2024 ANNUAL REPORT

Project Number: NE2251

Project Title: Tourism Resilience and Community Sustainability: Adaptation and Recovery of Rural Businesses and Destinations

Chair: Doug Arbogast, West Virginia University, Morgantown, WV Period Covered: October 1, 2022 through August 13, 2024

Date of this Report: August 13, 2023  
Annual Meeting: June 11, 2024, Burlinton, VT

**Summary of Minutes from June 11, 2024 Annual Meeting**

The meeting was held from 2:00-3:30 pm EST on June 11 at the Hyatt Regency Hotel in Burlinton, VT in conjunction with the 2024 Travel and Tourism Research Association conference

The meeting was called to order by Doug Arbogast at 2:00 PM EST.

1. **We began by welcoming folks to the meeting, reviewing the meeting agenda, and reviewing the NE2251 integrated, multi-state group objectives.**
2. **Update from NIFA National Program Leader Ashley Mueller** 
   * NIFA updates provided by Ashley Mueller via document circulated to participants
   * Funding updates and opportunities
   * Upcoming opportunities and announcements.

**Meeting Participants**

**\* Indicates virtual participation**

|  |  |  |
| --- | --- | --- |
| Arbogast, Douglas | West Virginia - West Virginia University | Doug.arbogast@mail.wvu.edu |
| Eades, Daniel C | West Virginia Cooperative Extension | Daniel.eades@mail.wvu.edu |
| Chase, Lisa | Vermont - University of Vermont | [Lisa.chase@uvm.edu](mailto:Lisa.chase@uvm.edu) |
| Curtis, Kynda\* | Utah - Utah State University | [Kynda.curtis@usu.edu](mailto:Kynda.curtis@usu.edu) |
| Entsminger, Jason\* | Maine Cooperative Extension | [Jason.entsminger@maine.edu](mailto:Jason.entsminger@maine.edu) |
| Jada Lindblom | New Hampshire Cooperative Extension | Charlie.french@unh.edu |
| Goetz, Stephan | Pennsylvania - Pennsylvania State | sjg16@psu.edu |
| Jasper, Cynthia R\* | Wisconsin - University of Wisconsin | crjasper@wisc.edu |
| King, Brian | Texas AgriLife Research | Brian.king@ag.tamu.edu |
| Lee, Seunghoon | Texas AgriLife Research | shlee@tamu.edu |
| Ann Savage | North Carolina State University | aesavage@ncsu.edu |
| Melissa Weddell | University of Montana | Melissa.weddell@umontana.edu |
| Elena Bigart | University of Montana | Elena.bigart@umontana.edu |
| Yeager, Emily \* | East Carolina University | Yeagere18@ecu.edu |
| Jake Powell\* | Utah State University | Jake.powell@usu.edu |
| David Conner\* | University of Vermont | David.conner@uvm.edu |
| Renata Endres\* | University of Illinois Urbana-Champaign | rendres@illinois.edu |

**Purpose of HATCH**

* Encourages integrated research-extension but research dollars aren’t directly provided
* All LGUs have access to support cross-state collaborations BUT how that money is distributed/used varies by institution
  + At UVM appointees at Ag Experiment Stations can access funds but Extension cannot.
  + Kynda (Utah State) can use funding for multiple projects for travel, but at UNLV could only to travel to one meeting regardless of multiple HATCH funding lines.

**Work that’s happening**

* ***Please provide Doug with grants/contracts; publications; presentations – especially those that highlight integrated work***
* UNH Extension – Outdoor recreation, time in nature. Working with WVU and VT on tourism projects. New Hampshire (Historic) Barn Trail; DIRT trail and outdoor rec groups to foster more partnerships and build capacity (6 workshop series; internal grant funding to support). Workforce development partnership with CTE. More interest in “outdoor recreation” than “tourism”

Downtowns and Trails program engaging business and volunteers (Shannon Rogers(?)) and statewide rail trail projects and impacts. Outdoor economy academy to help local stakeholders ID gaps; working with business school to better aggregate services within the university and state to have a “one stop shop” for available services.

