

REPORT

IN THE HOT SEAT:

STATE AND LOCAL GOVERNMENTS MUST PROTECT THEIR PEOPLE FROM EXTREME HEAT



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EXECUTIVE SUMMARY

Nearly every corner of the United States has been harmed by oppressively hot days in recent years. Heat waves have gotten longer, more frequent, and more intense since the 1960s, and the share of U.S. deaths attributable to the hottest days increased by more than 50 percent from 2000 to 2020.¹

Climate change, aging infrastructure, skyrocketing economic pressures, and a lack of preparedness for extreme heat are setting the stage for mass casualty events that could rival the disasters seen in Chicago in 1995 and the Pacific Northwest in 2021, which together killed more than 1,740 people. But even during less severe summers, rising temperatures are exposing U.S. residents to elevated risks of preventable health harms.

At the same time, other crises such as the COVID-19 pandemic and an increasing number of billion-dollar weather disasters have strained the budgets of state and local governments and made it harder for individual households to pay for heat-protective services such as electricity and health care. In response, state and local leaders have repeatedly asked the federal government for help with heat-related planning, recovery, and resilience activities.

One popular idea has been to unlock funding and technical support for heat waves through a “major disaster declaration,” which is commonly used for flooding, tornadoes, or other high-damage events. The president can issue such a declaration in response to a request from a state governor or chief executive of a Tribal Nation, but so far, all formal state requests to declare a heat disaster have been denied.

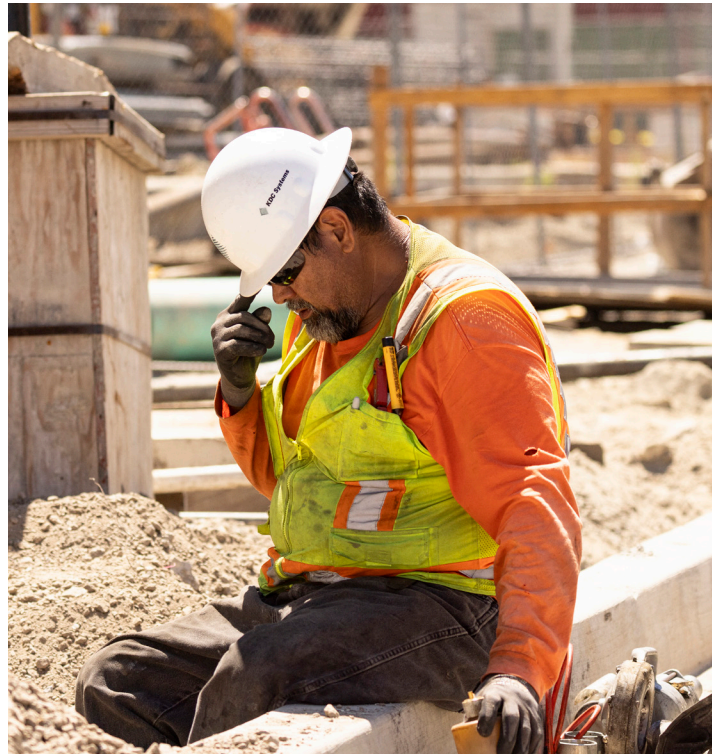
In early 2025, NRDC set out to explore the concept of heat disaster declarations and how they might help with the resource needs of state and local officials. We spoke with 17 state and local experts in 11 states with roles in emergency management, climate resilience, health care, and other relevant areas. We paired these interviews with a close review of recent literature and federal guidance documents about the disaster declaration process.

These conversations took place against a rapidly shifting backdrop created by the Trump administration’s unprecedented effort to dismantle many of the federal government’s core functions. The policy shifts at the federal level have increased strain and uncertainty for everyone from on-the-ground emergency responders to the upper levels of state and local governments. The administration has also undone nearly all of the whole-of-government progress made in recent years toward a more heat-resilient nation.

However, even without recent actions by the Trump administration, our research finds that **the major disaster declaration process is not well suited for extreme heat** because it emphasizes responses to widespread

infrastructure damage rather than the prevention of illness and death. And given the current policy context, which is hostile to climate action, it is even more true that **state and local governments cannot rely on the federal government to deliver meaningful help before, during, or after dangerous heat events**. Although there are pathways to improve the existing disaster declaration process and to create analogous procedures specifically for heat, the prospects of success seem distant under the current administration and Congress.

In the meantime, our interviews reveal significant resource gaps for state- and city-level heat-related planning, response, recovery, and resilience. State and local leaders face tightening budgets due to a loss of federal funding. But as extreme heat waves become an increasingly dangerous feature of U.S. summers, leaders must prioritize proactive local and statewide heat-related spending to keep people safe from deadly heat.



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A worker takes a break on a construction site in Los Angeles during a July 2024 heat wave.

HEAT EVENTS CAN BE DISASTROUS—BUT ARE THEY DECLARABLE DISASTERS?

Thousands of heat-related emergency medical service responses. Unusually high numbers of heat-related deaths. Waiting lists for cooling shelters. Canceled commuter trains and closed bridges. Hospital evacuations after air conditioning failures. These were just some of the many effects of a June 2025 heat wave that exposed nearly one-third of the U.S. population to record-breaking high temperatures.²

The early-summer heat wave reinforced what scientists, urban planners, community groups, medical professionals, and others have known for decades: The United States is ill prepared for the heat waves of the present, let alone the deadlier ones expected in the future.³

To be sure, a growing number of subnational governments (i.e., states, cities, counties, and Tribal Nations) are investing in their heat emergency procedures, passing laws to protect low-income households from heat, and developing plans for long-term resilience to rising temperatures.⁴ However, other public health crises such as the COVID-19 pandemic have made it difficult for subnational governments to keep pace with the various needs of communities and businesses, and funding for heat is typically not prioritized.⁵ This has prompted repeated calls to make federal funding and technical assistance for heat events available via a “major disaster declaration” for heat waves.

The federal disaster declaration process (see box 1, below) is intended to support subnational governments that have been overwhelmed by catastrophes such as hurricanes, pandemics, or terrorist attacks. Since Congress passed the Stafford Disaster Relief and Emergency Assistance Act (“Stafford Act”) in 1988, just three states have requested major disaster declarations for heat.¹² The requests made by Missouri, Illinois, and California were denied across multiple administrations, in part because the Federal Emergency Management Agency (FEMA) determined that the events were not of sufficient “severity and magnitude.”¹³ This finding was particularly noteworthy for the 1995 heat wave in Illinois, which killed more than 700 people in Chicago alone and threw the city’s health care system into chaos.¹⁴

Lawmakers and advocates have tried—and failed—multiple times to amend the Stafford Act and the disaster declaration process to meet the needs of heat-affected subnational governments.

- From 2019 through 2025, members of Congress introduced the FEMA Climate Change Preparedness Act, Climate RESILIENCE Act, and Extreme Heat Emergency Act, all of which would add explicit mentions of extreme heat to definitions in the Stafford Act.¹⁵ The most recent introduction of the Extreme Heat Emergency Act came in mid-July 2025 after early-season heat waves harmed communities and businesses across the country.¹⁶

BOX 1: THE PRESIDENTIAL DECLARATION PROCESS IN BRIEF

Subnational governments—starting with local governments—are responsible for responding to disasters that occur in their jurisdictions. Should they find their local, state, and interstate mutual aid capabilities overwhelmed, governors or Tribal chief executives can submit a formal request for an emergency declaration or a major disaster declaration.⁶ Because federal assistance under an emergency declaration is limited in ways that make it less useful for widespread heat events, this report focuses on major disaster declarations.

With some exceptions, requests for a major disaster declaration start with an Initial Damage Assessment conducted by local or Tribal officials and a request to FEMA for a Preliminary Damage Assessment (PDA).⁷ The PDA, which is conducted jointly with federal, state or Tribal, and local officials, helps FEMA understand the scope of disaster-caused damage, actual or estimated costs incurred by subnational responders, the characteristics of the disaster-affected population, and a jurisdiction’s recent history of repeated disasters.⁸ FEMA then uses the PDA and other documentation to make a recommendation to the president.

Importantly, FEMA manages the declaration process and provides evidence of need. However, the authority to make a final decision on major disaster declarations lies solely with the president.⁹ Previous research has suggested that this final step can be subject to political bias, particularly in election years.¹⁰ Although President Trump denied or delayed response to requests from states from across the political spectrum early in his second term, his recent denials have fallen almost entirely along party lines, posing an unprecedented challenge to the typical disaster declaration process.¹¹

- In 2024, 31 groups led by the Center for Biological Diversity petitioned FEMA to include extreme heat in its definition of major disasters.¹⁷ The petition was subsequently supported by 14 state attorneys general and 24 mayors and other local government officials.¹⁸
- In 2024 and 2025, members of Congress introduced the Extreme Weather and Heat Response Modernization Act, which would direct FEMA to consider innovative heat mitigation and preparedness projects under existing sections of the Stafford Act.¹⁹
- Members of Congress also introduced the Heat Management Assistance Grant Act in 2024 and 2025. The bill would amend the Stafford Act by authorizing FEMA to provide grants, technical assistance, supplies, and other forms of support for heat mitigation, with or without a major disaster declaration.²⁰

FEMA has responded to the flurry of legislation and petitions by saying it already has the authority it needs to recommend major disaster declarations for extreme heat.²¹ The problem, according to the agency, isn't how disasters are defined by the law. Rather, no states have convincingly shown that heat events have outstripped their local capacity to respond. States, clearly, disagree.

