State Resiliency Planning Considerations

Oct. 2024

Introduction

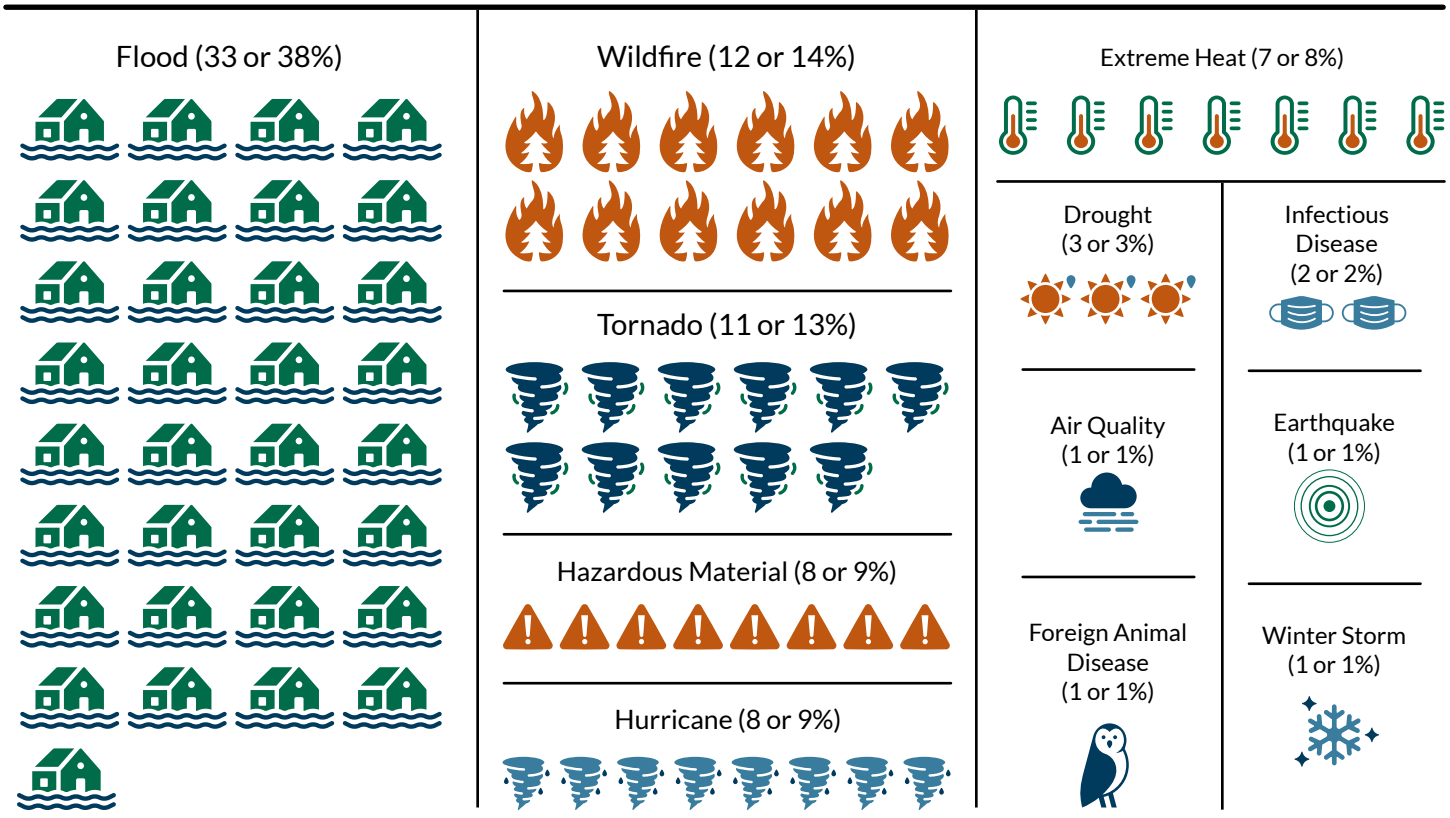
In Spring 2024, the Association of State and Territorial Health Officials (ASTHO) and the Environmental Council of the States (ECOS) partnered to gather information and share best practices for state and territorial (collectively, state) health and environmental agency resiliency planning. ASTHO and ECOS held a series of regional listening sessions to hear from state agencies about: how they plan for disasters and engage with disadvantaged or vulnerable communities; challenges faced for implementing resiliency plans; and how ECOS, ASTHO, and EPA's Office of Research and Development can connect states and collaborate or assist with planning for future events.