* UVM – Sustainability metrics (NIFA grant); agritourism AFRI grant with Claudia Schmidt at Penn State + Jason Entsminger; similar work with Dee and Jodi Smith at WVU; webinar series with NET agritourism working group; international presentations in Italy; in indicators for sustainable food systems/production; consumer preferences and demand for agritourism; pursuing NIFA funding for multistate work.
* Univ IL – interested in partnering with Lisa and co on agritourism projects; current research on agritourism liability exemptions laws and impact on number of participating farms (national, statewide analysis)
* NC State: Consumer demand specialty crop block grant brewers and grain producers, consumer WTP for local malts, etc.; project with state tourism board on retirement communities paired with industry research to fill gaps and meet state grants; First Impressions program; working with Ext leadership on starting outdoor rec program team in Extension – pursuing seed funding to understand county needs, talking to John Green at SRDC about scaling to southern regional.
* University of Montana – push to invest more east of continental divide in order to address over-tourism in western parks; surveyors across 10 regions at rest areas, etc – have a dashboard – tourism attitude data since 1992; need for grant capacity building – feeding data to local groups but creates a lot fo work for the lab/center.
* Texas: Looking at rural tourism bi resilience through the pandemic, qualitative moving into mixed methods – local partnerships (Taco Trails!), leadership, networking, biz owners “positive emotions,” other key characteristics of social support and how they impacted local resilience - 19 interviews with retail, bars, restaurants, community partners; Tourism Friendly TX Communities interagency agreement between agrilife and gov’s office;
* Utah State: New experiment station project drink tourism and craft beverages – presentation at AAEA; small grant internal not funded but looking at AFRI opportunity; Kynda’s work on consumer preferences could support the work the agritourism folks are doing; Jakes GNAR initiative – online asynchronous for local leaders to learn about planning in gateway communities; in fall of this year helping Instituto of outdoor recreation and gateway communities Basecamp in Moab, UT.
* UWI: Minority owned businesses resilience in face of COVID (Jason + Stephan + Heather + Daniel should learn more about this).
* Maine: Rec economies and agritourism. RecEcon – using EDA funding to work with state office of outdoor recreation to develop 10 year roadmap for rec econ development. Draft rollout at Maine Outdoor Econ summit in November. Then working with in and out-of-state partners on implementation. Hired post-doc with background in sustainable entrepreneurship sustainable biz model innovation in outdoor rec sector, piloting in Maine then scale to nationwide funding opportunities. How are biz addressing climate change and PFAS in gear manufacturing (so more BEA OR than just tourism hospitality). Applying USDA MOU to National Parks since Maine doesn’t have a lot of USFS land – should Dept of Interior folks be engaged in how that work (with USFS) plays out to see how they can implement and improve? Agritourism fact sheets released with Claudia Schmidt and NERCRD; working to link research and practice in agritoursim with Extension, campus, ag. experiment station, and state partners.

With Claudia Schmidt, Specialty Crop Research Initiative funding to inventory business model structures in agritourism and how are firms innovating around those models.

Penn State (NERCRD) and WVU have continued their integrated research-teaching-outreach collaboration on the TRIP grant, including mentoring of post doc and graduate students. This grant also includes UVM and UNH? You could also say that your ARISE grant was submitted, with collaborators including SRDC and NERCRD and...?

**Common Themes, Hot Topics,  and areas for Collective Work:**

* Academy’s and labs are recurring theme (Montana, WVU, NC State, UNH; Mellissa Weddell: people from chamber (as example) to DMO but don’t have the skills to do destination management (or even marketing) can we build training to help fill that capacity gap. Charlie – need to share resources, teach for/with each other; role for RRDCs to host sharing platforms/infrastructure.
* Refining and communicating Extension’s value proposition to gateway communities (and agencies) to better engage other federal partners and communities. NPS already has several programs that speak to these themes; Jake and Utah already working in NPS gateway communities but not necessarily with NPS itself, although RT(?)CA has helped with program development; also how can lessons learned be applied to helping with recreation of private lands – more case studies? --

1. **Discussion on the 2024 annual meeting aligning the National Extension Tourism and NETTRA conference in New Hampshire**
2. **The meeting was adjourned at 3:30 PM EST**

**Station Updates NE2251**

**October 1, 2023 through June 30, 2024**

**NE2251 Participants were asked to submit information on work during the annual report period that aligned with the NE2251 objectives (HIGHLIGHT WORK WITH OTHER STATES ON COMMITTEE) report items “as appropriate” including state-only projects (a premium is placed on cross-state work but other work is also of interest):**

**West Virginia University**

* **Name of the Extension/Research Faculty/Researcher(s). If submitting as a team please include all participants/contributors and define their role(s):** Doug Arbogast, Daniel Eades, Jinyang Deng
* **Title(s):** Extension Professors, Professor Recreation, Parks, and Tourism Resources
* **Specialization(s):** Rural Tourism, Rural Economics, Sustainable Tourism Development
* **University/Institution Address:** West Virginia University
* **Email(s):**[doug.arbogast@mail.wvu.edu; daniel.eades@mail.wvu.edu](mailto:doug.arbogast@mail.wvu.edu;%20daniel.eades@mail.wvu.edu); [Jinyang.deng@mail.wvu.edu](mailto:Jinyang.deng@mail.wvu.edu)

Activity

(Organized and specific functions or duties carried out by individuals or teams using the scientific method to reveal new knowledge and develop new understanding.)

