

SOUTHERN CLIMATE IMPACTS PLANNING PROGRAM

2025–2026

ANNUAL REPORT



The work highlighted in this report covers the performance period of June 1, 2025 – May 31, 2026, and is supported by the National Oceanic and Atmospheric Administration's Climate Program Office through grant #NA21OAR4310306.

Table of Contents

Meet The Team	1
Featured Accomplishment	2
New Focus/Partnerships	4
Research Highlights	5
State and Local Engagement	8
Challenges	11
Next Steps	11
Evaluation	13
Evidence of Societal Impact	13
Narrative Impact Stories.....	17
References	21
Appendix A: Publications	23
Appendix B: Presentations.....	25



MEET THE TEAM

Core Office & Investigators

- Rachel Riley, PI - OU (Director)
- Mark Shafer, PI - OU (Deputy Director)
- Vincent Brown, PI - LSU (Climate Research Director)
- Barry Keim, PI - LSU HSC (Investigator)
- Trey Bell - OU (Engagement Associate)
- Darrian Bertrand, Co-PI - OU (Climate Assessment Specialist)
- Caylah Cruickshank, Co-PI - OU (Program Manager)
- Josephine Kilgore* - OU (Student Climate Communications Assistant)
- Derek Thompson - LSU (Research Associate)

The Southern Climate Impacts Planning Program (SCIPP) is a NOAA-funded Regional Integrated Sciences and Assessments (RISA) team, which conducts research to understand climate hazard trends and patterns that are useful to decision makers, convenes decision makers from local, state and national organizations to solve complex problems, and co-produces data tools and information that are useful to a variety of audiences. SCIPP is a partnership between the University of Oklahoma (OU), Louisiana State University (LSU), Louisiana State University Health Sciences Center (LSU HSC), Texas Sea Grant at Texas A&M University, and Adaptation International (AI). Our ultimate goal is to help the people and economies of the south central region thrive in the midst of highly variable and often extreme weather conditions.

Co-Principal Investigators & Researchers

- Aimee Franklin, Co-PI - OU
- Christine Hale*, Investigator - Texas Sea Grant
- Scott Hemmerling*, Investigator - LSU HSC
- Cassandra Jean - Adaptation International (Climate Resilience Specialist)
- Lauren Mullenbach, Co-PI - OU
- Sascha Petersen, Co-PI - Adaptation International
- Laura Picariello, Co-PI - Texas Sea Grant
- Celine Rendon - Adaptation International (Climate Resilience Specialist)

Senior Personnel

- Ioana Cionea - OU
- Renee Edwards - LSU
- Renee McPherson - OU
- Randy Peppler - OU

Students

- Denis Cheruiyot, Graduate Student - OU
- Sadé Miller, Graduate Student - LSU
- Olivia Van Buskirk, Graduate Student - OU

Advisory Committee

- Nelun Fernando - Texas Water Development Board
- Jordan Fischbach - Water Institute of the Gulf
- Michael Hayes - University of Nebraska-Lincoln
- Kim Jenson - Oklahoma City Emergency Management
- Julie Lively - Louisiana Sea Grant
- Tim Lovell - Disaster Resilience Network
- Michelle Meyer - Hazard Reduction and Recovery Center, Texas A&M University
- Leif Olson - City of Fayetteville, AR

FEATURED ACCOMPLISHMENT

Integrated Research and Engagement for Resilience in Shreveport, Louisiana

This year, SCIPP's featured accomplishment reflects the culmination of research projects and engagement efforts in Shreveport, Louisiana. Shreveport is a city of about 187,593 (U.S. Census Bureau, 2020) people and is located in northwest Louisiana. Synergistic activities across research themes allowed for a deep dive into the city's weather-related challenges, and provided local city officials and community leaders with recommendations, tools, and resources to act on the issues that impact them. Beyond research, SCIPP acted as a convener, nurturing the ability of several organizations to self-organize and build their networks to expand their solutions to the impacts of weather. A detailed story map summarizing SCIPP's efforts in Shreveport is currently in development. Described below are the projects and related outputs.

- **Providing Key Resources to Decision-Makers: “Extreme Weather and Resilience Workshop Summary” & “Climate of Shreveport, Louisiana” Documents**
- 🔍 **Investigators: Mark Shafer, Trey Bell, Darrian Bertrand, Vincent Brown, Derek Thompson**

As highlighted during the previous reporting period, SCIPP hosted an Extreme Weather and Resilience Workshop in Shreveport, LA (March 2025) to further examine opportunities to build resilience. Participants from city departments and partners collaborated with SCIPP staff to examine the greatest weather-related challenges the city faces.

Three topics emerged: High winds and storms; heat and cold; and intense rainfall. This year, an official workshop [summary report](#) was released in May 2026, which highlights the discussion and recommendations related to these three areas, along with general community preparedness. A [“Climate of Shreveport, Louisiana” report](#) was also published alongside the workshop summary, and provides a concise summary of the climate and extreme weather events that affect the city of Shreveport. This information was presented to the city, and could be used to help inform planning and preparedness for extreme weather events now and in the future. **“We are eager to tackle the recommendations from the report and help our neighborhoods become better prepared to deal with adverse weather conditions.”**

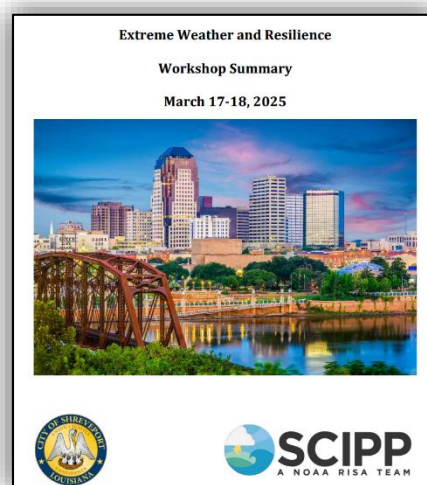


Figure 1. Cover page for the Shreveport, LA workshop summary report.

Continuing our partnership with SCIPP is vital to these efforts.” – Mayor Tom Arceneaux, City of Shreveport.

➤ **Embedding Engagement Throughout: Shreveport Disaster Resilience Community Network Workshop**

🔍 **Investigators: Cassandra Jean, Celine Rendon, Sascha Petersen, Darrian Bertrand, Vincent Brown, Caylah Cruickshank, Derek Thompson**

In August 2025, other SCIPP team members (Jean & Rendon) hosted the Shreveport Disaster Resilience Community Network Workshop. This in person event turned the focus to local community members, aiding to paint a more complete picture of the resilience efforts across Shreveport (beyond the city official perspective). At the workshop, 34 community members, organizational leaders, and neighborhood representatives gathered to share lessons from past disasters, identify resilience priorities, and co-develop strategies for a stronger, more resilient Shreveport. The workshop also featured presentations from additional SCIPP staff, where relevant [decision-support tools](#) related to extreme events were explained and contextualized for the public. Community members emphasized the need to develop responses to extreme weather events and power outages. Suggestions for doing so include investing in workforce development and resilience hubs across neighborhoods. **As a result of these conversations, workshop takeaways from were highlighted in a [report](#), and initial work on developing a Shreveport resilience hub network has begun (read more on p.14).**



Caption: Workshop attendees contribute to a community mapping activity in August 2025.