ASTHO and ECOS developed the following list of considerations to assist state health and environmental agencies in their planning process, with an emphasis on resiliency planning in communities with environmental justice (EJ) concerns. This effort builds upon a 2021 – 2022 project in which the associations held virtual workshops for state health and environmental agency staff on how to mitigate environmental pollution and related public health impacts from disaster events.

National Trends

To kick off each listening session, ASTHO and ECOS polled states to learn more about the types of disasters most experienced by their jurisdiction, important tools and partnerships for resiliency planning, and which of the tools or partnerships are particularly helpful for resiliency planning in communities with EJ concerns. The results were combined into the below graphics to highlight some national trends on disasters and resiliency planning.

Graphic 1



Partnerships	
General	**Specific to EJ Communities**
• Emergency management • Municipal, local governments, local officials • Other state agencies • Federal agencies (EPA, FEMA, FDA, USDA, NOAA, CDC, etc.) • Academia • Public water systems	• Local governments, local public health officials, local emergency management • Community-based organizations • Faith-based organizations • Tribes
Tools	
General	**Specific to EJ Communities**
• Social media • GIS, mapping tools • Communication, emergency, and mitigation plans • Listening sessions • Emergency alert systems • Other (e.g., ATSDR state vulnerability index, commodity flow studies, updated flood maps, predictive modeling, funding opportunity databases)	• EJ Screen, ESRI living sata, EmPOWER, etc. • Translation services • Boots on the ground, community outreach, community focus groups

Themes from the Listening Sessions

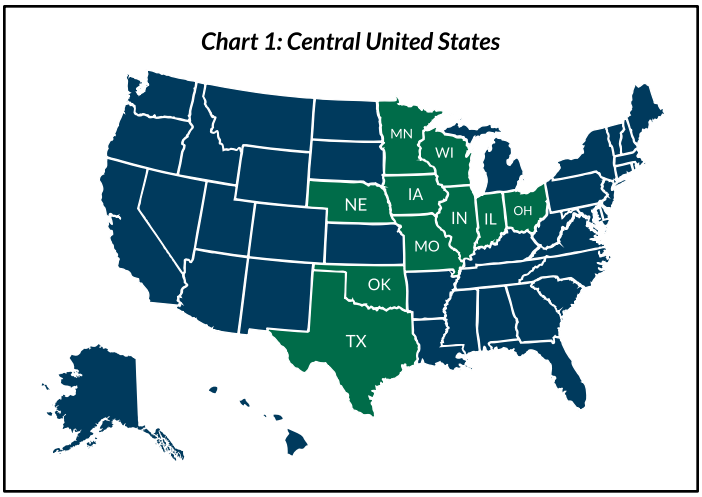


Chart 1: Central United States

Call 1: Central United States

Overview: Floods and tornadoes are the most frequent types of disasters that state agencies in the central United States respond to.

Partnerships: These states indicated that the most important partnerships they have for planning for disasters and engaging with communities are local health departments, emergency management/emergency response staff, and community- and faith-based organizations (which are essential to helping the states address EJ concerns as well).

Tools: These states said it is important to have communication, emergency, and mitigation plans in place. GIS mapping tools have been the most beneficial in planning for disasters and engaging with communities. Translation services have been helpful in supporting communities with EJ concerns and direct community outreach.

Challenges: These states have faced challenges in establishing regular communication outside of a response period, including setting the chain of command structure in place so communication is streamlined ahead of time. States often work on multiple disaster response plans at the same time, so it is important for agencies to be in sync for consistent and coordinated response activities. Complex or overlapping emergencies may burden staff and can make it challenging to stick with the original roles and planning efforts. Heeding lessons learned from previous responses and using them to inform future planning is key.