We explored this disconnect between subnational representatives and FEMA officials in early 2025 via 17 informational interviews with participants from 11 states (for details, see the appendix). Given the multidisciplinary nature of extreme heat, we selected interviewees with a range of backgrounds, experience, and roles including emergency management practitioners, climate resilience planners, health care professionals, and heat researchers.

From these interviews and a review of the major disaster declaration process, we find that:

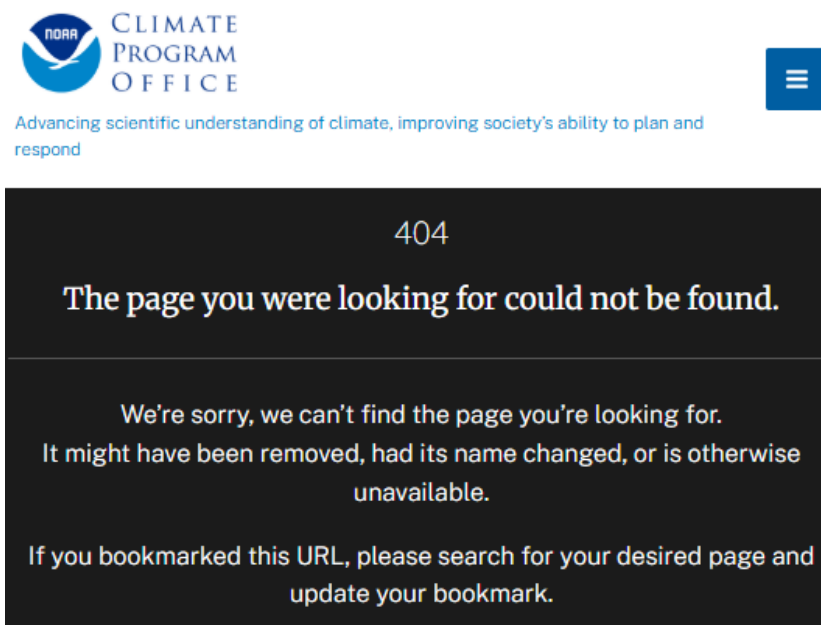
- On-the-ground responders and planners have significant unmet resource needs through every phase of the disaster cycle, from preparation for deadly heat events through recovery and resilience;
- The existing presidential disaster declaration process is not a good fit for meeting heat-related resource needs; and
- There is no easy pathway to “fixing” the declaration process for deadly heat events.

During our research, the Trump administration made the situation even worse by taking a wrecking ball to disaster preparedness and climate resilience efforts. Most notably, President Trump and his political appointees have repeatedly threatened to abolish FEMA and in the meantime have made it harder for state and local governments to access federal aid.²² The administration has also undone many of President Biden's whole-of-government efforts to strengthen the nation's heat resilience, including by dismantling climate and public health expertise across the federal government and taking critical data, planning tools, and funding opportunities offline.²³ Examples of vital resources that were removed from public view include the National Heat Strategy (figure 1), the U.S. Department of Housing and Urban Development's extreme heat guidance for affordable housing providers, and the entire National Climate Assessment.²⁴

The administration's assault will be especially detrimental to the programs and institutions that support those most vulnerable to extreme heat. As with other types of dangerous weather, the harms of heat tend to fall most heavily on medically vulnerable populations, disabled people, low-

FIGURE 1: SCREENSHOT OF THE FORMER LANDING PAGE FOR THE 2024–2030 NATIONAL HEAT STRATEGY, JULY 23, 2025

The strategy has since been archived by Harvard Law School.





A mother holds her child near a window fan at their home in Houston, Texas, during a July 2022 heat wave.

income households, and communities with high proportions of Black and Latine people.²⁵ But instead of acknowledging that reality, the Trump administration has made people less safe by—among other things—banning words related to climate impacts and solutions, rescinding grants to community-based organizations, and limiting access to federally funded health services.²⁶

Informed by these recent events, our research leads us to a clear conclusion: **Subnational governments cannot expect federal agencies to provide meaningful help before, during, or after dangerous heat events, especially not through the major disaster declaration process.** The current declaration process is not easily adaptable to extreme heat events and is unlikely, without

significant changes by Congress, to result in federal funding for states facing high temperatures. Rather than waiting, state and local leaders should use every tool under their immediate control to protect their local economies and the lives and livelihoods of their residents from extreme heat, planning and budgeting for dangerously high temperatures as if they are a given rather than a surprise.

This report provides an overview of the disaster declaration process, explores the reasons why it is not a likely or effective vehicle for delivering funding to states and local governments, and recommend the immediate steps that state and local governments should take to increase their resilience to deadly heat.

THE CURRENT DISASTER DECLARATION PROCESS IS NOT SUITABLE FOR EXTREME HEAT

Severe heat waves can result in many of the same wide-ranging and lasting harms as other deadly weather events. These include deaths, illnesses, and injuries; mental health harms; food or water insecurity; infrastructure damage; increased household debt; and disruptions to health care and business operations.²⁷ Our analysis suggests, however, that the current disaster declaration process is not well suited to extreme heat because heat incidents are hard to define, because the declaration process emphasizes property damage, and because health impacts are difficult to count in a timely fashion.

HEAT INCIDENTS ARE HARD TO DEFINE

One of FEMA's roles during the major disaster declaration process is to determine the "incident period" for a destructive event. According to federal regulations, "No Federal assistance under the Act shall be approved unless the damage or hardship to be alleviated resulted from the disaster-causing incident which took place during the incident period or was in anticipation of that incident."²⁸

It is fairly straightforward to define when a hurricane or flood starts and ends and how much damage can be directly attributed to such events. Extreme heat is different for several reasons.

First, there is no standard definition of "extreme heat" or "heat wave," even within the federal government.²⁹ That is partly because temperatures that would be considered "extreme" in one region may be a normal summer day in another.

Second, temperature alone is not a sufficient indicator of the potential harm of heat to people and property. Rather, forecasters and planners need to consider other factors, such as the seasonal timing of high heat conditions, and non-atmospheric characteristics of a region, such as access to cool spaces.³⁰ As one resilience expert who has worked with state and local governments across the Southeast mused:

We don't know how to define heat so we don't know how to respond . . . and plan for it. How do we define heat? Because it's different for me; I'm fully air conditioned . . . I'm good, financially solvent, my life is easy . . . So, what is hot for other people? Where is hot really existing, and what does an unaffordable power bill look like?

Third, high temperatures don't need to be extreme to be deadly for susceptible populations.³¹ This means that chronic, season-long heat can pose just as much of a threat in some regions as extreme heat. For instance, in Maricopa County, Arizona, less than half of all heat-related deaths in 2024 occurred on the most extreme heat days.³²

© Matt York/AP Photo



Patients gather under a water mister at a Circle The City mobile health clinic in Phoenix, Arizona in May 2024.