➤ Identifying Local Government Efforts and Challenges

🔍 **Investigators:** Denis Cheruiyot, Lauren Mullenbach, Mark Shafer, Olivia Van Buskirk

SCIPP's research on fiscal decentralization and implications on disaster risk reduction in Shreveport concluded during the previous reporting cycle. Data analyses were based on key city documents (N = 9; master plan, the City's consolidated plans, emergency operations plan, capital improvement plans, Caddo Parish hazard mitigation plan, climate resilience and adaptation strategies, Consolidated Annual Performance and Evaluation Report, and flood hazard awareness brochures), key informant interviews (N = 7), and budgetary data. The results suggested that while the city may have benefited from federal hazard mitigation funding in the past, the rigidity of the types of funds makes it difficult for Shreveport to proactively invest in risk reduction initiatives. Progress is being made towards publishing a journal article on this research. Subsequent research in fall 2025 (Mullenbach & Van Buskirk), showed that there is also a mismatch between local priorities and budgetary allocations. This leads to challenges in translating federal or state mandates into contextualized resilience strategies. Following interviews with additional local government officials (N = 4), key challenges and opportunities within city decision-making and planning were identified. These interviews touched on topics including water resources and management, grants management, public works, and sustainability efforts. Collaborating with other SCIPP investigators to build on existing resources in the city, Mullenbach and VanBuskirk have recently completed the Shreveport portion of their tri-city climate adaptation comparative study (see p.7).

Altogether, the results of these projects provide a multi-faceted view of the weather-related challenges Shreveport faces, the various ways local government officials and residents are working to address those challenges, and the fiscal realities (e.g., financial structures and associated constraints in being able to proactively address disaster issues) that are present.

NEW FOCUS/PARTNERSHIPS

Property Sector Professionals

In October 2025, Trey Bell, Darrian Bertrand, Caylah Cruickshank, Josephine Kilgore, Rachel Riley, and Mark Shafer hosted the Hazard Resilient Buildings Workshop (HRBW), with 31 professionals from the home builder, insurance, and real estate communities in central Oklahoma. The goal of this workshop was to raise awareness of weather and climate hazards that most impact these communities and showcase best practices for strengthening homes and buildings (e.g., through the Insurance Institute for Business and Home Safety's FORTIFIED program)s. Speakers illustrated strategies to increase building

resilience against common weather hazards in central Oklahoma, outlined in the [HRBW Summary Report](#). Participants engaged in group discussions and detailed needed resources to implement and educate home buyers on the presented strategies.

This workshop has enabled SCIPP to cultivate new relationships within the home builder, insurance, and real estate communities. As a result of partnerships formed through the HRBW, SCIPP Director Rachel Riley [moderated a panel at INSURCON](#) 2026 in April in Oklahoma City, focused on building practices that can reduce weather and climate impacts on homes and businesses. In May 2026, SCIPP Engagement Associate Trey Bell was invited to speak at the Region 9 REALTOR® Meeting for Arkansas and Oklahoma real estate professionals in September 2026.

Below is a list of speakers who participated in the HRBW, and their affiliations:

Speaker Name	Affiliation
Trey Bell	Southern Climate Impacts Planning Program
Rachel Gauthier	Insurance institute for Business & Home Safety
Jim LaDue	Amer. Soc. of Civil Engineers & American Metrological Society
Dr. Somik Ghosh	University of Oklahoma College of Architecture
Ashley Scott	Oklahoma Insurance Department
Brooke Troxmondo	Smart Home America
Scott McCollum	McRoof & Oklahoma Roofing Association
Jessica Thompson	Oklahoma City Metropolitan Association of REALTORS®

Figure 2. List of HRBW speakers and their affiliations.

RESEARCH HIGHLIGHTS

Building Capacity for Hazard Mitigation Planning in Low-Capacity Communities

As one of the projects under the *Climate-Informed Planning* research theme, SCIPP collaborated with the National Hazard Mitigation Association (NHMA) and FEMA Region VI to address the resource and capacity needs of hazard mitigation planners in the interior South Central United States. This focus group-based study, titled “Building Capacity for Hazard Mitigation Planning in Low-Capacity Communities”, was completed during the reporting period. The study involved 31 participants who worked in one or more low-capacity jurisdictions (that is, those that lacked grant management or technical capacity, resources, or public or political support with respect to hazard mitigation) across Oklahoma, Arkansas, Texas, and Louisiana. Participants were planners, emergency managers, and related officials whose work spanned approximately 160 jurisdictions across the region. This reporting cycle, Rachel Riley and Darrian Bertrand completed a [white paper](#) and four other deliverables (see below) in collaboration with the practitioner partners. The paper provides an overview of the study, identifies barriers to addressing current hazard-related challenges,

and delivers recommendations for actions that can be taken to improve hazard mitigation processes and outcomes.

Furthermore, on October 22, 2025, NHMA hosted a [webinar](#) where Riley presented about the research and its results. Approximately 90 people from across the country attended the webinar. During the event, Riley also showcased new resources and outputs that resulted from the research, including:

- An improved [hazard mitigation planning guide](#) to support professionals developing local hazard mitigation plans.
- A [list of eight training objectives](#) to inform the development of future training curricula.
- A [list of hazard mitigation messaging techniques](#) to help hazard mitigation planners more effectively communicate the importance and value of hazard mitigation.
- A [design concept](#) for a hazard mitigation action database that could assist professionals in identifying possible and effective mitigation actions for their jurisdiction(s).

Aside from persistent funding needs and the need for FEMA requirements to be streamlined, Figure 3 depicts the primary capacities and resources needed to improve hazard mitigation planning and implementation across the region:



Figure 3. Primary capacities and resource needs identified in the study.

Following the formal presentation, three local and state practitioners provided their perspectives regarding training needs and strategies to strengthen local resilience efforts. Panelists included Annie Mack Vest of the **Oklahoma Department of Emergency Management**, Tracee McKenna of the **Western Arkansas Planning and Development District**, and Tina Cole of the **Northwest Arkansas Economic Development District**. The discussion concluded with input regarding the future of hazard planning and underscored the importance of distributing the proper training and resources to professionals in the

hazard mitigation field. The final project deliverable includes a journal article, which is in development.

Reduction in Freezing Temperatures and Tropicalization of the Temperate Climates

Another major regional research advancement over the past year was the completion ([publication in 2026](#)) and dissemination of research examining changes in winter temperatures, which are critical to the survival, distribution, and expansion of cold-sensitive tropical and subtropical species across the conterminous United States (Brown et al., 2026). The project originated through discussions with scientists at the USGS Wetlands and Aquatic Research Center in Lafayette, Louisiana, who observed ecological changes associated with the northward expansion of tropical species into temperate ecosystems due to milder winter temperatures. In response, SCIPP conducted research on species-relevant winter temperatures metrics, including daily minimum and maximum temperatures, the coldest temperatures, freeze-day frequency, and the seasonal timing and concentration of freezes. The resulting study quantified how these climatically and ecologically important thresholds have changed from 1952–2024, providing new evidence of ongoing tropicalization across large portions of the CONUS and particularly within the tropical-temperate transition zone of the southeastern United States.

To ensure the research and results were accessible to stakeholders, SCIPP developed an interactive web-based decision-support tool (<https://cmintemp.scipp.lsu.edu>) that provides historical trends and county-level time across the CONUS. Additionally, an analytics dashboard was created to track engagement with the tool and future iterations will elicit more detailed feedback from users (e.g., sector, intended use, suggested improvements, etc.). By translating peer-reviewed science into an operational resource, the tool supports resource management, conservation planning, and climate adaptation efforts while exemplifying SCIPP's stakeholder-driven, co-production approach to research.