State Example: The Minnesota Pollution Control Agency provides funding for prevention projects that promote resilience. About 10 years ago, the state treasury created disaster response contingency funding account for disaster response, which has helped to de-politicize preparedness and response efforts since it doesn't require legislative session to approve funding for each ad-hoc response. Every year, they make recommendations for the budget based on how much they think will be spent, which has been helpful in planning for future events.

Call 2: Regions 1, 2, 3, and Territories

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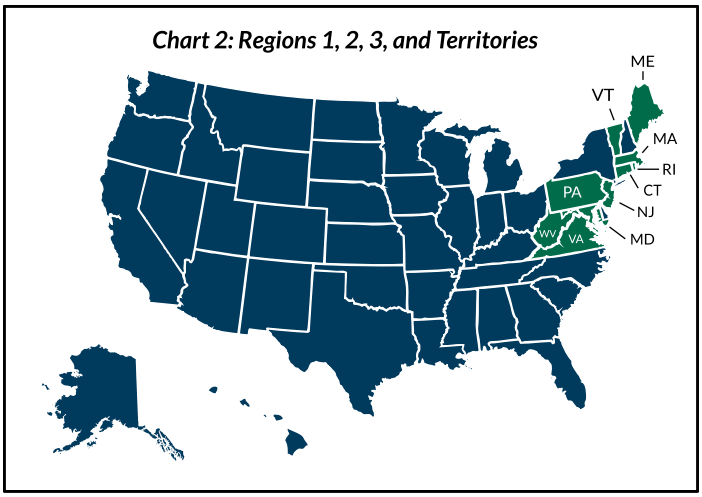

Overview: Flooding is by far the most common disaster that these states collectively experience.

Partnerships: There are several important partnerships when dealing with flooding. State climatologists may help build tools and provide expertise, facilitating the connection to resources from the National Oceanic and Atmospheric Administration (NOAA), for example. NOAA itself may support engineering and projects, furthering them to be funded. FEMA provides funding to support resilience planning workshops, and EPA and NOAA have a memorandum of understanding with coastal states to support the use of State Revolving Funds. State environmental agencies also partner with other agencies in their states to engage local governments with pre- and post-disaster safety and regulatory requirements.

Tools: The states noted a few considerations for communities with EJ concerns, namely cultural competence (e.g., consider food, languages, and environment when establishing shelters and cultivate trust in populations unaccustomed to being supported) and translation services. It is also important to consider evaluation capabilities as many people in overburdened communities lack personal transportation to leave ahead of a disaster. States in these regions are establishing several preparedness plans and using climate-related indicators. For example, one plan supports local efforts to promote resilience and equity in municipalities, and another focuses on helping communities understand vulnerabilities prior to disasters. States noted that attending workshops, including community representatives in core teams, using translation services, and utilizing mapping and planning tools are all helpful. Climate-related indicators and tools are helpful to support local response efforts with debris staging areas, evaluating flood risks at a municipal level, modeling hazards (both coastal and inland), and projecting precipitation events.

Challenges: One of the biggest challenges these regions face regarding impacts from flooding events is the impact of Substantial Damage. If the cost to repair a structure is 50% or more of the market value, the structure receives a Substantial Damage determination and must meet local floodplain management standards of compliance upon rebuilding. This is a significant challenge as it is difficult for communities with EJ concerns to meet the standards or other regulatory requirements essential for recovery. Often, bringing structures back up to code is costly, leading to limited housing options. States noted the importance of standardizing the damage assessment process so that evaluations are properly reported to FEMA and funding is utilized to its maximum potential. One state suggested creating a checklist with FEMA terminology so local officials can easily account for losses—it may be easier to identify damages from a list of choices rather than reading definitions and making determinations as to whether it applies to a particular situation.

State Example: Pennsylvania supports local flooding response efforts with debris staging areas and utilizes GIS, waste tools, and specific debris management processes to evaluate where individuals are going and how to get them back into their homes. The state created a series of factsheets for citizens like how to return to properties, how to clean up house post-flooding, how to manage waste, and information on private wells. Pennsylvania is looking at census data to pre-translate these fact sheets and determine which languages to translate into.