In 2024 West Virginia University academic faculty and Extension specialists conducted multiple research and Extension activities in support of the NE2251 objectives. Funded by a 2022 AFRI grant, research continued to identify indicators of sustainable rural tourism with primary and secondary data collection occurring in rural destinations in the northeast. This project features collaboration among academic and Extension faculty in West Virginia, New Hampshire, Vermont, and Pennsylvania. Research outputs included conference presentations at the Northeast Travel and Tourism Association annual conference as well as the Southern Regional Science Association included a conference proceeding as well as a journal article under review. In addition, Extension faculty assisted in the coordination of the National Extension Outdoor Recreation Economies Working Group to support the implementation of the USDA Recreation Economies MOU with a grant received from the Extension Foundation to support a national needs assessment.

Additional multistate, integrated partnerships emerged with a Rural Tourism Institute proposal submitted to the Appalachian Regional Commission that included collaboration with North Carolina State University and the University of Kentucky.

**Outputs and Dissemination**

* **Academic Presentations:**

Eades, D. C., Arbogast, D. W. (Author & Presenter), Han, L. (Author), Goetz, S. (Author), Travel and Tourism Research Association, "Identification and Perceptions of Sustainable Tourism Indicators in Rural America: Identifying Secondary Indicators With  Academics and Destination Stakeholders," Burlington, VT. (June 12, 2024).

Martin, M. (Author & Presenter), Strager, J. M. (Author), Arbogast, D. W. (Author & Presenter), Deng, J. (Author), WV GeoCon, "Aiding Rural Communities' Recreation and Tourism Economic Development Efforts via Asset Mapping and Dashboard Development," Charleston, WV. (May 7, 2024).

Eades, D. C. (Author & Presenter), Arbogast, D. W. (Author & Presenter), Goetz, S. (Author), Southern Regional Science Association Conference, "Integrated Partnerships to Enhance Rural Tourism Economies," Arlington, VA. (April 5, 2024).

* **Refereed Conference Proceedings:**

Deng, J., Eades, D. C., Arbogast, D. W., Lindblom, J. (2023). Perceptions of Sustainable Tourism Indicators in Rural America: Consensus on Priority Indicators and an Importance-Performance Analysis for the Upper Valley Region of Vermont and New-Hampshire. *Northeast Travel and Tourism Research Association 2023 Conference Proceedings*. Travel and Tourism Research Association. https://www.nettra.org/2023-conference-proceedings.html

Eades, D. C., Arbogast, D. W., Goetz, S., Han, L. (2024). Developing and Deploying Rural Sustainable Tourism Indicators for Improved Destination Management. *Travel and Tourism Research Association 2024 Conference Proceedings*. Travel and Tourism Research Association.

* **Refereed Journal Articles:**

Han, L., Eades, D. C., Arbogast, D. W., Goetz, S. (Submitted) Economic, Social, and Environmental Drivers of Resilience and Recovery of U.S. Counties during the COVID-19 Pandemic. *Current Issues in Tourism, 0*(0), 1-21.

Martin, M., Deng, J., Arbogast, D. W., Pierskalla, C. D. (in press). Evaluating residents’ attitudes toward the recreation economy within the Monongahela National Forest region. *Special Issue: The Outdoor Economy: The Intersection of the Outdoor Recreation Industry, Vibrant Communities, and Public Lands*. Journal of Outdoor Recreation, Education, and Leadership.

Pierskalla, C. D., Arbogast, D. W., Casseday, D., Deng, J., Eades, D. C., Haas, V., Smaldone, D. A., Twilley, D. L., Weddell, M., Williamson, A. (in press). Examining Progression in Mountain Bike Specialization: A Nationwide Study: Progression in Mountain Bike Specialization. *Special Issue: The Outdoor Economy: The Intersection of the Outdoor Recreation Industry, Vibrant Communities, and Public Lands*. Journal of Outdoor Recreation, Education, and Leadership.

Arbogast, D. W., Eades, D. C., Deng, J., Butler, P. M. I., Strager, J. M. (Resubmitting) Mon Forest Towns - Advancing Recreation Economies through Collective Impact. *Journal of Park and Recreation Administration*.

* **Grants, Contracts, and/or Other resources obtained by one or more project members as a result of the project's activities (include the recipients, funding source, amount awarded and term if applicable):**

Arbogast, D.W. (Principal), Deng, J., Eades, D., Goetz, S., Schmidt, C., Crissy, H., Chase, L., Whitman, P., “Tourism, Resiliency, and Indicators for Post-Pandemic Planning,” Sponsored by U.S. Department of Agriculture Program Area: Agriculture Economics and Rural Communities (AERC) Program Area Priority: Rural Economic Development, Code: A1661, Federal, $648,285.00. (January 1, 2022 - December 31, 2026).

Arbogast, D.W. (Principal), “Activating USDA Partnerships to Advance Recreation Economies,” Sponsored by Extension Foundation, Federal, $19,996.00. (February 1, 2024 – September 1, 2025).

