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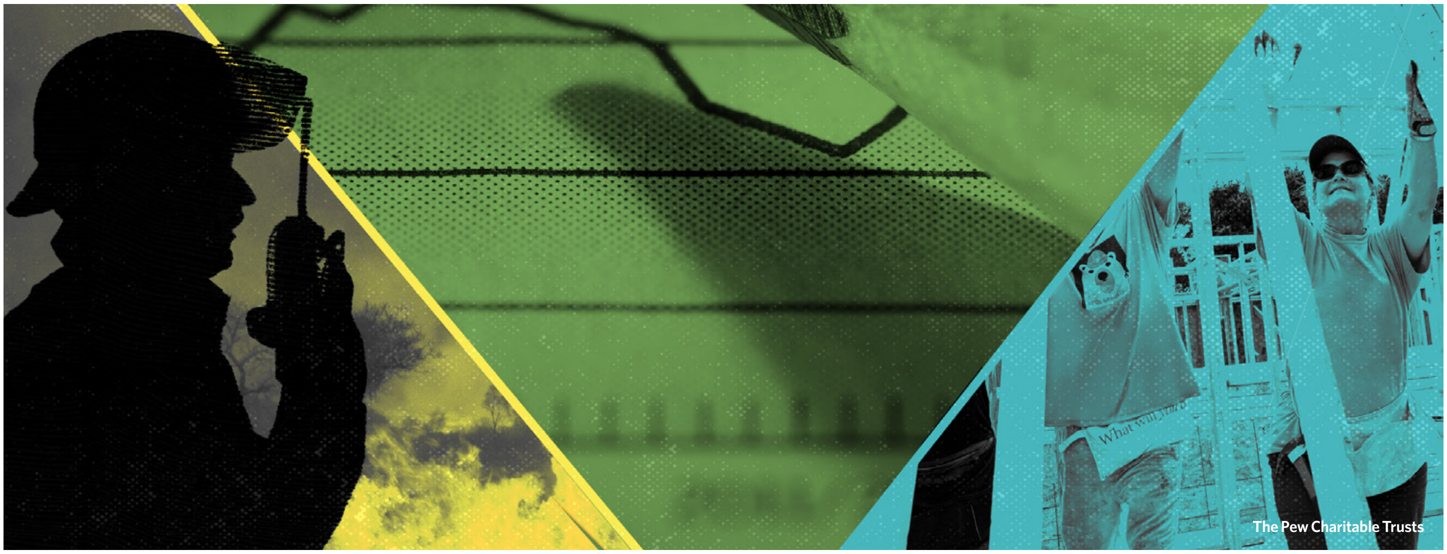


How States Can Build Disaster-Ready Budgets

Strategies for reducing fiscal risks in the face of rising costs

Overview

Policymakers at every level of government are grappling with the rising costs of storms, floods, wildfires, and other natural disasters and how best to aid affected communities. As disasters have grown in frequency and severity, so too have the strain on public finances and the urgency to update budgeting practices, especially in the states, to help public officials plan for changing spending needs.

A series of studies from The Pew Charitable Trusts from 2018 to 2022 examined how states manage the fiscal impact of natural disasters, including their spending practices, funding mechanisms, and risk reduction (mitigation) investments. The research revealed that data on public disaster spending is lacking, that states' typical budgeting approaches have not adapted to recent disaster trends, and that efforts to reduce loss of life and property, which could help control rising costs in the long term, are inconsistently and insufficiently funded.

As a result of these findings, along with lessons learned from observations of state practices and conversations with public finance and emergency management practitioners, Pew developed a set of strategies that state budget officials can adopt to improve disaster budgeting. These recommendations are organized around three key principles that can help minimize the fiscal risks stemming from natural disasters:

- **Measure** the total impact of natural disasters on state budgets across all agencies and activities.
- **Manage** disaster funding in a manner that ensures availability of funds when needed and that minimizes disruption from the year-to-year volatility of disaster costs.
- **Mitigate** future risks by investing in, requiring, and providing incentives for activities that can reduce the harms associated with disasters.

This brief details Pew's recommendations, including specific actionable steps that policymakers can take—regardless of their state's particular financial situation or disaster risks—to work toward these three principles and build fiscal resilience for increasingly costly disasters.