Finally, although extreme heat can cause acute damage to infrastructure such as roads or train tracks, no single heat wave will result in the scope and scale of devastation and debris-removal needs seen after a hurricane or a wildfire. Rather, heat tends to have a creeping effect on infrastructure, for example softening highways over time, causing them to develop deep ruts like one would see in a dirt road.³³

THE DECLARATION PROCESS EMPHASIZES DAMAGE TO PROPERTY, NOT DAMAGE TO PEOPLE

As discussed above, states requesting a major disaster declaration must demonstrate that they need federal assistance to supplement their own response efforts. The Preliminary Damage Assessment (PDA), which plays a major role in that demonstration, focuses almost exclusively on physical damage to infrastructure and the costs of addressing that damage. Because the number of deaths and injuries occurring during the incident period of an event play only a minor role in determining whether states are eligible for help—on paper, at least—many of the resource needs identified by project participants, such as overnight cooling shelters, would not be covered by the three main post-disaster programs described below.³⁴

- **The Public Assistance Program** helps subnational governments and eligible nonprofits pay for “the repair, restoration, reconstruction or replacement” of *public* systems, structures, and equipment such as roads and government buildings.³⁵ Emergency public assistance can include feeding and sheltering disaster survivors, which could be useful in the case of an extended regional power or drinking water outage during a heat wave.³⁶ However, FEMA does not recommend public assistance unless public infrastructure damage in a state or territory has exceeded \$1 million *and* has met an annually adjusted per capita threshold.³⁷ FEMA does not consider deaths and injuries in public assistance requests.
- **The Individual Assistance Program** helps households and individuals in a disaster-affected area who have experienced uninsured or underinsured property losses. Affected parties can receive assistance with things such as funeral expenses, crisis counseling, and legal counseling, which could be useful to households who lose loved ones or primary wage earners during deadly heat events. There is no per capita threshold for the individual assistance program. However, although deaths and injuries are considered in the recommendations for some types of assistance, the most important factors driving eligibility are the fiscal capacity of a state and the amount of uninsured home and personal property losses.³⁸

- **The Hazard Mitigation Assistance Program** provides funding to subnational governments for projects that “reduce long-term risk to people and property,” such as building retrofits and installation of backup power systems. Hazard mitigation grants must initially be authorized in a major disaster declaration. Later, states use a separate process to apply for project grants that can be used for any kind of hazard as long as the proposed projects meet a benefit–cost analysis threshold and other program criteria.³⁹ FEMA has tried to make it easier for states and localities to use hazard mitigation assistance and other grant programs for heat-related needs through guidance on allowable project types and by simplifying benefit–cost calculations.⁴⁰ Unfortunately, there is no way to assess how successful these efforts have been due to limitations in the agency’s current grant reporting database.⁴¹

In summary, the public and individual assistance programs include services that could meet some acute needs during or after a heat emergency, and the hazard mitigation program includes services that could reduce vulnerability to future heat emergencies. Nevertheless, the emphasis of the declaration process on infrastructure damage means that those services will remain inaccessible to state and local officials who are responding to, recovering from, or preparing for extreme heat.

HEALTH HARMS ARE HARD TO QUANTIFY IN A TIMELY MANNER

Even if health harms played a more central role in FEMA’s recommendation to the president, most jurisdictions lack a standardized way to quickly estimate the number of deaths, illnesses, and injuries associated with heat waves.⁴² This means the health toll of a single heat wave or an entire heat season is often not known until months or years later—if it is ever determined at all.⁴³ Nearly all our interviewees spoke about the challenges of acquiring and assessing reliable and timely heat-health data, including determining the contribution of heat to deaths from pre-existing conditions such as heart disease, inconsistent use of medical diagnosis codes across different health and safety providers and jurisdictions, the slow pace of medical examiner investigations, and privacy considerations.

Furthermore, few jurisdictions have attempted to estimate the staggering price tag of heat-related health harms, in part because of data limitations.⁴⁴ This data gap was reflected in the goals of the first-ever National Heat Strategy, which was released under the Biden administration and later retracted by the Trump administration. Had the plan moved forward, states and localities would have received valuable guidance on how to better quantify and communicate the economic costs of heat.⁴⁵

NEAR-TERM CHANGES IN THE FEDERAL FUNDING LANDSCAPE ARE UNLIKELY

While the disaster declaration process as it currently exists is not well suited to extreme heat, there are potential pathways for FEMA and other federal agencies to provide more heat-related assistance to states. That said, the current administration seems unlikely to make any such changes.

Although some interviewees expressed frustration about working with FEMA, they also acknowledged recent efforts by the agency to streamline the application process for federal assistance and to provide guidance on how to use existing disaster assistance and hazard mitigation programs for heat-related projects.⁴⁶ If FEMA is sufficiently funded and staffed, it could continue to find innovative pathways for heat-stricken communities to make use of existing federal programs for heat-related solutions. That work could start with fully adopting recent recommendations from the U.S. Government Accountability Office (GAO) to evaluate and address gaps in FEMA's programs for assisting subnational governments with heat hazards (see box 2, below).⁴⁷

Congress also could directly facilitate a better fit between heat emergencies and the declaration process by creating a Heat Management Assistance Grant (HMAG) program.⁴⁸ This would be similar to the Fire Management Assistance Grant (FMAG) program, which triggers an expedited decision from FEMA on disaster funding and technical support *before* an uncontrolled fire causes the kind of destruction that would constitute a major disaster.⁴⁹ Unlike FMAG, however, HMAG would also allow states and localities to apply later for heat-related hazard mitigation grants with or without a major disaster declaration for the original heat emergency.

As noted in the Federation of American Scientists' *2025 Framework for a Heat Ready Nation*, there is a long list of things FEMA and the rest of the federal government should do to "proactively implement strategies to prepare for longer heat seasons and save lives during extreme heat events."⁵⁰ That framework paints an ambitious but ultimately achievable vision of how each level of government could work together with communities and the private sector to build collective heat resilience.

But under the current administration, these options seem distant at best. For now, states and localities are in the unenviable position of going it alone when deadly heat descends on their communities.



The entrance to a cooling center in the Harlem neighborhood of New York City, July 2024.

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BOX 2: RECOMMENDATIONS FROM THE U.S. GOVERNMENT ACCOUNTABILITY OFFICE TO THE FEDERAL EMERGENCY MANAGEMENT AGENCY

At the request of Congress, the Government Accountability Office (GAO) evaluated how FEMA supports subnational governments that experience heat events.⁵¹ On the basis of their analysis, which was conducted from March 2024 through September 2025, GAO made four recommendations to the FEMA administrator:

1. Identify quantitative and qualitative evidence that subnational governments could use to determine the costs and benefits of heat-related projects.
2. Establish a concrete plan for incorporating additional heat-related activities into FEMA's process for benefit-cost analyses.
3. Identify projects that would work primarily to reduce heat hazards and then provide guidance materials about such projects to subnational governments.
4. Evaluate gaps in FEMA's role and capacities to assist subnational governments with extreme heat and determine whether and how best to address the gaps.

STATE AND LOCAL GOVERNMENTS ARE IN THE HOT SEAT WHEN IT COMES TO HEAT EMERGENCIES

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EMTs assist a patient who called 911 in June 2023 to report chest pain after working outside for hours in Eagle Pass, Texas.

As recent experience in the United States and around the world has shown, devastating heat events that once seemed impossible are now quite likely.⁵² Without reliable federal assistance, states and local governments must themselves be prepared to protect their residents.

For example, the 2021 Pacific Northwest heat wave took just about everyone by surprise.⁵³ One public health official told us how he had difficulty getting a solid forecast from the National Weather Service ahead of what would end up being a mass casualty event, with more than 1,040 deaths across the region.⁵⁴

I [saw] that some of their models [were] projecting all-time temperature records. And so, I called the Weather Service and said, “I just saw a kind of a scary mention in the discussion.” And they said, “Well, we don’t really believe our models” . . . because they didn’t think it would get that hot.”

Another surprise was the effect of the heat wave on the region’s economy as many businesses temporarily closed, commuter routes were disrupted, and residents stayed indoors. The same official went on to say:

People weren’t doing anything. They were just hunkering down. We had infrastructure impacts where we had our passenger rail systems . . . damaged by the heat. We had bridges that were inoperable during the heat.

Without appropriate planning and resource allocation, many places around the country are likely to face similar economic, health, and infrastructure impacts. As a worst-case scenario, large cities could be one extended power outage away from a “Hurricane Katrina of extreme heat.”⁵⁵ Electricity helps keep people safe during heat waves by powering everything from household fans and air conditioners, to drinking water treatment and distribution facilities, to hospital equipment such as ice machines and ventilators needed to treat heatstroke patients. Luckily, the Pacific Northwest

experienced only limited power outages during the 2021 heat wave. But cities and states should not rely on luck in the future.⁵⁶

State and local governments need to act now to minimize heat-related harm to lives, livelihoods, and the economy by:

- Appointing leaders empowered to oversee extreme heat planning and response;
- Budgeting for extreme heat on an ongoing basis; and
- Planning for heat emergencies *and* longer-term heat resilience.

APPOINT EMPOWERED HEAT LEADERS

Many states and localities have failed to fully grasp the wide-ranging threats of extreme heat, and therefore have no one in charge of heat-related planning, preparedness, response, or resilience.⁵⁷ Without one or more leaders empowered to convene people and mobilize resources across multiple agencies, heat-related planning and implementation will likely remain siloed, focused on easy wins rather than harder strategic choices, and unlikely to address the needs of the most heat-sensitive populations.⁵⁸

Critically, trusted leaders could help states and localities navigate the production of after-action reports, which evaluate how well organizations respond to real-life or simulated emergencies.⁵⁹ Two of our interviewees spoke about how this type of report can be politically sensitive, especially if resources aren't subsequently made available to address major shortcomings. However, this type of evaluation presents a valuable opportunity to improve operations before the next heat emergency arrives. For example, the city of Phoenix formed new partnerships with the American Red Cross and the Nature Conservancy after its 2024 after-action report revealed staffing and logistical challenges in its response to the 2024 extreme heat season.⁶⁰

States and localities should follow the examples set by Arizona, Los Angeles, and locations outside the United States to create a chief heat officer (or similar) position that is appropriate for their specific jurisdiction.⁶¹ One of our interviewees also recommended that county and state governments form a structure for heat emergencies similar to an incident management team (IMT). IMTs are multi-jurisdictional, multidisciplinary teams that are deployed for complex or extended events.⁶² Although the IMT-type structure was new in Phoenix, the aforementioned interviewee anticipated it would help officials better standardize and quantify the impacts of extreme heat and ultimately to make the case for state and federal funding.