Climate Adaptation and Capacity Building in Three Mid-Sized Cities

SCIPP's "Climate Adaptation and Capacity Building in Three Mid-Sized Cities" project examined the integration of climate-related actions across planning documents in three south central cities: Tulsa, OK; Fayetteville, AR; and Shreveport, LA. The comparative case study drew on four focus groups (23 participants), twelve interviews, and analysis of four planning documents.

During this reporting cycle, Lauren Mullenbach and Olivia Van Buskirk published case study results for Tulsa, OK and Fayetteville, AR, and completed data collection and analysis for

Shreveport, LA. Findings from the first two case studies were presented at the International Association for Society and Natural Resources (June 2025), and a [report](#) titled "Building Capacity and Preparedness for Extreme Weather Events in Shreveport, LA" was finalized. Some cross-city findings are summarized below (see figure 4). Lastly, a chapter abstract was submitted for consideration in an edited volume; the chapter would provide a comparative analysis of the three case studies.

Theme	Tulsa, OK	Fayetteville, AR	Shreveport, LA
A. State & Federal Government Priorities <i>Local values often conflict with higher-level governmental priorities and funding structures.</i>	Oklahoma's regulatory environment is broadly unfavorable to environmental initiatives.	State preemption legislation blocks locally driven initiatives.	Shifting federal grant timelines limit the city's capacity for capital investment.
B. Limited Local Government Capacity <i>Reduced and unstable funding streams limit municipal ability to sustain initiatives.</i>	Fragmented planning processes and closure of the city's sustainability office.	Both the city and non-profit partners are heavily reliant on grant funding.	Constrained grant-writing capacity compounded by long-term economic decline.
C. Reactive vs. Proactive Approaches <i>Due to limited resources, many proposed solutions for climate actions address problems as they arise rather than proactively planning for future challenges.</i>	Flood mitigation investments and post-event cleanup (e.g., Father's Day storm).	Engagement is reactive to projects already in the approval pipeline.	Poor air quality led to tree plantings, flood buyouts, and major gray infrastructure.
D. Piecemeal & Individual Solutions <i>Limited resources favor small-scale, individual-level actions over large-scale, transformative adaptation.</i>	Environmental work is primarily conducted by non-profits and community activists.	Mixed approach: the city is actively acquiring land and encouraging density.	Non-profits are the primary organizations addressing environmental challenges.

Figure 4. Some Cross-City Findings.

STATE AND LOCAL ENGAGEMENT

Contributing to Heat Awareness, Preparedness, and Action in Oklahoma City

SCIPP has sustained a strong relationship with the City of Oklahoma City Office of Sustainability for several years and, more recently, contributed to extreme heat resilience and preparedness efforts in the city. In 2023, we conducted a historical heat analysis for the City's involvement in the NOAA Urban Heat Island Mapping Campaign. In 2024, we presented at and participated in the NOAA/NIHHIS [Extreme Heat Tabletop Exercise](#) in Oklahoma City. This exercise allowed us to engage with a variety of city and county officials; health, transportation, and energy entities; and other local organizations on heat resilience resources and strategies. The culmination of these events and engagements was the

Oklahoma City Mayor issuing an official proclamation for Heat Safety Awareness Week for June 1-7, 2026. SCIPP was invited alongside Emergency Medical Services Authority (EMSA) representatives and a planner from the Office of Sustainability to meet with the mayor for this proclamation. In addition, the Office of Sustainability is releasing a major update to their sustainability plan, *adaptokc*, in which SCIPP provided a summer intern to assist with in 2025 (see p. 18 to learn more about the summer internship). SCIPP's expertise has, ultimately, contributed to heat awareness, preparedness, and action in Oklahoma City.



Caption: Representatives from SCIPP, EMSA and the OKC Office of Sustainability pose with Oklahoma City Mayor David Holt for the presentation of the heat proclamation in May 2026.

Gulf Resilience Community of Practice Grant Writing Workshops

In 2025, Texas Sea Grant co-hosted the Gulf Resilience Community of Practice Grant Writing Workshops. These workshops focused on how to secure funding to work on resilience issues such as hazard and risk prediction, reduction, preparedness, and recovery. Several local and state leaders/decision makers participated, including the Coastal Bend Council of Governments, Nueces County, Texas General Land Office, and Texas Parks and Wildlife. The endeavor paved the way for increased engagement and continued relationship-building with several decision-makers in the state of Texas. This community of practice builds on a previous grant writing workshop initiative in 2024, in which Caylah Cruickshank participated and presented on SCIPP decision-support tools.

Strengthening Connections in the State of Texas and the Region

SCIPP led the 2026 South Central Climate Resilience Forum (SCCRF), which occurred from April 15th-17th, 2026, in San Antonio, Texas. Building off the momentum from the [inaugural event in 2024](#), the Forum attracted nearly 175 participants from multiple sectors, including academia, private industry, government, and non-profit



Figure 5. SCCRf 2026 logo.

organizations, who were able to gather and build their networks.

SCIPP not only organized the event but was featured in [multiple presentations and workshops](#) across the three days.

The event provided an opportunity to share critical tools and resources, showcase new research, and expand engagement with professionals from across the region.

SCIPP worked alongside numerous organizations on the [planning committee](#), strengthening existing relationships and gaining new ones. These entities included universities, federally

funded regional climate and oceanic organizations, non-profits, and regional and local governments. SCIPP collaborated with multiple regional and local government entities, including the City of Austin, TX; the North Central Texas Council of Governments; the City of San Antonio, TX; the City of Yukon, OK; and the San Antonio River Authority.

We also worked closely with the U.S. Green Building Council (national program and Texas chapter). These partnerships strengthened coordination amongst the Texas entities and provided SCIPP with stronger relationships to further our reach in Texas and the region. The Forum ultimately allowed SCIPP to effectively engage with local stakeholders across our region and provided participants with connections and preparedness resources to take back to their communities.

Increasing Engagement with Arkansas Planning and Development Districts

In recent years, SCIPP formed new relationships with Arkansas Planning and Development Districts (PDDs) during our research project, “Building Capacity for Hazard Mitigation Planning in Low-Capacity Communities” (see p.5). SCIPP has since strengthened relationships with the PDDs this past year through multiple meetings with a group of Arkansas planners. This group was self-organized as a result of the previously mentioned research project, with the aim to coordinate hazard mitigation planning efforts, share lessons learned, and collaborate on funding and training opportunities. In the most recent meeting, SCIPP was invited to present the [Simple Planning Tool for Climate Hazards](#) (SPT)

and share relevant research and resources related to hazard mitigation. Through these interactions, we have become a trusted source of information for this group, expanded the use of the SPT, and gained new connections with **other PDDs**, the **Arkansas Department of Emergency Management**, and the **Arkansas Economic Development Institute**. These engagements will allow us to continue broadening our reach in Arkansas to build local capacity for hazard mitigation planning and preparedness.

CHALLENGES

Engaging Organizations Through Uncertainty

This reporting cycle presented challenges in engaging new and existing organizations. Shifts in the broader funding landscape created uncertainty for many organizations across the region, affecting their capacity to pursue grant funding opportunities and limiting their ability to travel to other engagement activities involving SCIPP (e.g.: to participate in conferences, workshops or other convenings). These effects were especially apparent at the 2026 South Central Climate Resilience Forum, where nonprofit representation was much lower than the previous event, and several of the organizations openly shared those challenges with us. To navigate these barriers, SCIPP was intentional about meeting partners where they were, and continued to build on existing connections.

