

Addressing Hazard Mitigation Planning Needs in Low-Capacity Jurisdictions Across the South Central Region

Rachel Riley and Darrian Bertrand,
Southern Climate Impacts Planning Program, University of Oklahoma

Ed Hecker, Caroline Cunningham, and Annie Vest,
National Hazard Mitigation Association

October 2025

SCIPP
A NOAA CAP TEAM

NHMA

Suggested Citation:
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

Cover Photos:
Left: Hail damage on a home (R. Riley)
Center: Participants at a workshop in 2017 (SCIPP)
Right: Arkansas River flooding (B. Keim)

Executive Summary

This study assessed and then determined how to begin to address the resource and capacity needs of hazard mitigation planners in the interior South Central United States. The focus group-based research 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. The study was approved by the University of Oklahoma Institutional Review Board (study #15610). Four research questions were addressed through four rounds of state-based focus groups that took place between May 2023 and February 2025. The topics included current barriers to addressing hazard-related challenges, capacities and capabilities needed to address those challenges, including accounting for climate change, how an existing Federal Emergency Management Agency (FEMA) Region 6 hazard mitigation planning template could be improved, and training needs.

Researchers at the Southern Climate Impacts Planning Program partnered with the National Hazard Mitigation Association to conduct the study and begin to develop resources that resulted from the findings. Aside from persistent funding needs and the need for FEMA requirements to be streamlined, the following were identified to be the primary capacities and resources needed to improve hazard mitigation planning and implementation across the region:

Supplemental materials have been produced to begin to meet some of the capacity needs. Those materials include an **improved hazard mitigation planning guide**, list of **eight training objectives**, list of **hazard mitigation messaging techniques**, and a **hazard mitigation action database design concept**. They are available at www.southernclimate.org.

The results of this study may not be generalizable across the entire four-state region, let alone all 50 states. Additionally, this study does not reflect any policy changes that were implemented at FEMA beginning January 2025.

Introduction

Hazard mitigation (HM) planning provides an opportunity for local governments to assess the risks and impacts their residents and infrastructure face from natural hazards and take action to reduce them. Hazards such as tornadoes, severe winds, damaging hail, riverine and flash flooding, and ice storms cause several billion dollars in damage every year and costs have been escalating[1]. The increase is due to a combination of factors including population growth, increased severity of some events, and local and state governments more effectively tracking costs. Having a Federal Emergency Management Agency (FEMA)-approved hazard mitigation plan (HMP) in place not only helps local officials steward assets and resources well, but it also enables a jurisdiction to be eligible for certain types of federal funding.

During the last quarter century, HMPs have proliferated[2] and jurisdictions have benefitted from the dollars that have flowed to them as a result. But as seen in Figure 1, many jurisdictions in the South Central U.S. (defined here as Oklahoma, Arkansas, Texas, and Louisiana) have expired (yellow) or no approved hazard mitigation (HM) plan (gray). The general pattern has persisted for years.

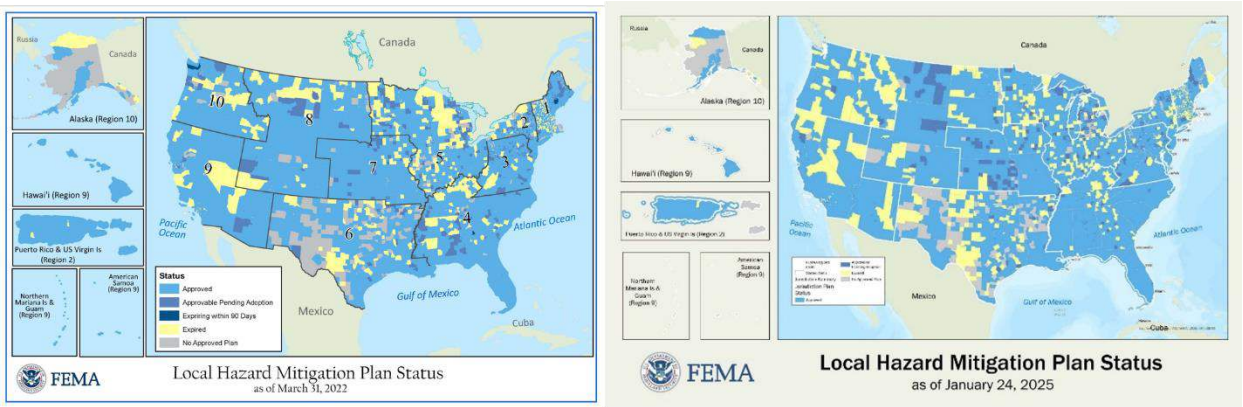

Figure 1.Local hazard mitigation plan status maps from 31 March 2022 and 24 January 2025. Source: Federal Emergency Management Agency (2022, 2025).