Call 3: Regions 9 and 10

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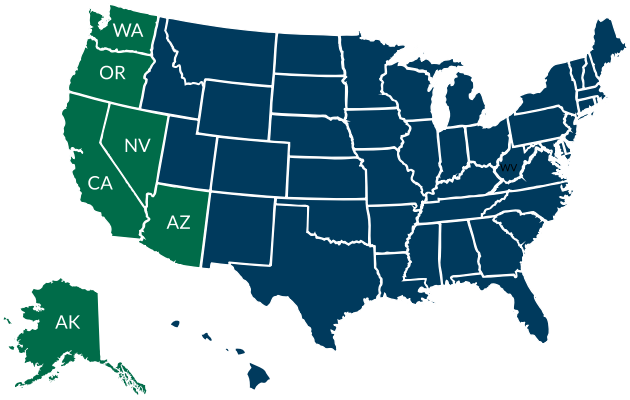

Overview: Wildfires and hazardous material events are the most common types of disasters in these regions, with extreme heat and flooding events following close behind. States noted the increased frequency of these events and the need to be proactive to anticipate and mitigate their impacts, especially for maintaining critical infrastructure and protecting vulnerable populations.

Partnerships: State health and environmental agencies collaborate with state, local, and tribal partners as part of the emergency response system. Some examples of partnerships include working with faith-based organizations to establish a network of facilities with services to support vulnerable individuals during heat events, collaborating with tribal liaisons during disaster planning activities and response exercises, working with university partners to conduct community-based participatory research, and conduct workshops to improve communications with local communities. States who work with tribal partners often rely on tribal liaisons to support government-to-government interactions, as well as navigating land sovereignty and fishing rights during hazardous material clean-up efforts.

Tools: Several states in these regions are developing hazard mitigation plans that incorporate climate-related indicators and support resiliency for environmental hazards. Some of the climate indicators tracked by states include ambient air and water quality measures, such as the number of unhealthy air days and greenhouse gas measurements. Some states also track seasonal shifts in vector-borne diseases incidence as an indicator of a changing climate. For tools most useful in engaging communities with EJ concerns, states mentioned hosting community focus groups and listening sessions as valuable conduits for information collection and building trust.

Challenges: States discussed funding challenges, specifically in terms of getting support for cooling and smoke centers. One state noted that while the mobile cooling centers have proven successful, especially in overburdened communities, it is challenging to obtain adequate security and staffing.

State Example: Washington is implementing a law that seeks to embed environmental justice in agency processes and budgets. The law establishes a broad definition of overburdened communities and an EJ council to provide guidance to state agencies on implementation of the law. Similarly to other states, Washington is working to map environmental health disparities to better understand and characterize underlying patterns of social, economic, and environmental disparities. In addition to creating an EJ mapping tool, Washington is developing indicators for statewide climate resilience plan and the University of Washington Climate Impacts Group has a variety of resources for state agencies that provide access to data and information on the impacts of climate change.

Call 4: Southeastern United States

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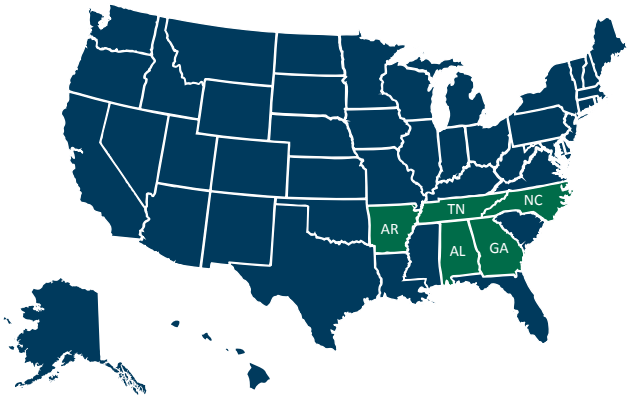


Overview: After identifying several types of natural disasters (flooding, hurricanes, and tornadoes) as the most common disasters they faced, the southeastern states focused their discussion on issues related to water and access to clean drinking water. As many of the states on the call were coastal states, they also discussed challenges around coastal issues like sea level rise and saltwater intrusion.