NEXT STEPS

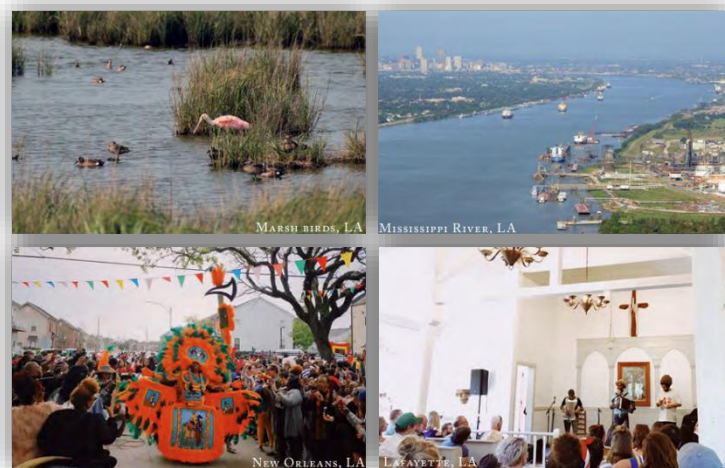
Forced Retreat of Coastal Populations Studies in Louisiana

Building on the recently completed “Forced Retreat of Coastal Populations – Study 1” research project, SCIPP will advance research and engagement on resident re-location due to extreme events in Louisiana and the Gulf Coast. The completed study, which was the M.S. thesis of LSU Baton Rouge GRA Sadé Miller (graduated in Spring of 2026), identified and ranked potential receiving communities spatially in ArcGIS using five priorities identified by Louisiana residents through surveys: access to health services, affordable housing, economic opportunities, public transportation, and quality education. Results were developed at the census tract and census place levels and highlighted areas that may be well-positioned to accommodate populations relocating from Louisiana's coastal zone.

The next steps of this research will expand on this foundation by conducting surveys and community engagement activities in both areas experiencing population loss and communities identified as potential receiving locations. This work will improve understanding of relocation decisions, community perceptions of residents moving into their towns, and local capacity to support population shifts. Following the survey phase, focus groups will be conducted in selected communities to provide deeper insight into the

survey findings and evaluate the index from the perspective of local residents and stakeholders.

Similar to the sequential explanatory mixed-methods approach employed by Hemmerling et al. (2024), participants will discuss community strengths, constraints, and perceptions regarding climate migration, as well as the extent to which the index reflects local conditions. Findings will be used to interpret survey results, identify additional indicators, and refine the community-weighted index. The resulting model will provide a more nuanced assessment of community suitability for receiving people who relocate due to natural hazards and support planning efforts that incorporate both quantitative data and local knowledge. By incorporating perspectives from residents and community stakeholders, the project will move beyond broad geographic indicators and areas to develop a more nuanced understanding of hazard-induced relocation, community resilience, and adaptation planning within Louisiana.



Caption: Photos of marsh birds (top left), the Mississippi River (top right), New Orleans, LA (bottom left) and Lafayette, LA (bottom right).

Gulf Resilience Community of Practice Annual Meeting 2026

The Gulf Resilience Community of Practice (Resilience CoP) was created by NOAA and the four Gulf-based Sea Grant Programs. It connects extension, outreach, education professionals, community-based organizations, and many other resilience practitioners with local leaders and decision-makers. Every year, the Resilience CoP convenes for their annual conference in a Gulf-based local community to exchange knowledge about implementing science-based strategies that protect coastal communities from sea-level rise, flooding, heat, and other climate related hazards and risks. In November 2026, Texas Sea Grant will host the 2026 Resilience CoP in Beaumont, Texas, a region with deep experience in both the research and real-world challenges of Gulf resources and coastal resilience. SCIPP partners will be in



Figure 6. Event flyer for the Community of Practice.

attendance and will participate through presentations, breakout discussions, and connecting tools, resources, and knowledge in this collaborative space.

Simple Planning Tool Evaluation

An evaluation of the [Simple Planning Tool for Climate Hazards](#) (SPT) will be conducted in the next year. An initial evaluation was conducted in 2019 (Riley 2021) but only included the states of Oklahoma and Arkansas as the tool was only available for those two states at the time. This time around, planners, emergency managers, and related officials across SCIPP's four states will be invited to participate in the evaluation.

The evaluation will investigate the tool's utility, the impact it has had at state and local scales, and the extent to which the number of users has increased since the prior evaluation.

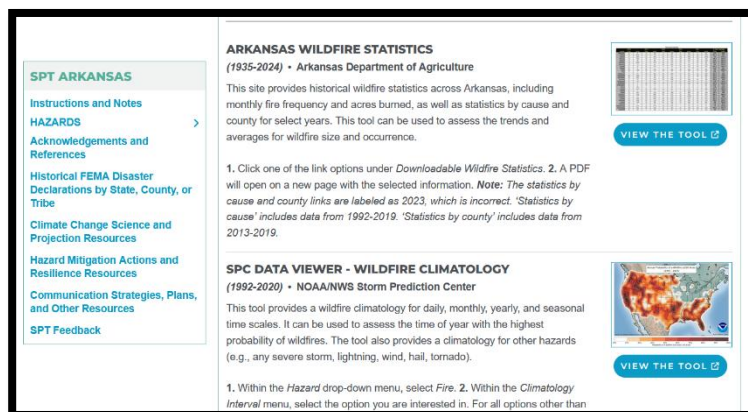


Figure 7. Screenshot sample of the SPT.

EVALUATION

SCIPP Phase IV Evaluation Summary Document

In 2026, SCIPP completed a [Phase IV summary evaluation report](#), which outlines all evaluation efforts throughout the grant cycle thus far. The Phase IV grant entailed multiple forms of evaluation. Summarized in the report is a multi-pronged approach of collecting feedback throughout the grant and implementing findings from such evaluation efforts, which was recommended in the concluding evaluation for SCIPP Phase III. In addition to incorporating previous evaluation recommendations, SCIPP evaluated several initiatives undertaken throughout the grant cycle. One of the major evaluation efforts this year was SCIPP's summer internship program (assessment procedures can be [found here](#)). The Phase IV report details the main evaluation projects, methodology, results, and outlines future recommendations for the program.

EVIDENCE OF SOCIETAL IMPACT

Providing Actionable Recommendations to City Leaders

In conjunction with Lauren Mullenbach and Olivia VanBuskirk's research and engagement efforts in Shreveport, LA (see p.7), they provided city representatives with actionable recommendations and first steps they can take to make Shreveport more resilient for all

residents. We anticipate that if they follow these recommendations, it will increase the capacity of the city to address weather-related challenges. Our primary contact with the City of Shreveport expressed gratitude for our [report](#), and explicitly mentioned the insight they gained from the study (see figure 8 below).