Arbogast, D.W. (Principal), Eades, D., Singh-Knight, D., Savage, A., Knollenberg, W., Frazier, M. “The Rural Tourism Institute: Leveraging Land-Grant Universities to Support Sustainable Rural Tourism Development in Appalachia,” Sponsored by Appalachian Regional Commission, ARISE, Federal, $611,365.00. (June 1, 2024 – June 1, 2025).

Deng, J., Eades, D. C., Arbogast, D. W., "River Park Visitor Profile and Economic Impact Analysis," Sponsored by Canal Place Preservation and Development Authority, West Virginia University, $24,886.93. (October 2, 2023 - February 1, 2024).

Arbogast, D. W., Eades, D. C., Deng, J., "Pocahontas County Economic Impact of Tourism Study," Sponsored by Pocahontas County Convention and Visitors Bureau, West Virginia University, $36,586.57. (January 1, 2023 - February 1, 2024).

* **Grants, Contracts, and/or Other resources identified for potential funding by one or more project members**

Pan, B. (Principal), Van Berkel, D., Arbogast, D., Qian, X., Goetz, S., Schmidt, C., Tomkins, S., “Rural Tourism Development with Big Data and Artificial Intelligence,” (**Not funded**) Sponsored by U.S. Department of Agriculture Program Area: Agriculture Economics and Rural Communities (AERC) Program Area Priority: Rural Economic Development and Data Science for

Food and Agriculture Systems, Federal, $650,000.00. (July 1, 2024 - December 31, 2028).

**Utah State University**

* **Name of the Extension/Research Faculty/Researcher(s):** Kynda Curtis
* **Title(s):** Professor and Extension Specialist
* **Specialization(s):** Consumer economics, food marketing, agritourism
* **University/Institution Address:** Utah State University
* **Email(s):** kynda.curtis@usu.edu

**Brief Description of project activities and outcomes that relate to NE2251 Objectives. Please consider including the list of items below as appropriate and relevant to the project.**

**Brief Description of project activities and outcomes that relate to NE2251 Objectives. Please consider including the list of items below as appropriate and relevant to the project.**

Activity

(Organized and specific functions or duties carried out by individuals or teams using the scientific method to reveal new knowledge and develop new understanding.)

Conducted online surveys of wineries, breweries and distilleries in the US West in the Fall of 2022. Research purposes include 1) Examine resiliency factors in rural drink tourism enterprises, which builds on rural winery resiliency research conducted with S. Slocum, published in Sustainability, and 2) Examine opportunities and hurdles for women in drink tourism enterprises/industry. One M.S. student is working on his thesis on research area 1) described above and will be presenting initial results at the Applied and Agricultural Economics Association annual meeting in July 2024. A new UAES (Utah Agricultural Experiment Station) project was approved and funded and will start on July 1, 2024.

**Outputs and Dissemination**

**Academic Presentations:**

* Salvi, C., and K. Curtis. “Determining Factors of Wine Industry Resiliency: A Covid-19 Case Study.” To be presented at the Applied and Agricultural Economics Association annual meeting in July 2024.

**Refereed Conference Proceedings:**

* Curtis, K, (forthcoming 2024). “Role of Women in the Drink Tourism Industry and Associated Impacts on Rural Economic Development.” *Proceedings of the 2023 National Extension Tourism Network Conference*.

**Grants, Contracts, and/or Other resources obtained by one or more project members as a result of the project's activities (include the recipients, funding source, amount awarded and term if applicable):**

* Curtis, K. (PD). “Resiliency Factors in Rural Food and Drink Tourism Operations: Lessons Learned and Strategies Moving Forward.”Utah Agricultural Experiment Station Project, 2024-2029. $550,000

**Grants, Contracts, and/or Other resources identified for potential funding by one or more project members**

* Curtis, K., O. Sleipness, and J. Schad. “Assessing and Building Resiliency in Utah’s Rural Communities: COVID-19 Impacts on the Food and Drink Tourism Industry.” Utah Agricultural Experiment Station Seed Grant. Applied January 2024. Not funded.