Partnerships: State environmental and health agencies discussed the need to work with state departments of natural resources on issues related to water, working with local health agencies on drinking water systems being offline or under a boil water notice, and working with state and local emergency preparedness groups ahead of disasters and emergency response groups during/after disasters. Alabama noted a regional compact for assistance where states can ask each other for staff assistance during disasters. Additionally, Arkansas noted that outside of formal state agency assistance agreements, hospitals coordinate to move patients between regions of a state or even between states during disasters.

Tools: State environment and health agencies discussed the value of planning and practicing for disaster response. One state talked about developing a roster of state staff volunteers for an environmental health strike team to serve as boots on the ground after a disaster to help communities get back on their feet. They also mentioned developing a registry of people who would need assistance evacuating to a shelter that helps the state plan for and be able to assist in a disaster. Other states talked about working with local governments to conduct vulnerability assessments and long-term resiliency planning, and working with some coastal tribal communities to run tabletop exercises. The southeastern states noted the need to get information out through different avenues depending on the disaster. For instance, one state noted that working with local community partners gets the word out to different groups and can help with translation. They also noted the value of having outreach lists grouped by jurisdiction/area so that agencies could quickly reach out to targeted areas of the state in response to a disaster. States mentioned using CDC's Social Vulnerability Index and ESRI's Living Atlas to identify communities with EJ concerns (see figure below). States encouraged CDC to expand the BRACE program to include all states as everyone needed to be building resilience against climate effects.

Challenges: These states discussed challenges in ensuring sufficient resources (e.g., time, staffing, funding) to effectively execute resilience plans and address priority challenges. One state also noted that local jurisdictions' interpretations of their primary threats may differ from the state's assessment, leading to variations in the thresholds or triggers for disaster events and impeding effective implementation of resilience plans. They noted the need for increased joint planning to ensure all perspectives are considered and planning is cohesive.

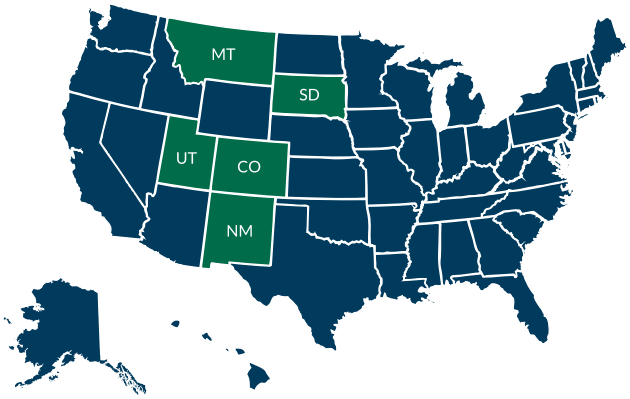
Call 4: Southeastern United States (Continued)

State Example: Georgia has done a lot of work to help its communities be more resilient in the face of disasters. The departments of health (DOH) and environmental quality work with the department of natural resources, local health departments, and local community organizations. They have worked to encourage facilities to have an emergency plan in place. The DOH has developed lists of facilities and their contacts so they can send messages ahead of expected disasters to remind them of what to do if there are power and/or water outages. To support individuals in need, the state has developed a registry where individuals can sign up for assistance, such as evacuation to a medical support shelter ahead of a disaster. The state has also worked with local partners to develop a statewide sheltering plan that should make it smoother to set up needed shelters for future disasters. DOH has also developed an environmental health strike team with environmental health specialists from local health districts around the state that volunteer to be sent to local communities to help after a disaster. The strike team is set up to help with emergency response and has helped with inspections to re-open restaurants, vector-borne illness surveillance and control, and well water testing after flooding events.

Call 5: Mountain and Southwestern United States

Overview: The mountains region discussion of disasters focused on flooding, especially flooding in an area that had recently experienced wildfires. They noted that the flooding could be from typical spring snowmelt or strong storms. Beyond evacuation needs, states noted that flooding caused challenges with wastewater treatment plants, drinking water systems, and even the reliability of some dams. The states also discussed some challenges around spills and wildfires.