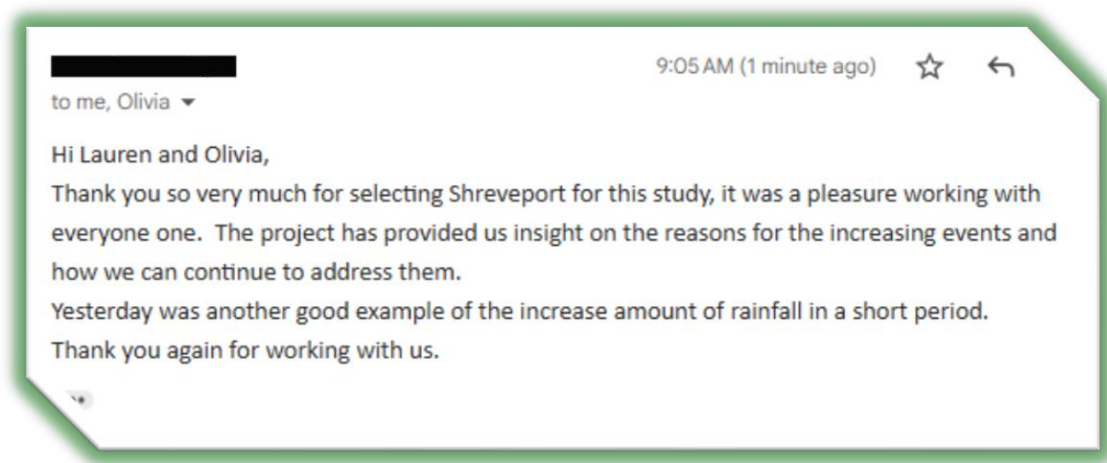


Figure 8. Screenshot of feedback from City of Shreveport representative.

Connecting Local Partners and Efforts to Build Resilience

Another example pertaining to Shreveport, was that Adaptation International hosted site visits in August 2025) and virtual convenings in November 2025. These engagements enhanced the ability of organizations in the area to work together. An official summary report titled “[Disaster Resilience Network Building Workshop: A Summary of Community-Centered Resilience Networks and Peer Learning Exchange across the U.S.](#)” was published this reporting cycle, and summarizes this project’s efforts.

“...it was evident in the depth and clarity of the content. The workshop was not only informative but also inspiring, and it provided invaluable insights that will undoubtedly benefit our community. Thank you both for your dedication and for making the workshop such a success. I look forward to future collaborations and learning more from you...”

- Written feedback from Shreveport workshop participant

"I would certainly welcome a conversation this summer or fall about continuing our collaboration and exploring opportunities to strengthen climate resilience...and community-led initiatives in Shreveport. The relationships built through this process have been just as valuable as the proposal itself."

- Written comment from contact at Wise Butterfly

Through these engagements, participants identified that the path forward lies in building with, not for, the community, recognizing existing leadership, and designing systems that reduce friction and confusion during crises. Success, as participants defined it, looks like familiarity with organizations and trust, not constant explanation or reinvention. Ultimately, the session underscored that resilience is not built through one project or grant cycle, but through long-term commitment, recognition, and collective care noting: "We don't need someone to build this for us. We need someone to build with us and stay." These connections led to part of SCIPP (Adaptation International) working with a local non-profit (Wise Butterfly) and completing a Climate Smart Communities Initiative grant application to build an outdoor resilience hub while training local youth and building the local workforce.

2026 South Central Climate Resilience Forum

The 2026 [South Central Climate Resilience Forum](#) (SCCRF) convened a variety of sectors and disciplines that are often siloed to address climate-related challenges, increase awareness of regional strategies and information, and build a network of practitioners and academics to increase capacity for adaptation and mitigation in the region. Overwhelmingly positive feedback was received through an online survey, in which over 90% of respondents indicated they would recommend this event to a colleague and would attend an event like this in the future. One respondent stated, **"The forum was highly valued to me and the people I interacted with...Topics covered were applicable to a wide variety of professions and interest groups. Talks were an**

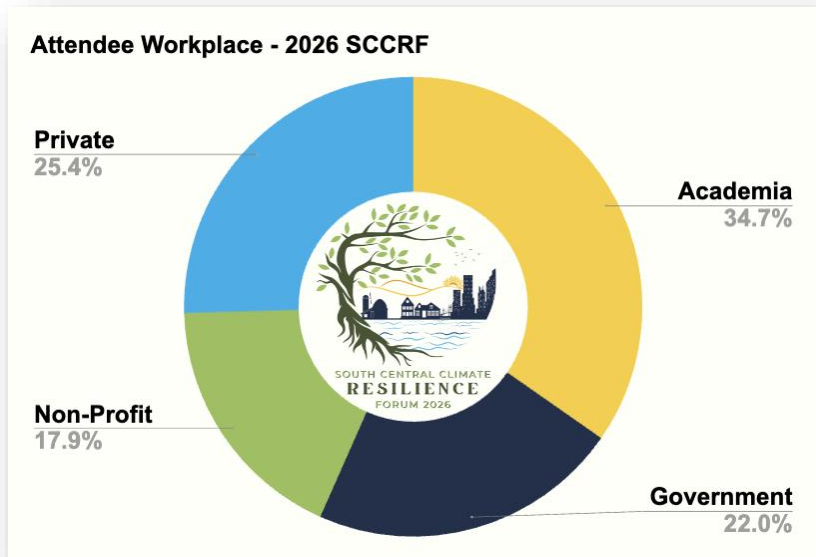


Figure 9. The pie chart displays the distribution of attendees by sector. The variety of sectors and disciplines brought a wide range of perspectives and experiences regarding climate resilience topics to SCCRf.

excellent balance of technical expertise and real-world applications". On average, respondents (n=39) marked a 4.3 on a scale of 1 (strongly disagree) to 5 (strongly agree), indicating that the value of SCCRF outweighed the cost of attending, and that they expect to use information learned at SCCRF both to inform a new decision and in a future presentation or meeting. On a scale of 1 (strongly disagree) to 5 (strongly agree), the statement with the highest agreement (average rating= 4.7 out of 5) was they learned something this week that helped them become more informed about a climate-resilience related topic.

Another respondent indicated they departed the Forum motivated to turn what they learned at the event into actionable steps to improve climate resilience in their work and their community: **"...I am so glad I attended; the sessions provided high-level insights that are immediately applicable to my work in sustainability. I've come away feeling truly inspired to take these strategies back to my community to affect meaningful change. It was an invaluable experience for anyone dedicated to building a more resilient future."**

Testimonials and feedback from SCCRF showcase our ability to boost learning of climate science, impacts, and adaptation topics; enable stakeholders to self-organize, grow their professional networks, and implement actions; and shift mindsets that resilience and adaptation actions are achievable. One direct outcome of connections made at SCCRF resulted in a climate resilience action in Dallas, TX. An architectural project manager and a water resources expert collaborated on a bioretention project that saved thousands of gallons of water from flowing onto nearby property. SCCRF provided a space for professionals across the region to share knowledge, tools, and strategies that can inform local decision-making and resilience actions.



Caption: Photographs from the 2026 SCCRF.

NARRATIVE IMPACT STORIES

Beyond Heat: Expanding a Stakeholder-Driven Initiative into a Cross-Sector Research Network

Over the past 30 years, heat has caused more fatalities in the United States than tornadoes, hurricanes, floods, or lightning (NWS, 2025). The Southeastern United States ranks among the lowest regions nationally in overall health indicators (United Health Foundation, 2024) and experiences some of the highest rates of occupational heat-related emergency department visits and fatalities (Gubernot et al., 2015; Harduar Morano et al., 2015). Although Louisiana residents generally report greater awareness of heat risks than residents of other states (Howe et al., 2019), awareness alone does not necessarily reduce vulnerability.