**North Carolina State University**

**Name of the Extension/Research Faculty/Researcher(s). If submitting as a team please include all participants/contributors and define their role(s):**

* + Whitney Knollenberg, Associate Professor, Department of Parks, Recreation and Tourism Management
  + Ann Savage, Tourism Extension Associate

**Title(s):**

**Specialization(s):**

* + Tourism, Advocacy, Leadership, Collaboration, Community Engagement

**University/Institution Address:**

* + College of Natural Resources

NC State University

2820 Faucette Drive

Raleigh, NC 27695

**Email(s):**

* + whitney\_knollenberg@ncsu.edu
  + [aesavage@ncsu.edu](mailto:aesavage@ncsu.edu)

**Activity**

**(Organized and specific functions or duties carried out by individuals or teams using the scientific method to reveal new knowledge and develop new understanding.)**

1. ***North Carolina Local Food Program Team Economic Impact Working Group Food Systems Disaster Needs Assessment*. (*LFPT*)**
   1. Project was developed as a response to the disruptions caused by the COVID-19 pandemic and other natural disasters that occurred during that time to better prepare North Carolina county extension professionals to both respond to disaster and identify needs for longer-term recovery
2. ***Promoting sustainable state park management in North Carolina through the identification of equitable pricing strategies.* Funder: NC Dept of Cultural & Natural Resource*s* (*NCSP*)**
   1. Designed as a response to the unsustainable continued growth of visitors to the NC State Parks while the funds for operation and maintenance remain more the same. The project team has set out to identify potential management actions that can increase revenue and disperse users as well as, more specifically, identify barriers for people of color to accessing parks and recreation areas.
3. ***Establishing tools to measure the relationship between travel and retirement decisions in North Carolina*. Funder: Visit NC (*Retire NC*)**
   1. Working closely with the state tourism office, the team identified the relationship travel plays in the retirement decisions of those interested in retiring to North Carolina. The team identified a suite of factors potential retirees consider and the importance of these factors in their decision-making.
4. ***Leveraging technology to promote local food systems: A user typology and itinerary functionality assessment of the Visit NC Farms mobile app* Funder: USDA NIFA AFRI Education and Workforce Development Program (*Visit NC Farms*)**
   1. Use of semi-structured interviews with app administrators and survey with current and potential app users to identify opportunities to enhance app engagement and benefits.
5. ***Synergies in Tourism and Craft Beer Production (Craft Beer)***
   1. The team has been crafting ways for the craft beer industry to understand their role in tourism. Additionally, the team is currently working on creating stronger ties between North Carolina farmers and brewers. Funding sough through SARE (pre-proposal not accepted) and NC Specialty Crop Block Grants (under review)
6. ***Sustainable Tourism Case Study Clearinghouse (Case Studies)***
   1. Undergraduate students utilize feedback from destination organizations and tourism professionals to develop case studies highlighting solutions to major challenges the tourism industry faces (e.g., Affordable Workforce Housing)
7. ***North Carolina Oyster Trail (NCOT)***

***Leveraging Direct-to-Consumer Marketing & Tourism to Diversify Income Streams for Seafood producers.* Funder: US Dept. of Commerce *(NCOT)***

* 1. Training, marketing assistance and network building for N.C. commercial fishers and marine aquaculture producers who are wading into tourism sector.

Multi-step process for identifying existing mariculture tourism assets and market demand for mariculture tourism in coastal NC communities. Supported the development of experiences on the North Carolina Oyster Trail (NCOT).

1. ***Engaging oyster growers to expand coastal monitoring (See Salt)***
   1. The development of a water salinity monitoring program built upon data gathered by oyster growers. This user-generated data provides key insights for oyster health and consumer safety and has the potential to serve as an education tool for oyster tour participants. Interviews with oyster growers in the pilot phase to determine challenges, opportunities, and potential uses of this data.
2. ***DMO Data Toolbox White Paper series (White Paper Series)***
   1. Overview of techniques to assess the appropriate use of different data types to inform tourism marketing and development decisions. Developed in partnership with a variety of tourism data vendors, supported by the Travel and Tourism Research Association, and reviewed by a panel of destination management professionals.
3. ***Promoting North Carolina Outdoor Recreation Stewards (ORS)***
   1. Working with state government programs to assess how this program can be adapted to support other areas of the state going through the Creating Outdoor Recreation Economies program or other county extension offices that are interested.
4. ***Supporting Agritourism Development and Sustainability throughout North Carolina (Agritourism)***
   1. Supporting partners, county extension offices and others by providing presentations and webinars on varying aspects of agritourism development.
5. ***Launching the North Carolina First Impressions Program (First Impressions)***
   1. A program to pair communities and use local experts as secret shoppers in their sister community to provide feedback via a survey and spawn new ideas for their own communities. A final presentation of results are provided to each community and if desired a final meeting with the sister communities is set up to discuss ideas and inspiration from their sister community.
6. ***Rural Tourism Institute***
   1. Collaborating with the University of West Virginia and the University of Kentucky extension and academic faculty to develop a Rural Tourism Institute that includes three components: the Rural Tourism Academy, Rural Tourism Lab, and Rural Tourism Peer Network. The RTI will support rural destination organizations and cooperatively create a sustainable rural destination management ecosystem.