As costs soar, traditional disaster budgeting falls short

States are facing increasingly expensive and frequent disasters, along with growing pressure from the federal government and municipalities to provide more of the resources necessary to aid disaster-affected communities.[1] But Pew's research has shown that states' standard approaches to funding disaster assistance are not built to meet the demand. As a result, decision-makers find themselves in a consistently reactive posture without the information, fiscal tools, and planning time they need to effectively manage disaster costs.

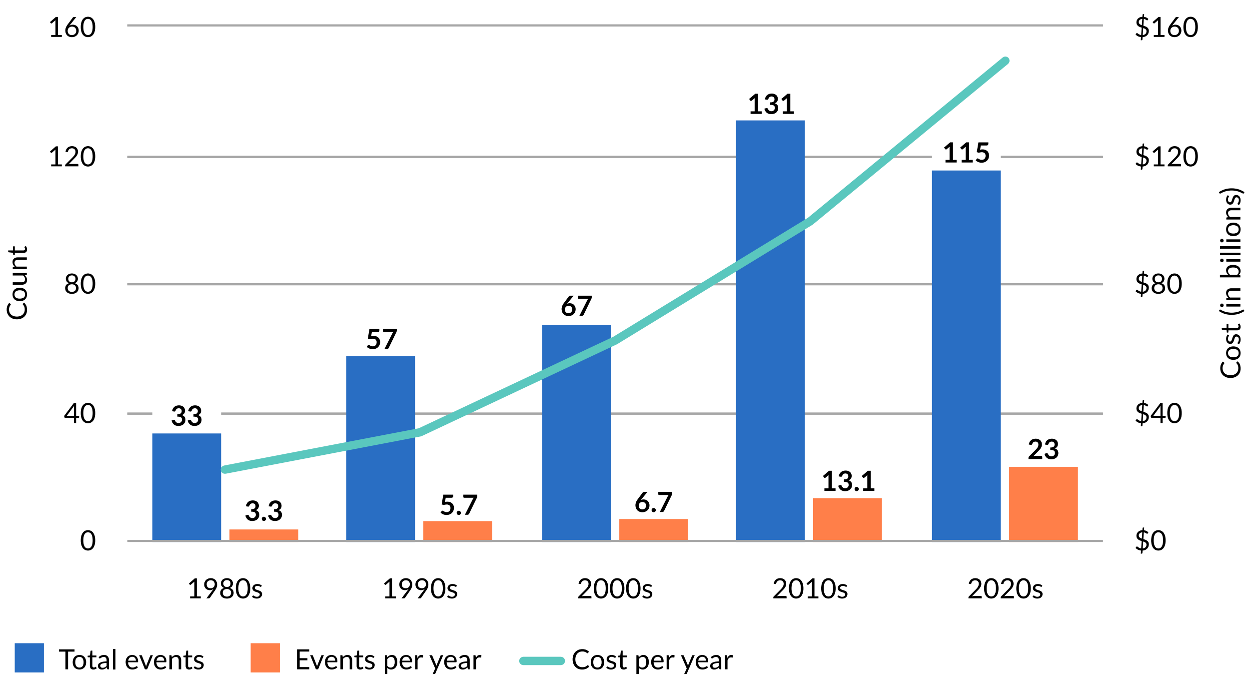
Rising costs increase pressure on state budgets

At the national level, the annual number of weather and climate disasters incurring at least $1 billion in costs to the public has risen dramatically since 1980, with an especially stark increase over the past five years. From 1980 to 2019, the U.S. experienced an average of slightly more than seven billion-dollar disasters per year, but from 2020 to 2024, that number grew to 23 annually.[2] Further, in just the past five years, the damage caused by all major disasters cost a combined $746.7 billion, nearly 75% of the previous decade's total and more than double the $335.3 billion price tag for the entire 1990s, adjusted for inflation. (See Figure 1.)

Figure 1

Major Natural Disasters Are Growing More Frequent and Expensive

Total and annual average billion-dollar events by decade overlaid with cost trend, 1980-2024



Source: National Centers for Environmental Information, "Billion-Dollar Weather and Climate Disasters"

These figures capture direct costs to individuals and society, such as destruction of residential, commercial, and government buildings, damage to public infrastructure, and loss of other private or public assets. Governments will ultimately cover some of these costs by providing individuals or communities with financial relief and recovery assistance.