Chart 5: Mountain and Southwestern United States



Partnerships: The health and environment agencies discussed working with state emergency services that are housed in various departments depending on the state. The states also noted that they work with local emergency services and local health departments. Colorado mentioned working with their Department of Local Affairs, a state agency that serves as the interface between state government and local communities. States also emphasized the need to reach tribal members through trusted sources and channels like social media.

Tools: The states discussed using mapping tools, like Montana DEQ's Today's Air and Colorado's EnviroScreen, to identify communities with EJ concerns, to predict areas with higher probability of flooding, and to visualize air quality concerns around wildfire smoke. Several states talked about tabletop exercises and other trainings to build resiliency to disasters: Utah noted they had recently completed the Great Utah Shakeout; New Mexico discussed doing tabletop exercises and other training with FEMA Region 6 and other states in their region; and Montana talked about running tabletop and field exercises to practice response as identified in the Montana Resiliency Plan.

Challenges: The states discussed challenges in working with volunteers like local firefighters, with part-time staff like local emergency management officials, and limited experienced agency staff.

Call 5: Mountain and Southwestern United States (Cont.)

State Example: New Mexico has built relationships across a wide range of partners in order to help the state build resiliency and disaster preparedness. Regionally, they work with FEMA region 6 and other states in their region to practice disaster response. At the state agency level, the Department of Homeland Security Emergency Management oversees resiliency through its lead role in emergency response and as the creator of the state's hazard mitigation plan. While the department is the overall lead, it regularly works with New Mexico's Department of Health, the Environment Department (NMED), and the Department of Energy, Minerals and Natural Resources. These various state agencies work with city and county emergency managers, tribal entities, and local organizations. At the national level the state works regularly with FEMA, the U.S. Forest Service, and other federal agencies. Additionally, the state works to engage with various groups and disadvantaged communities that may not be reached through traditional channels. For instance, the EJ Coordinator at NMED, the Climate Change Bureau at NMED, and the Climate Resilience Team at Energy, Minerals, and Natural Resources are variously working to build relationships with disadvantaged communities, social justice organizations and environmental organizations that work on EJ issues in order to better share information from the state to communities with EJ concerns and to get more input from those communities into the state's plans and actions. Also, the Governor's Commission on Disability is working to make disaster planning more inclusive in the state that has led to efforts like developing a text to 911 system that will make 911 services more accessible to people with hearing disabilities.

Conclusion

Overall, there are notable nationwide trends on resiliency planning and preparedness. Highlights include the importance of partnerships—with other state agencies, emergency management, community- and faith-based organizations, and others—as well as tools like GIS, listening sessions in communities, and translation services. ASTHO and ECOS look forward to continuing to discuss this important topic with states and plan to embark on a new project in 2024 – 2025 focused on identifying best practices for state health and environmental agencies, local health officials, federal partners, and other stakeholders, and building a resource hub with case studies, examples of successful resiliency plans, and other communication tools to help states with disaster resiliency planning and implementation.

Appendix: Discussion Questions

ASTHO and ECOS provided state staff with these questions ahead of the calls, and they helped shape each listening session discussion.

- What tools are important in planning for disasters and engaging with communities with EJ concerns?
- What partnerships are important in planning for disasters and engaging with communities with EJ concerns?
- How does your agency identify communities with existing environmental burdens? What are some considerations when responding to disasters in communities with EJ concerns?
- What tools has your state found helpful in responding to disasters and implementing such resiliency plans?
- What challenges has your state faced in implementing resiliency plans? How has your agency worked to overcome them?
- How has your agency collaborated with other states, state and federal agencies, local communities and businesses, etc. when responding to disasters and implementing resiliency plans?
- How has your agency been able to integrate climate-related indicators into your resiliency plan (i.e. heat, flooding, drought, tornadoes, wildfires)?
- How can ECOS and ASTHO support your agency in implementing the resiliency plan?