**Short term outcomes**

**(Quantitative measurable benefits of the research outputs as experienced by those who receive them. Examples: adoption of a technology, job creation, access to more nutritious food, change in policy.)**

1. Retire NC
   * Results shared with 7 communities and state DMO to support more strategic, efficient marketing efforts
2. White Paper Series
   * Enabled conversations of destination marketing organizations around research and university partnerships among over 100 DMO and faculty participants
3. ORS
   * First step to outdoor recreation plan in place for Montgomery County to use in their next state run project.
4. Agritourism
   * Between webinars and presentations about 50 farmers, community business representatives and farm enthusiasts have learned the steps to adding these activities on the farm and the value these agritourism activities can provide for a community.

**Milestone**

**(Key intermediate target necessary for achieving or delivering outputs of a project within an agreed timeframe. Useful for managing complex projects.)**

**Intended potential long-term outcomes and impacts**

**(Committees should build information around the activity's milestones, as identified in the original proposal. The report should also reflect on the items that stakeholders want to know, or want to see. If the committee is filing an annual report, the impacts will cover only the current year of the project; for termination reports, list impacts from the entire span of the project.)**

**Outputs and Dissemination**

***Numbers correspond to project activity numbers above***

* **Outreach/Industry Presentations:**

1. Craft Beer
   * Knollenberg, W. & Savage, A. & (2023, November). *Your use and interest in local agricultural products in beer production*. Oral presentation at the North Carolina Craft Brewers Association Conference, Winston Salem, NC.
2. White Paper Series
   * Knollenberg, W., Blount, A., Braganza, C., Rudowski, M., & St. Germain, J. (2024, January). The future of data in marketing decision making. Oral presentation at the Marketing Outlook Forum, Houston, TX.
3. Agritourism
   * Savage, A., Kline, C., Bass, T., & Valle., J (2024). *UPLIFT Agritourism Webinar Series*, Virtual April 16, April 23, April 30, May 7, May 14 (Weekly, 5-part

1-hour webinar).

* + Savage, A. (2024). North Carolina Agritourism. Lincoln County Chamber of Commerce, Vale (NC), April 25 (3-hour meeting, Invited).
  + Savage, A. (2023). *Building Trails on Your Property. NC Tree Farm Webinar Series*, Virtual, Nov 2 (1-hour webinar, Invited).
  + Savage, A. (2023). *North Carolina Agritourism*. Cary Newcomers Group, Cary (NC), Oct 4 (1-hour meeting, Invited).
* **Outreach/Industry Publications:**
  1. LFPT
     + Savage, A. & Prickett, E. (2024). Food Systems Disaster Needs Assessment 2023-2024. Technical Report. DOI: https://repository.lib.ncsu.edu/bitstreams/b25e09ec-d1f0-410b-b401-0ab2723e00 08/download
  2. NCSP
     + Smith, E., Thompson, K., Knollenberg, W. & Savage, A. (2024). U.S. State Park Systems Pricing Strategies for Revenue Generation. Available at: https://tourism.ces.ncsu.edu/site-tourism-4/tourism-resources/partner-research-ou tputs/u-s-state-park-systems-pricing-strategies-for-revenue-generation/
  3. Retire NC
     + Savage, A. & Knollenberg, W. (2024). Understanding Profiles of Potential NC Retirees. Factsheet. DOI:

https://repository.lib.ncsu.edu/bitstreams/35165eaf-04ad-414b-bbe3-507503c2c7 a2/download

* + - Knollenberg, W., Savage, A., Nabors, A., Taylor, M., & English, A. (2024). Understanding the Relationship between Travel and Retirement Decisions in North Carolina. Available at: https://[www.youtube.com/watch?v=3xvNN1jq-AA](http://www.youtube.com/watch?v=3xvNN1jq-AA)

1. Case Studies
   * Bracken, M.\*, Srinivasan, C.\*, & Knollenberg, W. (2024). Sustainable tourism case study: Voluntary visitor fee programs. Available at: https://go.ncsu.edu/u1zj8kv
2. NCOT
   * Savage, A. & Harrison J. (2024). Is Agritourism Right for Your Shellfish Mariculture Operation? Factsheet. DOI: https://repository.lib.ncsu.edu/bitstreams/0556d6b1-5b5c-4d31-a789-17a8fe8063 cb/download
   * Harrison, J. & Savage A. (2024). Aquaculture Tour Plans & Boat Safety Guidance for Shellfish Tours. Factsheet. DOI:

https://repository.lib.ncsu.edu/bitstreams/13ccd30b-beeb-4a99-83f6-ff2de3d0e5a 4/download

* + Knollenberg, W., Yeager, E., Barbieri, C., & Harrison, J. (2023). Visitor profiles inform the development of oyster tourism in North Carolina. North Carolina Cooperative Extension Service, Raleigh, NC. Available on-line at: https://content.ces.ncsu.edu/visitor-profiles-inform-development-of-oyster-touris m-in-north-carolina

1. White Paper Series
   * Knollenberg, W. (2024). Why DMOs need a data toolbox to make evidence-based decisions. Available at: https://go.ncsu.edu/dmodatatoolboxwhitepaper1
   * **Academic Presentations:**
2. NCSP
   * Savage, A. Smith, E., & Knollenberg, W. (2024, June). *Exploring*

*Revenue-Generating Strategies for U.S. Parks and Recreation Areas*. Poster Presentation at the Travel and Tourism Research Association (TTRA) International Conference, Burlington, VT.