Of course, creating new positions and teams is easier said than done for smaller cities and rural areas with less fiscal and governance capacity. As a climate and health researcher who has extensive work with rural communities told us:

There are a lot of counties, towns, and regional governments where the mayor is also the town planner, and is also driving the bus, and is also putting up the

Christmas lights . . . How are these towns meant to create plans when . . . the people who run the town government are so incredibly overburdened themselves—until there is more of a mechanism, a sort of formalized mechanism, for people to get this capacity?

Put simply, without significant support from state governments or regional entities such as regional planning commissions or natural resources districts, the need for dedicated heat leaders in less-populated areas will likely remain unmet.⁶³

BUDGET FOR EXTREME HEAT ON AN ONGOING BASIS

According to recent research from the Pew Charitable Trusts (Pew), the budgetary approaches of state governments have not kept up with recent increases in the number and severity of *any* kind of disaster.⁶⁴ This is partly because most states don't systematically track what they spend on disaster planning, response, and recovery. The lack of data makes it difficult to predict future costs, even for disasters that are likely to occur again soon.

As a result, state governments tend to wait until after a disaster occurs to make major spending decisions, “outside of—and without the analysis and deliberation of—the formal budget process.”⁶⁵ This reactive approach can end up being less transparent and therefore less equitable, can stymie other policy priorities through unexpected budget cuts, and can prioritize quick fixes that have the potential to amplify future disaster-related risks.⁶⁶ Examples of the latter include adding shade structures to transit routes without assessing how much they heat up during the day, or opening a cooling center in low-wealth neighborhoods without also providing low-cost transportation to get there.⁶⁷

This approach is particularly problematic for responding to heat, a hazard whose mitigation is already underfunded even as average temperatures rise and deadly heat waves become more frequent, severe, and long-lasting. As one of our interviewees put it:

The hazard is getting worse, and I think it's not something we should be thinking about as these random one-off offenses. It's something we should be thinking about as a predictable, anticipated hazard that we will deal with most years.

One of Pew's most important points was that planners and responders need dedicated funding for every phase of a disaster. The people we spoke to consistently reinforced that point (see table 1), highlighting the need for resources to fund, for instance:

- Translation services to ensure public education materials and emergency messaging are linguistically appropriate for local communities;
- Surge staffing and supplies for responding to heat emergencies;
- Utility assistance funding; and
- Cost assessments needed to inform future budgets.

TABLE 1: EXAMPLES OF NEEDS IDENTIFIED BY INTERVIEWEES FOR HEAT EMERGENCY PREPAREDNESS, RESPONSE, AND RESILIENCE, EACH OF WHICH CARRIES BUDGET IMPLICATIONS.

This list is not comprehensive; exact needs will depend on factors such as the local climate, socioeconomic conditions, and existing emergency response capabilities.

Category of need	Preparing for heat emergencies	Responding to heat emergencies	Reducing long-term heat vulnerabilities
Year-round leadership	Permanent chief heat officer or similar position		
	Permanent staff to support heat preparedness, response, and long-term resilience		
Data and research	Research to identify most vulnerable populations and their locations	Real-time estimates of heat-related deaths, injuries, and illnesses	Research to refine real-time estimates of heat-related deaths, injuries, and illnesses; infrastructure damage; and economic disruption
	Development and refinement of a standardized way to identify and record heat-related deaths, injuries, and illnesses	Real-time estimates of heat-related damage and disruption to public infrastructure (e.g., effects on public water and energy utilities, commuter rail delays)	Tracking and reporting of costs and benefits of heat adaptation projects and programs
	Tracking and reporting of planning costs	Real-time estimates of cooling center usage	
		Real-time estimates of heat-related demand for essential community services such as child care (e.g., because of early dismissal from school or summer camp)	
		Real-time estimates of response and recovery costs, including those incurred by public hospitals, health clinics, and health departments	
Planning and budgeting	Development of heat emergency action plans (including via tabletop exercises)		Development and implementation of actionable heat resilience plans
	Production of after-action reports to identify the effectiveness of heat emergency responses		
	Ongoing coordination with critical stakeholder groups (e.g., health systems, schools, utilities, community-based organizations, local businesses)		
Public communication and education	Development and refinement of culturally and linguistically appropriate heat early warning systems	Emergency messaging on multiple platforms about health threats and resources available to the public	Heat-safety education in public schools
	Pre-event public outreach campaigns on multiple platforms about health threats and local resources available to the public	Ongoing funding for public radio and TV stations, which are critical sources of extreme weather information	
	Translation services	Translation services	
	Dedicated heat training for first responders and "second responders" (i.e., those who support first responders or provide post-disaster help)		

TABLE 1: EXAMPLES OF NEEDS IDENTIFIED BY INTERVIEWEES FOR HEAT EMERGENCY PREPAREDNESS, RESPONSE, AND RESILIENCE, EACH OF WHICH CARRIES BUDGET IMPLICATIONS.

This list is not comprehensive; exact needs will depend on factors such as the local climate, socioeconomic conditions, and existing emergency response capabilities.

Category of need	Preparing for heat emergencies	Responding to heat emergencies	Reducing long-term heat vulnerabilities
Supplies, equipment, and short-term facilities		Vehicles for moving supplies and staff	
		Portable air conditioner units	
		Backup power generators and charging stations	
		Food and bottled water for cooling shelters, response staff, and unhoused populations	
		Ice machines	
		Heat-related first aid supplies	
		Beds for overnight cooling shelters	
		Lockers for unhoused people to store belongings	
		Utility and rental/lease costs for cooling shelters and/or command centers	
		Buses, tents, or other mobile cooling shelters	
Social service programs	Inquiry into feasibility/ desirability of creating a registry of heat-vulnerable residents, like those used for hurricanes or other disasters	Emergency residential utility assistance	Increased access to affordable home retrofits, cooling equipment, and distributed energy generation for low-income and medically vulnerable populations
	System for identifying cooling centers and overnight shelters and communicating about them to the public	Organized door-to-door wellness checks for particularly heat-sensitive households	Energy affordability policies and programs for households
		Transportation services to cooling centers, alternate temporary housing, or medical care	Ongoing community health outreach to vulnerable communities
		Call center for non-emergency heat-related calls	Capacity-building among community-based organizations and other “second responders”
Public infrastructure		Surge staffing and overtime, especially for health and human services agencies and local service providers such as libraries	Expansion of urban greening programs to provide natural cooling in hot urban landscapes
			Establishment/improvement of shade structures and drinking water fountains
			Ongoing funding for public libraries and other cooled “third spaces” that serve as year-round community gathering spots and information hubs
			Improved heat resilience of critical infrastructure (e.g., transportation, water, electricity, public buildings)
			Heat safety protections for workers

In the absence of sufficient funding from their state governments, local heat planners and responders have historically turned to the federal government, philanthropists, and even the private sector for grants. One local official engaged in heat response said to us:

It really is me spending as much time as I can looking for grants, looking for funding, trying to make connections.

Unfortunately, most of the federal avenues for funding heat-related policies and programs have closed under the Trump administration. The loss of those dollars will admittedly put additional burdens on state and city budgets at an already challenging moment.⁶⁸ Although finding new ways to finance emergency response efforts are beyond the scope of this

report, we refer interested readers to the “State and Local Revenue Options” tool developed by the Center on Budget and Policy Priorities.⁶⁹

Furthermore, as some of our interviewees noted, there are creative ways to redirect existing funding to heat-related programs, even if that wasn’t its intended purpose. For example, New York State’s Essential Plan is a zero-premium, zero-deductible health insurance plan for lower-income households that don’t qualify for Medicaid or other, similar programs.⁷⁰ The state recently started using the program to supply free air conditioners to members with persistent asthma, which will help prevent heat-related illnesses and deaths and reduce cost burdens on the health insurance plan itself.⁷¹

PLAN FOR HEAT EMERGENCIES AND LONGER-TERM HEAT RESILIENCE

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Trees being planted on a street corner lot during an annual Community Tree Day in Greenville, North Carolina.