Some research has been conducted to understand the barriers to HM planning and implementation[345678] and anecdotal reasons have been cited by hazard mitigation professionals. Formal studies are lacking, especially for inland locations with small populations and low-capacity. To better understand the capacity and resource needs of hazard mitigation planners in low-capacity areas of the South Central region, the Southern Climate Impacts Planning Program and National Hazard Mitigation Association partnered to conduct a focus group-based study on the topic. Here, low-capacity is defined as a community that lacks one or more of the following with respect to hazard mitigation: expertise to apply for and/or manage federal grants, technical expertise (e.g. engineering, GIS, natural hazards), resources, and/or public or political support.

Purposeful sampling[9] was employed to recruit planners, emergency managers, and related officials who work in a self-identified low-capacity community in the region of interest. Thirty-one participants enrolled in the study and were assigned to state-based cohorts. The most common reason participants considered their jurisdiction to be low-capacity was staffing (n = 11), including lack of staff altogether (n = 8) or lack of knowledgeable staff (n = 3), followed by funding (n = 5), small population (n = 3), and lack of buy-in from community members (n = 2).

Four rounds of focus groups were conducted with each cohort between May 2023 and February 2025 (3 virtual, 1 in-person; 12 total meetings). Attrition occurred due to job changes or other reasons, and only 17 participated in the fourth round of focus groups. Almost all participants (n = 28) worked in the public sector while three participants worked in the private sector. Altogether, the participants worked in approximately 160 local jurisdictions (cities, towns, counties, and/or parishes) across the four states. The University of Oklahoma Institutional Review Board (IRB) approved the study (#15610). Specific geographic location information cannot be disclosed due to IRB constraints.

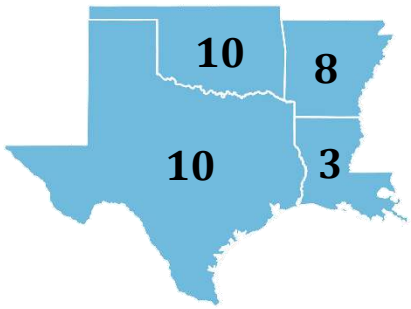

Figure 2. Map of the study's geographical region and number of participants associated with each state.

Below are the major findings, resulting from four research questions that included 40 discussion questions and two online surveys.

Barriers to Addressing Current Hazard-Related Challenges

Reasons why the participants' jurisdictions are unable to address their hazard-related challenges include inability to meet **monetary thresholds**, **time**, **lack of awareness** by decision makers and public stakeholders of the importance of HM, **staff expertise**, the **HMP not being an impactful plan in and of itself**, and **information on the HM actions that are even possible to take is limited**. Participants also expressed a general sentiment that there is a lack of return on their time investment for completing a HMP, and that too much effort is required to try to obtain grant funding, especially if they have little chance of successfully competing against larger jurisdictions.

The participants' largest frustrations with the entire HMP process or requirements are explained by three categories: 1) Having to **frequently re-educate local high level decision makers**, 2) **certain FEMA requirements** (unrealistic benefit cost analysis thresholds, extraneous details), and 3) **perceived lack of communication between FEMA, the states, and the locals**.

Additional Capacities and Capabilities Needed Overall and to Account for Climate Change

Capacities and capabilities that are needed for HM planning overall include: **building a HM workforce** that has the needed expertise (most common response), **training on how to navigate grant application processes and managing a grant**, better **utilization of regional planning organizations**, a marketing campaign to **increase the urgency for HM planning and to showcase available resources**, **cross-departmental communication**, and **involving the community**. The skilled workforce need repeatedly surfaced. One participant explained, "I have staff, but not necessarily people who have the needed knowledge or skillsets."

Factors that would help the participants remain engaged in hazard planning and mitigation processes were **improved awareness of HM importance**, **shorter plans and/or fewer planning requirements**, **experiencing the benefits of planning and grant application efforts** (i.e., actually getting proposed projects funded), and having **more time to participate** in the process.

Specific to climate change, participants expressed a need for **education and outreach** (**short**, digestible, de-politicized **statements relevant to their local contexts and community values**), how to communicate about climate change and hazards information in such a way that is salient to a municipal or county scale, more local data, and for flooding, shifting beyond the "100-year flood" paradigm. A few participants **were unsure** what was needed or said the **topic overwhelmed them** and they did not know how it applied to their local jurisdiction. While there was some variation across states, some participants expressed that the term climate change can cause division. One participant said, "climate change is a hot topic that can make people upset".