To address growing heat risks across the Southeast, with a particular emphasis on Louisiana, SCIPP partnered with the Louisiana Department of Health (LDH) to improve the integration of health, weather, and climate data, including the use of heat stress metrics such as wet-bulb globe temperature (WBGT). Our partnership with LDH informed the state's approach to monitoring, communicating, and responding to heat-related health risks. Specifically, **SCIPP helped integrate weather and climate information, including WBGT and other heat metrics, with health outcome data on LDH's public-facing heat data and guidance dashboard (<https://ldh.la.gov/page/heat>)**. This integration allows public health officials and the public to evaluate when and where elevated heat exposure coincides with increased heat-related illness and emergency department visits, improving situational awareness and supporting risk communication, preparedness, and response activities. Additional activities include technical reports, such as [*Heat-Related Emergency Department Visits in Louisiana: Review of Syndromic Surveillance Data for April through October 2023*](#).

The collaboration has also contributed to long-term preparedness by establishing a scientific foundation for assessing heat vulnerability across the region. Through the development of a [regional WBGT climatology](#) (Thompson and Brown, 2026), analyses linking heat exposure to morbidity and mortality in Louisiana (Thompson et al., 2026), and operational data products, **SCIPP has helped build LDH's capacity to incorporate weather and climate information into public health decision-making**. A key lesson learned is that effective heat resilience requires the integration of environmental and health datasets, allowing agencies to move beyond hazard monitoring alone and toward a more comprehensive understanding of human impacts. **These efforts provide benefits beyond heat preparedness, including stronger interagency partnerships, improved data**

infrastructure, and enhanced capacity to address future climate-sensitive public health challenges.

SCIPP's heat research continues to expand in both scope and partnerships, with increasing emphasis on populations facing elevated heat exposure risks, including outdoor workers, athletes, and urban residents. The initial partnership with the Louisiana Department of Health (LDH) has evolved into a broader interdisciplinary collaboration that now includes the City of New Orleans Health Department, Johns Hopkins University, and LSU Health Sciences Center-New Orleans. Through these partnerships, **SCIPP researchers are developing population-weighted temperature time series to support an LDH/John Hopkins-led study of heat-related hospitalizations across Louisiana and are preparing a manuscript, *Heat Exposure and Excess Morbidity in the City of New Orleans, Louisiana During the Warm Season, 2010–2019*, for submission to *PLOS Climate*.** Findings from this work will also be presented at the upcoming International Society for Environmental Epidemiology Annual Conference in September 2026.

SCIPP's heat research is also expanding into new areas. Following a media inquiry regarding a Louisiana heat-related legislative proposal and LSU football, researchers developed WBGT climatology for stadiums hosting early-season Southeastern Conference football games. Presented at the American Meteorological Society Annual Meeting, the project has generated interest in expanding the analysis to additional universities, sports, and regions, and has created **opportunities for a potential cross-RISA collaboration with Pacific RISA focused on the implications of future weather and climate conditions for athletic participation, performance, and safety.** Together, these efforts demonstrate how an initial stakeholder-driven heat project has grown into a broader research network that advances public health, supports decision-making, and addresses emerging climate-related challenges across multiple sectors.

NARRATIVE IMPACT STORIES – CONT'D

From Classroom Knowledge to Impact in Action: SCIPP's 2025 Summer Internship Program

Insights from previous SCIPP stakeholder engagement efforts and research highlight the need to help city, county, and local organizations build capacity to address weather-related hazards (Riley et al. 2025, Riley et al. 2022). This is especially the case for the South Central U.S. region, one of the most disaster-prone regions in the country, with more than 200 unique billion-dollar weather and climate disasters from 1980-2022, accumulatively costing over \$500 billion (NCEI 2023). In an effort to promote workforce development and address the critical need for skills and capacity building in the hazard mitigation and adaptation

arenas, SCIPP designed, prepared for, recruited, and initiated a summer internship program for undergraduate students at the University of Oklahoma College of Atmospheric and Geographic Sciences. The goals of the ten-week (May to July 2025) internship were to: 1) Help non-profit organizations, city or county government offices, and community-based organizations in Arkansas, Louisiana, Oklahoma, and Texas enhance their capacity to address weather and climate-related challenges; 2) Provide sophomore and junior students at the University of Oklahoma an opportunity to gain hands-on work experience in the fields of climate science and hazard preparedness, and to form meaningful professional connections; 3) Build the next generation workforce across the SCIPP region. Through a matching process with local host organizations across the states of Arkansas, Louisiana, Oklahoma, and Texas, students were given the opportunity to further their classroom knowledge in applied contexts and contribute directly to a variety of local projects from SCIPP stakeholders.

Name of Organization	Location
Center for Sustainable Engagement and Development	New Orleans, LA
City of Oklahoma City Office of Sustainability	Oklahoma City, OK
City of Shreveport	Shreveport, LA
LEAD Agency Inc.	Miami, OK
Oklahoma Department of Emergency Management	Oklahoma City, OK
Pope County Office of Emergency Management	Russellville, AR
Texas Impact	Austin, TX

Figure 10. Participating host organizations and their geographic scope.

SCIPP conducted evaluation assessments to better understand the broader impacts of the internship and gathered valuable feedback for program improvement. A [formal report](#) on the summer internship was published during this reporting cycle, and includes a full list of internship project descriptions, as well as some listed outcomes and outputs from the endeavor. Through this internship initiative, SCIPP ultimately expanded its reach by directly assisting local organizations to tackle weather and climate-related challenges, and students contributed to projects with tangible outcomes that build resilience across the region. A few examples are listed below.

- City of Shreveport (Shreveport, LA): The intern authored a summary for a grant application, and their efforts **resulted in the successful acquisition of a \$10,000 Keep Louisiana Beautiful Beautification Grant for the City of Shreveport.**

- City of Oklahoma City Office of Sustainability (Oklahoma City, OK): The intern **developed the OKC Climate and Sustainability Dashboard, an interactive site for the general public meant to communicate climate and sustainability information in a simple and effective way.** The dashboard was still under review at the time of this report. The intern also **reviewed progress on existing sustainability indicators from the 2020 adaptokc report and completed a progress report.**
- Oklahoma Department of Emergency Management (OEM) (Oklahoma City, OK): In relation to the Sooner Safe Program, the intern **verified and developed an updated map of safe rooms in Northeast Oklahoma.** The intern also compiled a comprehensive dataset—including emergency management contacts, school district details, and project/disaster response numbers— **added replacement sites for withdrawn projects, and created an enhanced Google Maps visualization** to assist OEM employees with effectively administering the program across Oklahoma.