The interviews we conducted revealed an interesting tension between emergency planning and long-term heat resilience. For example, one local heat expert talked about how heat funding in her area wasn't accessible for emergency response:

It's fine to plant a tree. And I think that's a great idea . . . but planting a tree today is not going to save someone's life today. I still need funding to do the cool water. I need to pay rent at cooling centers, you know, utilities have to be kept on so that there are cool spaces. And so I've left meetings very, very frustrated because they're like, "Oh, no, we don't have money for heat response, but do you want trees?" I'm like, "Yes, but no."

On the other hand, a heat-health researcher noted that a typical emergency response playbook doesn't reduce underlying vulnerabilities to extreme heat:

If you look at the Pacific Northwest heat wave . . . almost everyone who died was either unhoused or behind closed doors with no AC and nobody knew they were there. That's how they died and there's just no way for a public health response to reach all of those people . . . That calls for a long-term adaptation plan in which you're just requiring that all housing that people are going to live in is capable of protecting them from the heat.

The inexorable march of climate change means that state and local governments don't have the luxury of treating heat as either an emergency response problem or a longer-term climate resilience problem.⁷² It is both—as shown in table 1—meaning that planning and investment are needed in both areas.⁷³

Some of the people we interviewed discussed how this kind of "yes, and" thinking is starting to emerge in their area. Examples include New York City, which has moved from advertising cooling centers only during heat emergencies to communicating their availability over the entire heat season.⁷⁴ In Oklahoma City, a planning exercise hosted by the National Oceanic and Atmospheric Administration helped the Office of Sustainability, which is charged with long-term planning, forge a stronger relationship with the Office of Emergency Management, which historically has been the lead on emergency response to extreme heat.⁷⁵

LOOKING AHEAD

States and localities faced a challenging landscape for heat-related federal funding long before President Trump took office. Despite substantial interest in the potential of major disaster declarations to unlock funding for both short-term response and long-term heat resilience, the declaration process is not well suited to the unique characteristics of extreme heat. Many of the stumbling blocks could be addressed, but only with commitment from every corner of the federal government to engage in thoughtful, data-driven legislation, rulemaking, policy guidance, and technical support.

Instead, we see the administration making the federal landscape even bleaker, as resources for data, grants, and other support that existed specifically to shore up heat-related efforts by subnational governments are being clawed back, canceled, or subverted for other purposes. In this context, it would be understandable for states and localities to put (or keep) extreme heat on the back burner while they deal with other crises, such as the increasing number of climate- and weather-related disasters that each result in at least \$1 billion of damage.⁷⁶

However, the dangers of extreme heat aren't hypothetical to most Americans. In June 2025, nearly 7 in 10 U.S. residents reported that someone in their household had experienced heat-related health problems. And yet, most of those same respondents were not aware of life-saving resources in their area, such as help with utility bills or transportation to cooling centers.⁷⁷

States are on the front lines now. We cannot give up entirely on federal assistance; states should still push their congressional partners to protect the functions and functionality of federal agencies like FEMA, the U.S. Centers for Disease Control and Prevention, and the National Weather Service, and to advance improvements in federal law. However, they cannot rely on federal funding or an overhaul of the disaster declaration process. Without robust federal recognition of these dangers, state and local policymakers will need to take the lead to help protect their residents from extreme heat.

APPENDIX: INTERVIEWS

We used a combination of informational interviews, literature reviews, and an analysis of FEMA’s disaster declaration process to understand how on-the-ground responders have experienced extreme heat events and how well their needs could be met by the existing presidential disaster declaration process.⁷⁸

We conducted two rounds of interviews in 2025 (March 4 to April 11 and July 10 to August 8). Our initial invitations went to representatives from states or localities that had recently experienced dangerous heat conditions or had publicly indicated support for heat disaster declarations. Additional interviewees were incorporated in a manner similar to snowball sampling, a nonrandom method in which participants recommended others from within their networks. In total, we interviewed 17 people in 11 states: Alabama, Arizona, Illinois, Maryland, Massachusetts, New York, North Carolina, Oklahoma, Oregon, Texas, and Washington.

Participants included:

- Public health officials from two cities and one county
- Two emergency medicine physicians/professors
- A city heat response manager
- A city sustainability planning and outreach official
- A city climate resilience coordinator
- Two state climate policy officials
- An assistant state attorney general
- Two climate impact and equity researchers
- Two disaster resilience researchers
- A national heat-health policy expert
- A regional disaster response and climate resilience expert

Quotes within the report represent the opinions and experiences of individual participants, not their organizations, and participation in interviews does not indicate endorsement of this report or the recommendations herein.

ROUND 1 INTERVIEW QUESTIONS (MARCH 4 TO APRIL 11, 2025)

- What is your profession/role’s connection to extreme heat events?
- Have any heat events overwhelmed your state or local government’s capability to respond?
- Describe the characteristics of the event (duration, departure from normal). How did you know it was extreme?
- How did the state or locality know it was overwhelmed? What were the indicators or thresholds that were met?

- Are there any difficulties the state or locality has experienced while trying to quantify the impacts of an extreme heat event—for example, inconsistencies in reporting deaths or other health issues?
- What resources did the state or locality need before, during, or after the heat event?
- What federal assistance would have been most helpful to respond to the disaster, and why? What would this assistance have been put toward?
- How could FEMA change its damage assessment process to allow states to document what happened and what help they needed?
- Do you believe that the FEMA disaster declaration process is the appropriate way to secure federal funding and resources in the event of extreme heat? Some have suggested that addressing extreme heat as a public health crisis could be an effective alternative.
- What has most worried you about your state/locality’s ability to respond to future heat events?
- How would your state’s emergency preparedness be affected if FEMA is dismantled?

ROUND 2 INTERVIEW QUESTIONS (JULY 10 TO AUGUST 8, 2025)

- How would you characterize your state or local government’s approach to heat preparedness?
 - In other words: Is it treated more like an emergency management problem, a long-term adaptation problem, not a problem at all, or something else?
- Has your state or local government struggled to respond to any recent extreme heat events?
 - What were some of the problem areas, and who or what was most affected as a result?
 - What were some of the staffing or funding gaps?
 - Has your state or local government ever formally evaluated its own response to an extreme heat event?
- Has your state or local government made any significant progress in its response to extreme heat events?
- Are you aware of any dedicated state or local funding streams for heat-related policies, programs, or projects?
 - What are some of the state/locality’s biggest funding needs for short-term heat emergencies?
 - What are some of the state/locality’s biggest funding needs for longer-term heat adaptation and resilience?
- What worries you most about your state’s or locality’s ability to respond to future extreme heat events?