1. Retire NC
   * Savage, A., Taylor, M., Knollenberg, W., & Nabors, A. (2024, June). *It Takes a Village: Collaborating to Understand the Role of Travel in Retirees Migration Decisions*. Oral Presentation at the Travel and Tourism Research Association (TTRA) International Conference, Burlington, VT.
2. Visit NC Farms
   * Brune, S., & Knollenberg, W. (2024). Motivations and preferences in agritourism mobile apps: Preliminary findings. Poster Presentation at the Travel and Tourism Research Association (TTRA) International Conference. Burlington, VT.
3. Agritourism
   * Baby, J., Barbieri, C., & Knollenberg, W. (2024, June). Personal attributes that predict perceived importance of creativity: The agritourism context. Oral presentation at the Travel and Tourism Research Association (TTRA) International Conference. Burlington, VT.
   * **Refereed Conference Proceedings:** NA
   * **Refereed Journal Articles:**

2. NCSP

* Smith, E., Knollenberg, W., Seekamp, E., Lee, K., and Savage, A. (2024). Gateway community stakeholders’ perceived impacts of protected area management actions: The case of North Carolina (U.S.) state parks. *Journal of Outdoor Recreation and Tourism, 47,* 100792. doi.org/10.1016/j.jort.2024.100792.

1. Craft Beer
   * Gil Arroyo, C., Knollenberg, W., & Barbieri, C. (2024). The craft beverage tourism research agenda: Recommendations to move forward. *Annals of Tourism Research Empirical Insights, 5*(1), DOI: 10.1016/j.annale.2024.100123
2. Agritourism
   * Savage, A. E., & Barbieri, C. (2024). Are All Farmers Challenged Equally? Women Farmers’ Perceived Standing As Compared to the Others. *Journal of Rural and Community Development*, *19*(2).
   * Brune, S.\*, Knollenberg, W., & Vila, O. (2024). Building tourism resilience through communication. Tourism and Hospitality, 5(1), 51 – 59. DOI: 10.3390/tourhosp5010004
   * Baby, J., Barbieri, C., & Knollenberg, W. (2023). How memorable are agrifood travel experiences? Tourism and Hospitality, 4(4), 576 – 583. DOI: 10.3390/tourhosp4040035
   * **Book Chapters: N/A**
   * **Grants, Contracts, and/or Other resources obtained by one or more project members as a result of the project's activities (include the recipients, funding source, amount awarded and term if applicable):**
3. See Salt
   * Nelson, N., Knollenberg, W., Ben-Horin, T., Ardon, M., Osburn, C., & Herbst, E. Engaging oyster growers to expand coastal monitoring. NC State University Research Innovation Seed Funding, $93,642, February 2024 – January 2025.
   * **Grants, Contracts, and/or Other resources identified for potential funding by one or more project members**

5. Craft Beer - Working with NC Craft Brewers Guild to apply for a grant (e.g., Specialty Crop Block Grant) to support local farmers sourcing to local brewers

13. Rural Tourism Institute - Grant submitted to Appalachian Regional Commission ARISE program for planning the Rural Tourism Institute

**Texas A&M University**

* **Participant**
  + Dr. Brian King (Professor and Department head of Hospitality, Hotel Management and Tourism at Texas A&M University)
    - Lead the project - establishing conceptual frameworks, identifying local stakeholders, and contacting stakeholders.
  + Seunghoon Lee (Ph.D. Candidate of the Department of Hospitality, Hotel Management and Tourism at Texas A&M University)
    - Assist the project – researching the previous literature and preparing data collection.
* **Title(s):** Assessing the Impact of Local Partnerships and Leadership on Rural Tourism Business Resilience
* **Specialization(s):** Resilience, non-metropolitan area, tourism businesses
* **University/Institution Address:** Texas A&M University / 400 Bizzell St, College Station, TX 77843
* **Email(s):** [**Brian.king@ag.tamu.edu**](mailto:Brian.king@ag.tamu.edu) **/** [**shlee@tamu.edu**](mailto:shlee@tamu.edu)

**Brief Description of project activities and outcomes that relate to NE2251 Objectives.**

Activity

Dr. Brian King

* Developed a conceptual framework to assess the resilience, adaptability, and recoverability of local businesses, with a focus on tourism businesses, in the non-metropolitan area of Bryan / College Station, TX, in response to external shocks.
* Identified stakeholders for the conduct of meetings.
* Participated regularly in meetings of local community partners and introduced the research.