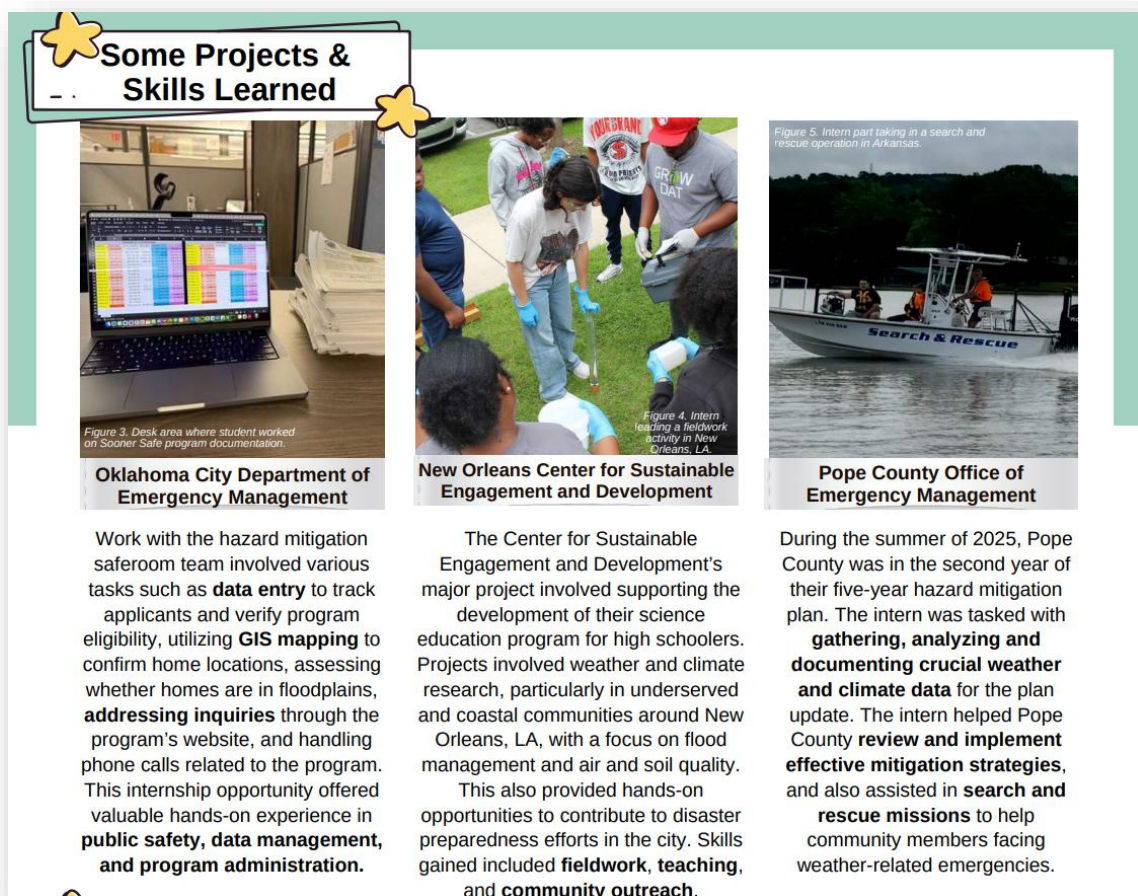


Figure 11. Description of some projects accomplished and skills learned throughout the 2025 internship.

REFERENCES

- Brown, V.M., Thompson, D.T., DeFee, B.B., Osland, M.J. and Keim, B.D., 2026: Tropicalization of the Temperate Zone: Spatiotemporal Variability of Winter Warming and Declining Freeze Days Across the United States. *International Journal of Climatology*, p.e70425. <https://doi.org/10.1002/joc.70425>
- Gubernot, D. M., G. B. Anderson, and K. L. Hunting, 2015: Characterizing occupational heat-related mortality in the United States, 2000–2010: An analysis using the census of fatal occupational injuries database. *Amer. J. Ind. Med.*, 58, 203–211, <https://doi.org/10.1002/ajim.22381>
- Harduar Morano, L., and Coauthors, 2015: Occupational heat-related illness emergency department visits and inpatient hospitalizations in the southeast region, 2007–2011. *Amer. J. Ind. Med.*, 58, 1114–1125, <https://doi.org/10.1002/ajim.22504>
- Hemmerling, S. A., Haertling, A., Shao, W., Di Leonardo, D., Grismore, A., & Dausman, A. : 2024. “You turn the tap on, the water’s there, and you just think everything’s fine”: a mixed methods approach to understanding public perceptions of groundwater management in Baton Rouge, Louisiana, USA. *Frontiers in Water*, 6, 1289400. DOI: 10.3389/frwa.2024.1289400
- Howe, P. D., Marlon, J. R., Wang, X. R., and Leiserowitz, A., 2019: Public perceptions of the health risks of extreme heat across US states, counties, and neighborhoods. *Proc. Natl. Acad. Sci. U.S.A.*, **116**(14), 6743–6748. <https://doi.org/10.1073/pnas.1813145116>
- NOAA National Centers for Environmental Information (NCEI), 2023: U.S. Billion-Dollar Weather and Climate Disasters. <https://www.ncei.noaa.gov/access/billions/> , DOI: 10.25921/stkw-7w73
- NWS, 2025: Weather related fatality and injury statistics 2024. Accessed 11 July 2025, <https://www.weather.gov/hazstat/>
- Riley, R. E., 2021: An evaluation of the utility of a decision maker-driven climate hazard assessment tool. *Weather, Climate, and Society*, **13**, 147-157, <https://doi.org/10.1175/WCAS-D-20-0019.1>
- Riley, R., D. Bertrand, and S. Arens, 2022: Connecting Climate Adaptation and Hazard Mitigation Planning in Climate Discourse-Sensitive Regions: A Cross-RISA Collaborative Project. Southern Climate Impacts Planning Program and Western Water Assessment, 22 pp, <https://www.southernclimate.org/wp-content/uploads/CAHMPCrossRISA.pdf>

- Riley, R., D. Bertrand, E. Hecker, C. Cunningham, and A. Vest, 2025: Addressing Hazard Mitigation Planning Needs in Low-Capacity Jurisdictions in the South Central Region. Southern Climate Impacts Planning Program, 8 pp. <https://www.southernclimate.org/wp-content/uploads/Addressing-HM-Needs.pdf>
- Thompson, D. T. and V. M. Brown, 2026. A Climatology of Gridded Wet-Bulb Globe Temperature for the Southeastern United States. *Journal of Applied Meteorology and Climatology*, **65**, 359–378, <https://doi.org/10.1175/JAMC-D-25-0125.1>
- Thompson, D. T., V. M. Brown, A. Reilly, E. Oral, B. D. Keim, and T. Gentimis, 2026. Analysis of Multiple Measures of Heat Stress on Morbidity and Mortality in Louisiana. *Weather, Climate, and Society*, <https://doi.org/10.1175/WCAS-D-25-0060.1>
- United Health Foundation, 2024: America’s Health Rankings 2024 annual report. United Health Foundation Rep., 52 pp., <https://www.americashealthrankings.org/learn/reports/2024-annual-report>
- U.S. Census Bureau, 2020: Shreveport, Louisiana. Accessed 29 June 2026, <https://www.census.gov/search-results.html?searchType=web&cssp=SERP&q=Shreveport%20city,%20Louisiana>