ENDNOTES

- 1 U.S. Environmental Protection Agency, “Climate Change Indicators: Heat Waves,” accessed November 10, 2025, <https://www.epa.gov/climate-indicators/climate-change-indicators-heat-waves>; Lingzhi Chu, Robert Dubrow, and Kai Chen, “Heat- and Cold-Related Mortality Burden in the US from 2000 to 2020,” *JAMA Network Open* 8, no. 11: e2542269, <https://doi.org/10.1001/jamanetworkopen.2025.42269>.
- 2 National Emergency Medical Services Information System and National Highway Traffic Safety Administration, “Heat-Related EMS Activation Surveillance Dashboard, June 14, 2025 to June 27, 2025,” accessed July 3, 2025, <https://nemsis.org/heat-related-ems-activation-surveillance-dashboard/>; Danielle J. Brown, “Hundreds Went to Emergency Rooms, 7 Died from Heat-Related Illness in June Heat Wave,” *Maryland Matters*, July 8, 2025, <https://marylandmatters.org/2025/07/08/hundreds-landed-in-emergency-rooms-seven-died-from-heat-related-illness-during-june-heat-wave/>; Heartland News, “Shelter at Capacity During Heatwave,” KFVS 12 (Cape Girardeau, MO), June 26, 2025, <https://www.kfvs12.com/2025/06/26/shelter-capacity-during-heatwave/>; Andrew Freedman and Mary Gilbert, “US Heat Wave Exposes Infrastructure, Health Vulnerabilities—and It’s Not Quite Over Yet,” CNN, June 25, 2025, <https://www.cnn.com/2025/06/25/weather/heat-wave-infrastructure-health-global-warming-climate/>; Natalie Martinez and NBC Chicago Staff, “3 Chicago-Area Hospitals with Broken Air Conditioning as Heat, Humidity Continues,” NBC5 Chicago, June 25, 2025, <https://www.nbcchicago.com/news/local/chicago-area-hospitals-deal-with-air-conditioning-issues-as-heat-continues/3775692/>; National Oceanic and Atmospheric Administration (hereinafter NOAA), “Assessing the U.S. Climate in June 2025,” July 9, 2025, <https://www.ncei.noaa.gov/news/national-climate-202506>.
- 3 See, e.g., Sara Meerow and Ladd Keith, Planning for Extreme Heat: A National Survey of U.S. Planners,” *Journal of the American Planning Association* 88, no. 3 (2022): 319–34, <https://www.tandfonline.com/doi/abs/10.1080/01944363.2021.1977682>; Rajashree Kotharkar and Aveek Ghosh, “Progress in Extreme Heat Management and Warning Systems: A Systematic Review of Heat-Health Action Plans (1995–2020),” *Sustainable Cities and Society* 76 (2022): 103487, <https://www.sciencedirect.com/science/article/abs/pii/S2210670721007538>; Juliette M. Randazza et al., “Planning to Reduce the Health Impacts of Extreme Heat: A Content Analysis of Heat Action Plans in Local United States Jurisdictions,” *American Journal of Public Health* 113, no. 5 (2023), <https://ajph.aphapublications.org/doi/full/10.2105/AJPH.2022.307217>.
- 4 See, e.g., Maryland Department of Health, *Extreme Heat Emergency Plan, 2025 Version 3.0*, 2025, <https://health.maryland.gov/preparedness/docs/MDH%20Extreme%20Heat%20Emergency%20Plan%202025.pdf>; County of Los Angeles Public Health, “Establishing a Safe Maximum Temperature Threshold for Rental Housing Units in Los Angeles County,” accessed September 5, 2025, <http://publichealth.lacounty.gov/eh/safety/safe-maximum-temperature-threshold.htm>; Nathaly Agosto Filión, Montana Knutsen, and Shamay Phillips, *New Jersey Extreme Heat Resilience Action Plan*, Interagency Council on Climate Resilience, 2024, <https://dep.nj.gov/climatechange/resilience/resilience-action-plans/>.
- 5 See, e.g., Andrew Shida Jin and Kelly T. Sanders, “Analyzing Changes to U.S. Municipal Heat Response Plans During the COVID-19 Pandemic,” *Environmental Science & Policy* 128 (2022): 347–58, <https://doi.org/10.1016/j.envsci.2021.11.022>.
- 6 Federal Emergency Management Administration (hereinafter FEMA), “How a Disaster Gets Declared,” accessed August 20, 2025, <https://www.fema.gov/disaster/how-declared>.
- 7 FEMA, *FEMA Preliminary Damage Assessment Guide*, June 2025, https://www.fema.gov/sites/default/files/documents/fema_pda_guide_socialization_presentation.pdf.
- 8 Ibid.
- 9 FEMA, “How a Disaster Gets Declared.”
- 10 See, e.g., John T. Gasper, “The Politics of Denying Aid: An Analysis of Disaster Declaration Turndowns,” *Journal of Public Management & Social Policy* 22, no. 2 (2015): article 7, <https://digitalscholarship.tsu.edu/jpm/vol22/iss2/>; Stephan A. Schneider and Sven Kunze, “Disastrous Discretion: Political Bias in Relief Allocation Varies Substantially with Disaster Severity,” *Review of Economics and Statistics* 107, no. 5 (2025): 1448–59, https://doi.org/10.1162/rest_a_01319.
- 11 Kenny Stancil, “Map: Trump Has Often Delayed or Denied Disaster Aid,” Revolving Door Project, July 2, 2025, <https://therevolvingdoorproject.org/trump-disaster-policy-tracker-map/>; Christopher Shea, “Federal Judge Strikes Down Trump Edict Tying Federal Disaster Aid to Immigration,” *Maryland Matters*, September 25, 2025, <https://marylandmatters.org/2025/09/25/federal-judge-strikes-down-trump-edict-tying-federal-disaster-aid-to-immigration/>; Gabriela Aoun Angueira, “Trump Gives Disaster Declarations to Alaska and Others but Denies Illinois, Vermont and Maryland,” Associated Press, October 23, 2025, <https://apnews.com/article/fema-trump-disasters-alaska-maryland-illinois-2c7a90956c101db8fe281d669a9cbde2>.
- 12 Conor F. Boyle et al., “Emergency Response to Extreme Heat: Federal Financial Assistance and Considerations for Congress,” Congressional Research Service (hereinafter CRS), April 2024, Product No. R46873, <https://www.congress.gov/crs-product/R46873>.
- 13 Ibid.
- 14 Maudlyne Ihejirika, “A Look Back at Chicago’s Deadly 1995 Heat Wave,” *Chicago Sun-Times*, August 30, 2016, <https://chicago.suntimes.com/2016/8/30/18354264/a-look-back-at-chicago-s-deadly-1995-heat-wave>.
- 15 FEMA Climate Change Preparedness Act, S.280, 117th Congress (2021), <https://www.congress.gov/bill/117th-congress/senate-bill/280>; Climate RESILIENCE Act, H.R.6396, 117th Congress (2022), <https://www.congress.gov/bill/117th-congress/house-bill/6396>; Extreme Heat Emergency Act of 2025, H.R.4497 (2025), <https://www.congress.gov/bill/119th-congress/house-bill/4497>. Earlier versions of each bill can be found at <https://www.congress.gov/>.
- 16 Office of Congresswoman Sylvia Garcia, “Rep. Sylvia Garcia, Senators Jacky Rosen and Ruben Gallego Introduce Bicameral and Bipartisan Bill to Declare Extreme Heat a Major Disaster,” press release, July 17, 2025, <https://sylviagarcia.house.gov/media/press-releases/rep-sylvia-garcia-senators-jacky-rosen-and-ruben-gallego-introduce-bicameral-and-bipartisan-bill-to-declare-extreme-heat-a-major-disaster>.
- 17 Center for Biological Diversity et al., “Petition for Rulemaking, Pursuant to the Administrative Procedure Act, to Include Extreme Heat and Wildfire Smoke as Major Disasters Under the Stafford Act,” June 17, 2024, https://www.biologicaldiversity.org/programs/energy-justice/pdfs/EMBARGOED_FEMA-Petition-on-Heat-and-Wildfire-Smoke.pdf.
- 18 Zack Budryk, “Fourteen Attorneys General Ask FEMA to Make Wildfire Smoke, Extreme Heat Eligible for Major Disaster Aid,” *The Hill*, July 16, 2024, <https://thehill.com/policy/energy-environment/4775601-attorneys-general-fema-letter-wildfire-smoke-heat-major-disaster-aid/>; Regina Romero et al. to Alejandro N. Mayorkas, Deanne Bennet Criswell, and Colt Hagmaier, “Local Government Leaders Letter to Federal Emergency Management Agency,” August 29, 2024, <https://www.tucsonaz.gov/files/sharedassets/public/v1/government/city-mayor/documents/mayor-romero-leads-national-petition-for-fema-to-recognize-extreme-heat-and-wildfire-smoke-as-major-disasters.pdf>.
- 19 Extreme Weather and Heat Response Modernization Act of 2025, H.R.3661, 119th Congress (2025), <https://www.congress.gov/bill/119th-congress/house-bill/3661>. Earlier versions of the bill can be found at <https://www.congress.gov/>.
- 20 HMAG Act of 2025, H.R.3738, 119th Congress (2025), <https://www.congress.gov/bill/119th-congress/house-bill/3738>. Earlier versions of the bill can be found at <https://www.congress.gov/>.
- 21 Boyle et al., “Emergency Response to Extreme Heat.”