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<Dr. King speaking in the Destination Bryan Community Partners Meeting on March. 6>

* Started working on data analysis with Seunghoon Lee.
* Attended TTRA to present the research and solicit feedback.

Seunghoon Lee

* Conducted a comprehensive search of existing literature relevant to the project objectives.
* Interviewed local businesspeople (19 as of June. 6).

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<Interviewee information>

* Started analyzing interview data.
  + The themes identified from the data suggest that the impact of local community partnerships and leadership can be considered a form of social support.
    - Information sharing and provision
    - Networking and collaboration
    - Promotion and marketing support
    - Emotional support
    - Infrastructure and facility support
* Worked on survey questions for quantitative analysis.
* Attended TTRA to present the research and solicit feedback.

Short term outcomes

(Quantitative measurable benefits of the research outputs as experienced by those who receive them. Examples: adoption of a technology, job creation, access to more nutritious food, change in policy.)

1. Academic outcomes
   1. Publication in relevant tourism journals
   2. Conference presentations
2. Practical outcomes
   1. Policy recommendation
      1. BCS (Bryan/College Station) Chamber of Commerce
      2. Brazos Valley Hospitality Association
      3. Destination Bryan (destination marketing organization for Bryan)

Milestone

(Key intermediate target necessary for achieving or delivering outputs of a project within an agreed timeframe. Useful for managing complex projects.)

|  |  |
| --- | --- |
| **Projected Dates** | **Event** |
| October, 2023 | * Meet with the Chief Executive of *Destination Bryan* * Finalize the research framework |
| November, 2023 | * Select interview participants * Prepare interviews and survey questions |
| December - March, 2024 | * Contact interview participants * Start writing papers for publication * Attended Community Partners meeting |
| April - June, 2024 | * Conduct interview * Attended Community Partners meeting |
| July - September, 2024 | * Analyze interview data * Conduct Survey * Finish writing papers and submit |
| October - December, 2024 | * Analyze Survey data * Writing research paper |

Intended potential long-term outcomes and impacts

(Committees should build information around the activity's milestones, as identified in the original proposal. The report should also reflect on the items that stakeholders want to know, or want to see. If the committee is filing an annual report, the impacts will cover only the current year of the project; for termination reports, list impacts from the entire span of the project.)

1. Academic outcomes and impacts
   1. Enhancing understanding of the non-metropolitan area tourism sectors and their resilience and adaptive strategies for external shocks.
   2. Providing guiding principles for improving resilience and adaptability in local tourism businesses and partnerships
2. Practical outcomes and impacts
   1. Policy guidelines: offering insights for policymakers to support tourism businesses in non-metropolitan area during and after crises
   2. Strategic planning for local businesses: providing real examples of resilience-building for other partnerships and networks in non-metropolitan area.
   3. Crisis management: lessons from this project may be applied to future crises
   4. Education and training: establishing education programs designed to train future leaders of local partnerships and networks, including local business owners
   5. Sustainable local tourism: contributing to encourage local actions for sustainable and responsible tourism

**Outputs and Dissemination**

We attended two community partner meetings and introduced our research project. We also attended the TTRA conference to present our research project and seek feedback.

**East Carolina University**

* **Participant**
  + Dr. Emily Yeager
* **Title(s):** Assistant Professor Department of Recreation Sciences, Interim Director of the Crisp Small Business Resource Center in the Miller School of Entrepreneurship
* **Specialization(s):**
* **University/Institution Address:** East Carolina University
* **Email: yeagere18@ECU.EDU**

Here at ECU, one of the primary related initiatives that we are working on is the continued development of a template for regional rural sustainable community development anchored in recreation and tourism. The template is called “Blue Economy Corridor”.

We are piloting this template in the Tar-Pamlico River Basin: <https://storymaps.arcgis.com/stories/7b317fd4dd0445a7928b29a03d524857>.  We have received official approval of the certification trademark for the BEC ensuring that we can attach certification guidelines based on a triple bottom line approach towards sustainable community development.

* We were able to publish about the framework:

*Yeager, E.,*Bee, B., Hou, AJ.\*, Cash, T.\*, Dew, K.\*\*, Dickerson, D., White-Singleton, K.\*, Schilling, M.\*\*, Jones, S.\*\*. A Process for Developing a Blue Economy Corridor (In Press) *Journal of Higher Education and Outreach.*

* Additionally, I am leading ECU’s involvement with the NC Department of Commerce Creating Outdoor Recreation Economies (CORE) program: <https://www.commerce.nc.gov/news/press-releases/2023/01/30/north-carolina-selects-34-communities-creating-outdoor-recreation-economies-core-program#:~:text=According%20to%20the%20U.S.%20Department,billion%20in%20compensation%20for%20employees>.