APPENDIX A: Publications

- Bell, T., C. Cruickshank, and R. Riley, 2025: Hazard Resilience Buildings Workshop Summary. Southern Climate Impacts Planning Program, 17 pp. <https://southernclimate.org/wp-content/uploads/Hazard-Resilient-Buildings-Workshop-Summary.pdf>
- Brown, V. M., A. M. Haberlie, D. T. Thompson, and B. D. Keim, 2025. Using the Analysis of Record for Calibration to Estimate Subdaily Rainfall Characteristics across Louisiana. *Journal of Hydrometeorology*, **26**, 1315–1332, <https://doi.org/10.1175/JHM-D-25-0005.1>
- Brown, V.M., D. T. Thompson, B. B. DeFee II, M. J. Osland, and B. D. Keim, 2026. Tropicalization of the Temperature Zone: Spatiotemporal Variability of Winter Warming and Declining Freeze Days Across the United States. *International Journal of Climatology*, e70425, <https://doi.org/10.1002/joc.70425>
- Cionea, I., C. Cruickshank, A. Wanless, R. Riley, and J. Kilgore, 2026: SCIPP Phase IV Evaluation Report. Southern Climate Impacts Planning Program, 25 pp. <https://southernclimate.org/wp-content/uploads/SCIPP-Phase-IV-Evaluation-Report.pdf>
- Cruickshank, C., I. Cionea, and A. Wanless, 2025: From Classroom Knowledge to Impact in Action: SCIPP's 2025 Summer Internship Program. Southern Climate Impacts Planning Program, 21 pp. <https://southernclimate.org/wp-content/uploads/SCIPP-Summer-Internship-Report-2025.pdf>
- Oral, Evrim; Harrington, Daniel; Mohamed, Mohamed S.; Rahman, Mohamed S.; Cuccia, Saheba; Mukherjee, Samrat; Stelly, Amy; Keim, Barry; and Katner, Adrienne (2025) "High Activity Urban Event Impacts Local Air Quality of the Claiborne Corridor in New Orleans, LA," *Journal of the Louisiana Public Health Association*: Vol. 5: No. 2, Article 9. DOI: 10.59020/09551. Available at: <https://digitalscholar.lsuhsu.edu/jlpha/vol5/iss2/9>
- Riley, R., D. Bertrand, E. Hecker, C. Cunningham, and A. Vest, 2025: Addressing Hazard Mitigation Planning Needs in Low-Capacity Jurisdictions Across the South Central Region. Southern Climate Impacts Planning Program, 8 pp. <https://www.southernclimate.org/wp-content/uploads/Addressing-HM-Needs.pdf>
- Shafer, M., T. Bell, D. Bertrand, V. Brown, and D. Thompson, 2026: The Climate of Shreveport, Louisiana. Southern Climate Impacts Planning Program, 31 pp. https://southernclimate.org/wp-content/uploads/Climate_Shreveport.pdf
- Sitzman, A. K., V. M. Brown, B. D. Keim, and J. H. Spencer, 2025. Heavy rainfall and New Orleans neutral ground parking decisions. *Urban Water Journal*, **22**, 907–921, <https://doi.org/10.1080/1573062X.2025.2519099>

- Thompson, D. T. and V. M. Brown, 2026. A Climatology of Gridded Wet-Bulb Globe Temperature for the Southeastern United States. *Journal of Applied Meteorology and Climatology*, **65**, 359–378, <https://doi.org/10.1175/JAMC-D-25-0125.1>
- Thompson, D. T., V. M. Brown, A. Reilly, E. Oral, B. D. Keim, and T. Gentimis, 2026. Analysis of Multiple Measures of Heat Stress on Morbidity and Mortality in Louisiana. *Weather, Climate, and Society*, <https://doi.org/10.1175/WCAS-D-25-0060.1>
- VanBuskirk, O. G. and L.E. Mullenbach, 2026. “It’s politics, not processes:” Challenges to climate adaptation planning in Tulsa, Oklahoma. *Urban Climate*, **65**, 102732, <https://doi.org/10.1016/j.uclim.2025.102732>
- VanBuskirk, O.G., and L.E. Mullenbach, 2026: Building Capacity and Preparedness for Extreme Weather Events in Shreveport, Louisiana. Southern Climate Impacts Planning Program, 16pp. <https://southernclimate.org/wp-content/uploads/Building-Capacity-for-Extreme-Weather-Events.pdf>

APPENDIX B: Presentations

“Analysis of Wet-Bulb Globe Temperature with Implications for Human Health and Comfort”, South Central Climate Resilience Forum, April 17, 2026, San Antonio, TX (Thompson)

“Assessing and building capacity for hazard mitigation in small and rural communities”, 14th Symposium on Building a Weather-Ready Nation, American Meteorological Society, January 28, 2026, Houston, TX (Riley, Bertrand, & Hecker)

“Assessing and Building Capacity for Hazard Mitigation Planning in Low-Capacity Communities”, National Hazard Mitigation Webinar Series, October 22, 2025, Virtual (Riley)

“Assessing and Building Capacity for Hazard Mitigation Planning in Low-Capacity Communities”, South Central Climate Resilience Forum, April 15, 2026, San Antonio, TX (Bertrand)

“Exploring Data and Action Tools for Climate-Informed Decision-Making”, South Central Climate Resilience Forum, April 15, 2026, San Antonio, TX (Bertrand, Brown, Keim, Thompson, & Petersen)

“From Classroom Knowledge to Impact in Action: SCIPP’s 2025 Summer Internship Program”, South Central Climate Resilience Forum, April 17, 2026, San Antonio, TX (Cruickshank)

“Helping communities prepare for extreme weather events and hazard risk reduction”, University of Oklahoma Division of Planning, Landscape, Architecture, and Design Lunch with a Professional, April 20, 2026, Norman, OK (Riley)

“Hut, Hut, Heat: Investigating Heat Risk during Southeastern Conference Football Games”, AMS Poster Presentation: 30th Conference on Applied Climatology, January 28, 2026, Houston, TX (Thompson)

“Introduction to the Southern Climate Impacts Planning Program”, Shreveport Resilience Exchange Workshop, November 29, 2025, Virtual (Cruickshank)

“Longer Summers and Shorter Winters: Impacts of Tropicalization in the Southeastern United States”, South Central Climate Resilience Forum, April 17, 2026, San Antonio, TX (Keim)

“Mesonet & SCIPP Tools”, AGSC 1513: First Year Experience Class - Fall 2025, October 15, 2026, Norman, OK (Bell)

“Mesonet & SCIPP Tools”, AGSC 1513: First Year Experience Class - Spring 2026, February 4, 2026, Norman, OK (Bell)

“Meteorologist vs. Climatologist: What's the Difference?”, Jackson Elementary School Career Fair, May 14, 2026, Norman, OK (Bell)

“Picture This: Building Trust and Inclusion in Climate Adaptation through PhotoVoice”, South Central Climate Resilience Forum, April 16, 2026, San Antonio, TX (Kestell , Jackson & Petersen)

“Roughly the size of Texas, Hurricane Erin is one of the largest Atlantic storms in history. Why?”, New Orleans Times Picayune, August 21, 2025, Louisiana (Thompson)

“SCIPP and Hazard Planning”, University of Oklahoma REU Program, June 27, 2025, Norman, OK (Bertrand)

“SCIPP Resources”, Arkansas Mitigation Planners Meeting, April 10, 2026, Virtual (Bertrand)

“Simple Planning Tool for Climate Hazards”, National Adaptation Forum, May 13, 2026, Pittsburgh, PA (Bertrand)

“Simple Planning Tool for Climate Hazards”, Texas Panhandle Regional Emergency Preparedness Conference, September 17, 2025, Amarillo, TX (Bell)

“Southern Climate Impacts Planning Program Research and Engagement”, University of Oklahoma Student Chapter of the American Meteorological Society and National Weather Association, March 10, 2026, Norman, OK (Riley)

“SPT Hazard Tools”, Oklahoma State University Guest Lecture - Fall 2025, September 11, 2025, Stillwater, OK (Bell)

“Strengthening Oklahoma’s Buildings to Withstand Hazardous Weather: The Problem. The Solution. The How.”, Big I Oklahoma Insurcon, April 8, 2026, Oklahoma City, OK (Gauthier, LaDue, Scott, Riley)

“The Katrina Project”, WBRZ Sunday Journal, August 18, 2025, New Orleans, Louisiana (Keim)

“This group of Tulsans envisions a city more prepared for extreme weather, natural disasters”, KGOU, January 13, 2026, Norman, OK (Mullenbach & VanBuskirk)

“Tropicalization of the Temperate Zone”, South Central Climate Resilience Forum, April 17, 2026, San Antonio, TX (Brown)

“Winter Ice Could Humble the United States”, The Atlantic, January 22, 2026, Virtual (Riley)