Hazard Mitigation Planning Template Improvements

A primary study focus was to assess the usefulness of an existing HM planning template that is available through FEMA Region 6. Prior to investigating how the planning template should be improved, a baseline assessment was conducted. Of the 19 participants who responded to a survey, 16 had not used the existing FEMA Region 6 template or were not sure if they or their jurisdiction had used it. The template includes three major sections: planning process, risk assessment, and mitigation strategy. Of the three sections, participants most commonly said they had trouble answering the mitigation strategy section.

In some cases, a planner or emergency manager's inability or difficulty to complete a particular element may be due to inconsistent review criteria at the state or federal level, or a lack of interest among their local stakeholders. For example, one participant explained,

> In my experience, the state and FEMA don't give a lot of feedback on what could be improved. It's more of a pass/fail plan review. I use the same template for several jurisdictions and depending on who reviews the plans, they get kicked back for a variety of reasons.

Another said,

> The hardest elements to complete have been the participation. We have a hard time trying to get the public involved, and even getting representatives from each jurisdiction to attend the meetings.

To Better Align with the Capabilities and Capacities of Low-Capacity Communities:

- update the references associated with the various FEMA handbooks
- include a glossary of terms
- add hyperlinks to definitions and resources when relevant
- clarify monitoring and evaluation requirements
- allow strategies that reduce the length of the plan such as hyperlinks and streamlining the hazard definitions and descriptions requirement
- include contact information relevant to state government and FEMA points of contact
- include the "why" behind certain elements needed using a different font color
- showcase successful mitigation examples

One participant commented that the existing FEMA R6 template is probably sufficient for larger jurisdictions who have more resources and knowledge, but a more detailed version is needed for smaller jurisdictions.

To Advance Climate Resilience and Disaster Risk Reduction More Broadly:

As noted by some participants, a **planning template that links to or references relevant incentive programs and grant opportunities beyond FEMA** or the FEMA HM grant program (HMGP) would help local officials understand how their planning process can be used to have a broader impact. Additionally, **stating municipal or county programs or regulations that are relevant to HM** and might exist for a jurisdiction would be beneficial. **Establishing an ordinance that integrates relevant plans** (e.g., HMP and floodplain) would help reduce disaster risk more broadly. Some participants said, however, that some rural counties have very few plans, if any. There might not be a plan in which to integrate HM.

In light of the study findings the 2015 version of the FEMA Region 6 HM planning template was updated and re-named to Hazard Mitigation Planning Guide. The recommended improved version, which would need to be approved by FEMA Region 6 to become operational and may need further revision to reflect recent policy changes, is provided as supplemental material.

Training Needs

Participants were very interested in additional training, especially if some of the material is tailored to their region or state. One participant who was relatively new to hazard mitigation planning asked, "Am I alone in feeling like there is no good training on this?" Another participant said, "The state needs as much training as we do. They're [state agency] stretched very thin." Comments were received about some of the existing training that is provided by FEMA being too broad (national scale) and/or not very relevant to the capacity of smaller and rural jurisdictions. Several participants said that in-person training is most effective, but acknowledged the associated costs. A way to limit the cost associated with attending trainings would be to have an initial training be in person followed by asynchronous virtual trainings. Participants recommended that online trainings be delivered via short modules (20-30 minutes) and for continuing education credits to be offered.

Eight training objectives were developed and refined based on participant feedback. The objective topics include **HMP** and **grant application best practices**, **messaging techniques**, the **future conditions requirement**, **maximizing benefit-cost analyses**, navigating the **action database**, **monitoring and evaluation**, and **managing a FEMA grant**. The list of training objectives is provided as supplementary material.

Additional Needs Identified

Beyond the need to improve the HM planning guide and develop training materials based on the aforementioned topics, three additional needs were identified. A summary is below. Example messages and the action database design concept are provided as supplementary material.

1. **Develop message techniques that can help planners and emergency managers more effectively communicate the importance of HM.**

Relevant messages include that HM saves lives, saves jurisdictions and residents money, preserves property, and helps minimize disruptions to people's lives. For high level officials, relating HM actions to cost savings and economic impacts is important. One participant stated, ". . . even $100-200K is a lot of money for rural counties."

2. **Develop message techniques that can help planners and emergency managers communicate the relevance of climate change to their local communities in ways that align with community values.**

Relevant messages include talking about future conditions, impacts, hazards, extreme events, loss of life, and economic impacts. Climate change message turn-offs include doomsday messaging, the term global warming, the term climate crisis. One participant provided context. "Some of our areas are dealing with other issues, economic issues, so climate is not the crisis," they noted.