- 22 Rob Moore, “FEMA—and the Nation’s Disaster Safety Net—Gets Cut Adrift,” NRDC, May 15, 2025, <https://www.nrdc.org/bio/rob-moore/fema-and-nations-disaster-safety-net-gets-cut-adrift>; Amelia Davidson, “In First Hearing, FEMA Chief Dodges on Agency Future,” *E&E News*, July 23, 2025, <https://subscriber.politicopro.com/article/eenews/2025/07/23/in-first-hearing-fema-chief-dodges-on-agency-future-00470011>; Joel Scata, “The BRIC Program Is Essential in Our New Climate Reality,” NRDC, August 26, 2025, <https://www.nrdc.org/bio/joel-scata/bric-program-essential-our-new-climate-reality>; Jennifer DeCesaro and Sarah Labowitz, “The Trump Administration Is Quietly Curbing the Flow of Disaster Funding,” *Emissary*, September 19, 2025, <https://carnegieendowment.org/emissary/2025/09/fema-disaster-relief-fund-dr-f-budget-hurting-states%E2%80%A6&lang=en>.
- 23 See, e.g., The White House, “Fact Sheet: Biden–Harris Administration Takes Action to Protect Communities from Extreme Heat Fueled by the Climate Crisis,” July 11, 2023, <https://bidenwhitehouse.archives.gov/briefing-room/statements-releases/2023/07/11/fact-sheet-biden-harris-administration-takes-action-to-protect-communities-from-extreme-heat-fueled-by-the-climate-crisis/>; Chelsea Harvey and Ariel Wittenberg, “Heat Warnings Wither Under Trump,” *E&E News*, August 20, 2025, <https://subscriber.politicopro.com/article/eenews/2025/08/20/heat-warnings-fade-under-trump-00513735>; Nambi Ndugga et al., “Impacts of Federal Actions on Extreme Heat and Health,” KFF, July 17, 2025, <https://www.kff.org/racial-equity-and-health-policy/issue-brief/impacts-of-federal-actions-on-extreme-heat-and-health/>.
- 24 National Integrated Heat Health Information System and Interagency Working Group on Extreme Heat, *2024–2030 National Heat Strategy*, August 2024, <https://eelp.law.harvard.edu/tracker/hhs-released-a-national-heat-strategy-for-2024-2030/>; Kate Yoder, “Why the Federal Government Is Making Climate Data Disappear,” *Grist*, July 21, 2025, <https://laist.com/news/climate-environment/why-the-federal-government-is-making-climate-data-disappear>.
- 25 See, e.g., Angel Hsu et al., “Disproportionate Exposure to Urban Heat Island Intensity Across Major US Cities,” *Nature Communications* 12 (2021): 2721, <https://www.nature.com/articles/s41467-021-22799-5>; Yasmin Romitti et al., “Inequality in the Availability of Residential Air Conditioning Across 115 US Metropolitan Areas,” *PNAS Nexus* 1, no. 4 (2022): pgac210, <https://doi.org/10.1093/pnasnexus/pgac210>; Jayajit Chakraborty, “Heatwave Frequency and Disability Status: Thermal Inequities in the U.S. South,” *Disability and Health Journal* 18, no. 1 (2025): 101665, <https://doi.org/10.1016/j.dhjo.2024.101665>.
- 26 PEN America, “Federal Government’s Growing Banned Words List Is Chilling Act of Censorship,” May 28, 2025, <https://pen.org/banned-words-list/>; Meg Slattery, “Trump’s EPA Cancelled 350 Environmental Justice Grants, Then Congress Cut Funding for Future Projects. Here’s Why That Matters,” *Earthjustice*, July 11, 2025, <https://earthjustice.org/article/trumps-epa-cancelled-350-environmental-justice-grants-then-congress-cut-funding-for-future-projects-heres-why-that-matters>; Maya Goldman, “Community Clinics Squeezed by Immigration Checks,” *Axios*, July 17, 2025, <https://www.axios.com/2025/07/17/clinics-cutoff-undocumented-immigrants>.
- 27 Kristie L. Ebi et al., “Hot Weather and Heat Extremes: Health Risks,” *Lancet* 389 (2021): 698–708, [https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(21\)01208-3/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(21)01208-3/fulltext); Margaret V. du Bray et al., “Beyond Extreme: Heat Emergency and Water Insecurity for People Experiencing Houselessness in Phoenix, Arizona, USA During and After the Heatwave of 2023,” *Human Ecology* 51 (2023): 799–808, <https://link.springer.com/article/10.1007/s10745-023-00447-4>; Health Policy Innovation Hub, “The Hidden Cost of Heat: Impacts to Bridges,” Nicholas Institute for Energy, Environment & Sustainability, Duke University, accessed September 8, 2025, <https://nicholasinstitute.duke.edu/publications/hidden-cost-heat-impacts-bridges>; U.S. Department of the Treasury, *The Impact of Climate Change on American Household Finances*, September 2023, <https://home.treasury.gov/news/press-releases/jyl1775>; Aparna Jayashankar et al., “Hotter Summer Days Heat Up Texans but Chill the State Economy,” *Federal Reserve Bank of Dallas*, October 18, 2023, <https://www.dallasfed.org/research/swe/2023/swe2309>.
- 28 Emergency Management and Assistance, 44 C.F.R. § 206.32 (2024), <https://www.ecfr.gov/current/title-44/chapter-I/subchapter-D/part-206/subpart-B#206.32>.
- 29 Eva Lipiec, *Extreme Heat: Background, NOAA’s Role, and Issues for Congress*, CRS, June 2025, Product No. R48579, <https://www.congress.gov/crs-product/R48579>; Erin L. Bunting, Vasily Tolmanov, and David Keellings, “What Is a Heat Wave: A Survey and Literature Synthesis of Heat Wave Definitions Across the United States,” *PLOS Climate* 3, no. 9 (2024): e0000468, <https://journals.plos.org/climate/article?id=10.1371/journal.pclm.0000468>.
- 30 National Weather Service, “NWS HeatRisk,” accessed September 8, 2025, <https://www.wpc.ncep.noaa.gov/heatrisk/>; American Forests, “Tree Equity: Shade Is Essential. Trees Make It Possible,” accessed September 8, 2025, <https://www.americanforests.org/why-shade-mapping/>.
- 31 Michelle L. Bell et al., “Climate Change, Extreme Heat, and Health,” *New England Journal of Medicine* 390 (2024): 1793–1801, <https://doi.org/10.1056/NEJMr2210769>.
- 32 City of Phoenix Office of Heat Response and Mitigation, *City of Phoenix 2025 Heat Response Plan*, accessed October 6, 2025, <https://www.phoenix.gov/administration/departments/heat/heat-response-programs/heat-response-plan.html>.
- 33 Kaity Kline, “Why Is Extreme Heat Causing Roads to Buckle in Multiple States?,” NPR, June 26, 2025, <https://www.npr.org/2025/06/26/nx-s1-5443646/hot-weather-humidity-effects-roads>.
- 34 Emergency Management and Assistance, 44 C.F.R. § 206.48 (2024), <https://www.ecfr.gov/current/title-44/chapter-I/subchapter-D/part-206/subpart-B/section-206.48>.
- 35 Erica A. Lee, *A Brief Overview of FEMA’s Public Assistance Program*, CRS, June 2025, Product No. IF11529, <https://www.congress.gov/crs-product/IF11529>.
- 36 Elizabeth M. Webster, *FEMA Individual Assistance Programs: An Overview*, CRS, March 2025, Product No. R46014, <https://www.congress.gov/crs-product/R46014>.
- 37 Tribal Nations have much lower thresholds. See Lee, *A Brief Overview of FEMA’s Public Assistance Program*.
- 38 FEMA, *FEMA Preliminary Damage Assessment Guide*; Webster, *FEMA Individual Assistance Programs*; FEMA, “How a Disaster Gets Declared.”
- 39 Diane P. Horne, *Post-Disaster and Pre-Disaster Hazard Mitigation Assistance*, CRS, January 2025, Product No. IF12833, <https://www.congress.gov/crs-product/IF12833>.
- 40 See, e.g., FEMA, “Mitigating the Risk of Extreme Temperatures with Hazard Mitigation Assistance Funds,” September 2022, https://www.fema.gov/sites/default/files/documents/fema_extreme-heat-fact-sheet_102022.pdf.
- 41 U.S. Government Accountability Office (hereinafter GAO), *Extreme Heat: Limited FEMA Assistance Highlights Need for Reevaluation of Agency’s Role*, GAO-25-107474, September 30, 2025, <https://www.gao.gov/products/gao-25-107474>.
- 42 Chelsea Harvey and Ariel Wittenberg, “Coroners Ignore Heat in Many Deaths. That’s Dangerous,” *E&E News by Politico*, September 4, 2024, <https://www.eenews.net/articles/coroners-ignore-heat-in-many-deaths-thats-dangerous/>.
- 43 Joan A. Casey et al., “Excess Injury Mortality in Washington State During the 2021 Heat Wave,” *American Journal of Public Health* 113 (2023): 657–60, <https://doi.org/10.2105/AJPH.2023.307269>; Nina Lakhani, “Americans Are Dying from Extreme Heat. Autopsy Reports Don’t Show the Full Story,” *Guardian*, October 9, 2025, <https://www.theguardian.com/environment/ng-interactive/2025/oct/09/extreme-heat-deaths-autopsy>.
- 44 Vijay S. Limaye et al., “Estimating the Costs of Inaction and the Economic Benefits of Addressing the Health Harms of Climate Change,” *Health Affairs* 39, no. 12 (2020): 2098–2104, <https://doi.org/10.1377/hlthaff.2020.01109>.
- 45 National Integrated Heat Health Information System and Interagency Working Group on Extreme Heat, *2024–2030 National Heat Strategy*.
- 46 FEMA, “Mitigating the Risk of Extreme Temperatures.”