3. **Develop a resource that describes HM actions that are possible to take, and especially those that are realistic for low-capacity communities (i.e. not cost-prohibitive).**

Recommended hazard mitigation action database elements include the following:

- *Primary content:* Title of action/project, broad project category, price range estimate, brief description, funding source example
- *Secondary content:* Objectives met, cost-benefit analysis estimate, photo(s) of completed project, list of relevant government authorities/departments who have jurisdiction over a particular risk or hazard.
- *Interface design and functionality:* Summary with ability to dig deeper, search function, ability to save actions, filters.

Conclusions

Progress has been made since the Disaster Mitigation Act (DMA) was passed in the year 2000[2]. There is little doubt that the DMA has made communities safer and that communities have benefitted from plans and local, state, and federal efforts. But progress has stalled, impacts and costs from natural hazards continue to increase, and reforms and resources are needed.

Aside from addressing the immediate need to improve the HM planning guide and the ever-present need to develop funding strategies, there is also a significant need to develop a workforce that is more knowledgeable about HM planning and implementation and possesses the necessary technical and collaborative expertise. Tackling hazard-related problems requires collaborative, interdisciplinary approaches, and critical and innovative thinking. Beyond training and workforce development, local officials are in need of a more comprehensive resource they can use to determine how to better protect the people and economic assets that reside in their jurisdictions (e.g., an HM action database).

Reforms associated with FEMA requirements are also desired. While it is appropriate to strive to raise the expectations of locals to account for longer planning timescales and changing risk landscapes when relevant, flexibility with certain requirements is likely needed to better align with the realistic capacity of a large portion of U.S. communities. Eighty-five percent of U.S. municipalities have populations of less than 10,000 people[10]. Participants desired plan

requirements and reviewers that are less focused on what are sometimes viewed as trivial aspects of the plan, and more focused on the intent behind a jurisdiction's plan while also being cognizant of the reality of the local context in which they live, work, and play. This would enable more local jurisdictions to have approved plans rather than them getting bogged down with inconsequential details and processes that prohibit progress.

Finally, it is worth noting that the findings reported here on local workforce and funding challenges align with a recently published study[11] that reported on the perspectives of *state* emergency management agency representatives.

Study Limitations:

The limitations of this study include enrolling fewer participants than the planned goal of 10 per state, limited representation from Louisiana, and inability to account for policy changes that were implemented at FEMA beginning January 2025. The results may not be generalizable across the entire four-state region, let alone all 50 states.

Acknowledgements

We thank the 31 participants for their time and effort to be involved in the study and FEMA Region 6 for its support. Funding was provided by NOAA Climate Program Office grant NA21OAR4310306.

---

[1] National Centers for Environmental Information, 2025: United States Billion-Dollar Disaster Events 1980-2024 (CPI-Adjusted). https://www.ncei.noaa.gov/access/billions/time-series, accessed 21 July 2025.

[2] Lyles, W., P. Pennel, and R. Riley, 2023: Headwinds in the Heartland? Hazard Planning Lessons from Six Inland Jurisdictions in the Southern Plains. *International Journal of Mass Emergencies and Disasters*, 41(2-3), 208-222. https://doi.org/10.1177/02807270231211838.

[3] Prater, C., and M. K. Lindell, 2000: Politics of hazard mitigation, *Natural Hazards Review*, 1(2), https://doi.org/10.1061/(ASCE)1527-6988(2000)1:2(73).

[4] 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.

[5] National Hazard Mitigation Association, 2021: FEMA's Benefit Cost Analysis (BCA) and Recommendations to Enhance its Mitigation Grant Process, https://www.naseo.org/Data/Sites/1/documents/tk-news/bca-white-paper-nhma-final-6-15-004.pdf.

[6] Headwaters Economics, 2021: Improving benefit-cost analyses for rural areas, https://headwaterseconomics.org/equity/improving-benefit-cost-analyses/, accessed 21 July 2025.

[7] Smith, G., and O. Vila, 2020: A national evaluation of state and territory roles in hazard mitigation: Building local capacity to implement FEMA hazard mitigation assistance grants. *Sustainability*, 12, doi: 10.3390/su122410013.

[8] Schwab, J., 2010: Hazard Mitigation Integrating Best Practices into Planning, Planning Advisory Service Report Number 560, American Planning Association, Chicago, IL.

[9] Patton, M. Q., 1990: Qualitative evaluation and research methods (2nd ed.). Thousand Oaks, CA: Sage.

[10] Smith, K. K., E. A. Goto, S. J. Domingue, S. E. Kalafatis, M. L. Bartley, T. L. Preston, P. G. Hernandez, 2025: Mapping rural local government capacity for climate resilience projects in the United States. Public Administration Review, 0:1-15, https://doi.org/10.1111/puar.70025.

[11] Deloitte Development LLC, 2025: *Deloitte-NEMA National Risk Study: Changing Landscapes in State Emergency Management*, 29 pp.