- 47 GAO, *Extreme Heat: Limited FEMA Assistance Highlights Need for Reevaluation of Agency's Role*.
- 48 HMAG Act of 2025, H.R.3738, 119th Congress (2025).
- 49 FEMA, *Fire Management Assistance Grant Program and Policy Guide*, June 2021, FP-104-21-0002, https://www.fema.gov/sites/default/files/documents/fema_fmaggpg_063121.pdf.
- 50 Grace Wickerson and Melissa Guardaro, *Framework for a Heat Ready Nation*, Federation of American Scientists, July 2025, https://fas.org/wp-content/uploads/2025/07/July-2025_Heat-Ready-Nation.pdf.
- 51 GAO, *Extreme Heat: Limited FEMA Assistance Highlights Need for Reevaluation of Agency's Role*.
- 52 See, e.g., World Weather Attribution, "Extreme Heat in North America, Europe and China in July 2023 Made Much More Likely by Climate Change," July 25, 2023, <https://www.worldweatherattribution.org/extreme-heat-in-north-america-europe-and-china-in-july-2023-made-much-more-likely-by-climate-change/>; World Weather Attribution, "Intense Two-Week Heatwave in Fennoscandia Hotter and More Likely Due to Climate Change," August 14, 2025, <https://www.worldweatherattribution.org/intense-two-week-heatwave-in-fennoscandia-hotter-and-more-likely-due-to-climate-change/>; World Weather Attribution, "Consecutive Extreme Heat and Flooding Events in Argentina Highlight the Risk of Managing Increasingly Frequent and Intense Hazards in a Warming Climate," March 27, 2025, <https://www.worldweatherattribution.org/consecutive-extreme-heat-and-flooding-events-in-argentina-highlight-the-risk-of-managing-increasingly-frequent-and-intense-hazards-in-a-warming-climate/>.
- 53 Erica Fleishman et al., "Synthesis of Publications on the Anomalous June 2021 Heat Wave in the Pacific Northwest of the United States and Canada," *Bulletin of the American Meteorological Society* 106, no. 6 (2025): E1155–E1174, <https://doi.org/10.1175/BAMS-D-24-0188.1>.
- 54 Matthews et al., "Mortality Impacts of the Most Extreme Heat Events," *Nature Reviews Earth & Environment* 6 (2025): 193–210, <https://www.nature.com/articles/s43017-024-00635-w>.
- 55 Susan Spierre Clark et al., "The Vulnerability of Interdependent Urban Infrastructure Systems to Climate Change: Could Phoenix Experience a Katrina of Extreme Heat?," *Sustainable and Resilient Infrastructure* 4, no. 1 (2018): 21–35, <https://doi.org/10.1080/23789689.2018.1448668>; Brian Stone Jr. et al., "How Blackouts During Heat Waves Amplify Mortality and Morbidity Risk," *Environmental Science & Technology* 57, no. 22 (2023): 8245–55, <https://doi.org/10.1021/acs.est.2c09588>.
- 56 Matias Korfmacher et al., "Lessons Learnt from the 2021 Pacific Northwest Heat Dome: A Qualitative Study of Western Washington's Healthcare Community Response," *BMJ Open* 15 (2025): e089093, <https://doi.org/10.1136/bmjopen-2024-089093>.
- 57 Jordan Clarke and Ashley Ward, *Defining Extreme Heat as a Hazard: A Review of Current State Hazard Mitigation Plans*, Nicholas Institute for Energy, Environment and Sustainability at Duke University, April 20, 2023, <https://hdl.handle.net/10161/27339>; K. M. Archie et al., "Too Hot to Handle: Assessing Practitioner Climate Service Needs to Advance Heat Resilience," *Climate Services* 40 (2025): 100606, <https://doi.org/10.1016/j.cliser.2025.100606>; Wickerson and Guardaro, *Framework for a Heat Ready Nation*.
- 58 Jessica C. Kelley et al., "Extreme Heat Preparedness and Response Implementation: A Qualitative Study of Barriers, Facilitators, and Needs Among Local Health Jurisdictions in the United States," *Environmental Research: Health* 3, no. 3 (2025): 031002, <https://doi.org/10.1088/2752-5309/adf08b>.
- 59 World Health Organization, "After Action Review," accessed September 9, 2025, <https://www.who.int/emergencies/operations/emergency-response-reviews/after-action-review>.
- 60 City of Phoenix Unified Heat Response, "2024—After Action Report," accessed October 27, 2025, <https://phoenix.legistar.com/View.ashx?M=F&ID=13945418&G=UID=E552D6F9-C1C7-4EB7-8B4C-0870310AB57A>; City of Phoenix Office of Heat Response and Mitigation, *City of Phoenix 2025 Heat Response Plan*.
- 61 Wickerson and Guardaro, *Framework for a Heat Ready Nation*; Atlantic Council Climate Resilience Center, "Chief Heat Officers," accessed September 9, 2025, <https://onebillionresilient.org/heat-action-policy/chief-heat-officers-lead-by-example/>.
- 62 See, e.g., U.S. Fire Administration, "An Overview of All-Hazard Incident Management Teams," accessed September 9, 2025, <https://www.usfa.fema.gov/a-z/incident-management-teams/overview.html>.
- 63 Gregory Pierce et al., "Planning for Heat Beyond the Big City: Comparing Smaller Cities' Heat Activities, Opportunities, and Constraints in California," *Local Environment* 30, no. 11 (2025): 1–17, <https://doi.org/10.1080/13549839.2025.2477015>.
- 64 Pew Charitable Trusts, "How States Can Build Disaster-Ready Budgets," May 1, 2025, <https://www.pew.org/en/research-and-analysis/issue-briefs/2025/04/how-states-can-build-disaster-ready-budgets>.
- 65 Ibid.
- 66 Marilyn Marks Rubin, John R. Bartle, and Katherine Willoughby, "Equity in Budgeting: U.S. State and Local Government Initiatives," *Journal of Policy Studies* 39, no. 4 (2024): 103–122, <https://doi.org/10.52372/jps.e673>; Richard Sutherland, Tatiana Skalon, and Stephanie Allan, "Budgeting for Resilience: A Blueprint for Incorporating Disaster Risk into Governments' Budgets," Financial Protection Forum, February 29, 2024, <https://www.financialprotectionforum.org/blog/budgeting-for-resilience-a-blueprint-for-incorporating-disaster-risk-into-governments-budgets>; Government Finance Officers Association, "Capital Planning and Asset Management: Disaster Preparedness," accessed October 6, 2025, <https://www.gfoa.org/materials/disaster-preparedness>.
- 67 Sara Willa Ernst and Katie Watkins, "'It's Like a Sweatbox': Houston Bus Stops Reach Dangerous Temperatures This Summer," *Houston Public Media*, September 8, 2023, <https://www.texasstandard.org/stories/houston-bus-stops-dangerous-heat-wet-bulb-globe-temperature-wbgt/>; Michael J. Allen, Daniel J. Vecellio, and Jeremy S. Hoffman, "Evaluating the Relationship Between Heat-Related Illness and Cooling Center Location in Virginia," *Natural Hazards* 121 (2025): 4293–4308, <https://link.springer.com/article/10.1007/s11069-024-06946-x>.
- 68 Eric Peterson, "State Budgets 2025: Time to Tighten the Belt?," National Conference of State Legislators, August 5, 2025, <https://www.ncsl.org/state-legislatures-news/details/state-budgets-2025-time-to-tighten-the-belt>.
- 69 Center on Budget and Policy Priorities, "State and Local Revenue Options for Advancing a Brighter Future," accessed August 13, 2025, <https://www.cbpp.org/research/state-budget-and-tax/state-revenue-options-for-advancing-equity-and-prosperity>.
- 70 NY State of Health, "Fast Facts on the Essential Plan," March 2025, <https://info.nystateofhealth.ny.gov/sites/default/files/2025%20Essential%20Plan%20Fact%20Sheet.pdf>.
- 71 NY State of Health, "Essential Plan Cooling Program," accessed September 9, 2025, <https://info.nystateofhealth.ny.gov/CoolingProgram>.
- 72 United Nations Climate Change, *U.S. National Adaptation and Resilience Planning Strategy*, official submission to the United Nations Framework Convention on Climate Change Secretariat, January 2025, <https://unfccc.int/documents/645358>; Wickerson and Guardaro, *Framework for a Heat Ready Nation*.
- 73 Archie et al., "Too Hot to Handle."
- 74 New York City Government, "NYC Cool Options," accessed September 9, 2025, <https://finder.nyc.gov/coolingcenters/locations?mView=map>.

- 75 Britny Cordera, “OKC’s Heat Preparedness Work Moves Forward Without NOAA,” *Oklahoma City Free Press*, July 13, 2025, <https://freepressokc.com/okcs-heat-preparedness-work-moves-forward-without-noaa/>.
- 76 Climate Central, “U.S. Billion-Dollar Weather and Climate Disasters,” accessed October 30, 2025, <https://www.climatecentral.org/climate-services/billion-dollar-disasters/time-series>.
- 77 M. Speiser and Marryam Ishaq, “Extreme Heat Is Harming Americans’ Health—and Communities Aren’t Ready,” American Climate Perspectives Survey 2025, Vol. IV, ecoAmerica, August 5, 2025, <https://ecoamerica.org/american-climate-perspectives-survey-2025-vol-iv-blog/>.
- 78 FEMA, *FEMA Preliminary Damage Assessment Guide*.