However, their responsibilities—and expenses—extend beyond a disaster's immediate aftermath. The federal, state, and local governments also work together to prepare and protect the public from severe weather events through a set of activities—collectively known as disaster management—that take place before, during, and after an emergency and typically are divided into four phases:[3]

- **Mitigation.** Actions, such as retrofitting buildings and infrastructure and implementing disaster-ready building safety codes, to reduce the harms associated with natural disasters.
- **Preparedness.** Ongoing planning, training, and organizing to identify threats, determine vulnerabilities, and muster the resources necessary to deal with disasters when they strike; relevant activities may include inventorying resources and establishing warning systems.[4]
- **Response.** Activities to limit loss of life, personal injury, and property damage during and immediately after a disaster, such as search and rescue operations and provision of emergency food and shelter.
- **Recovery.** Short- and long-term efforts, such as removing debris or providing redevelopment loans, designed to restore communities to normal or better conditions.

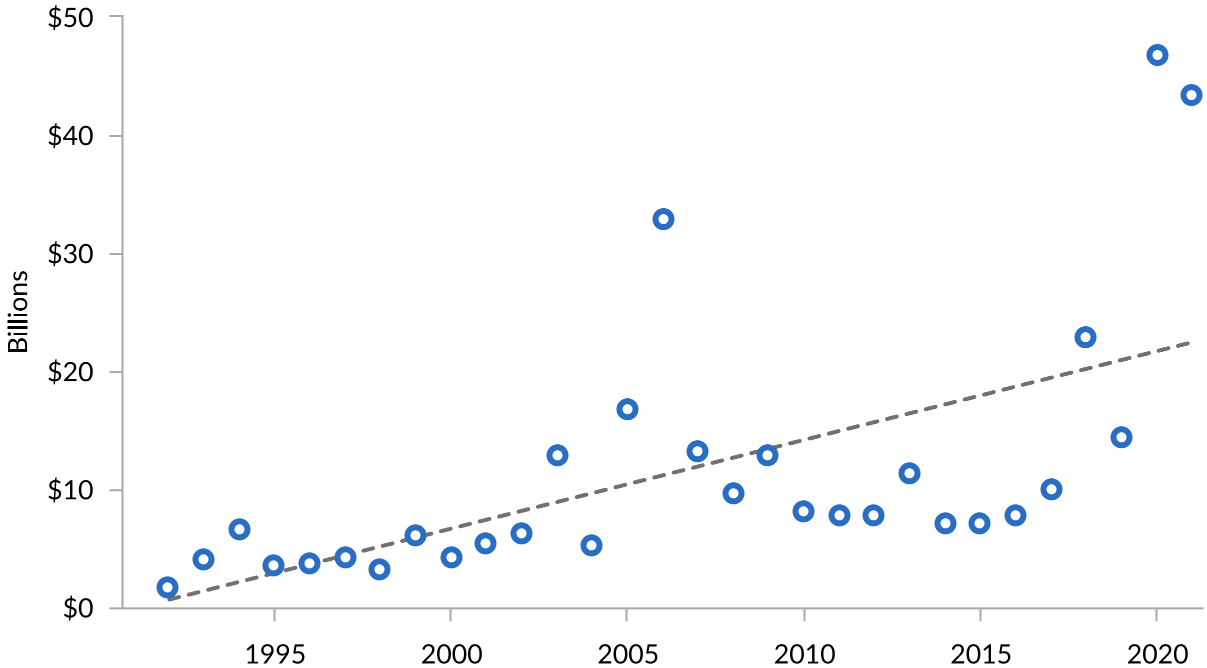
Government disaster spending is higher than ever

Available data on government spending for disasters shows that costs are rising at the federal and state levels. Annual spending by the Federal Emergency Management Agency (FEMA) disaster relief fund has increased significantly over the past 30 years, driven in part by major events, including Hurricane Katrina and the COVID-19 pandemic. (See Figure 2.) FEMA's biggest recovery program, the Public Assistance Program, requires state and local governments to share responsibility for rebuilding costs. Therefore, the upward federal trend also has implications for state spending.

Figure 2

Federal Disaster Spending Is on the Rise

FEMA inflation-adjusted outlays from the disaster relief fund, FY 1992-2021



Note: The disaster relief fund supports activities related to a major disaster or emergency declaration, pre-declaration surge, and disaster readiness and support, as well as assistance grants for large wildfires.

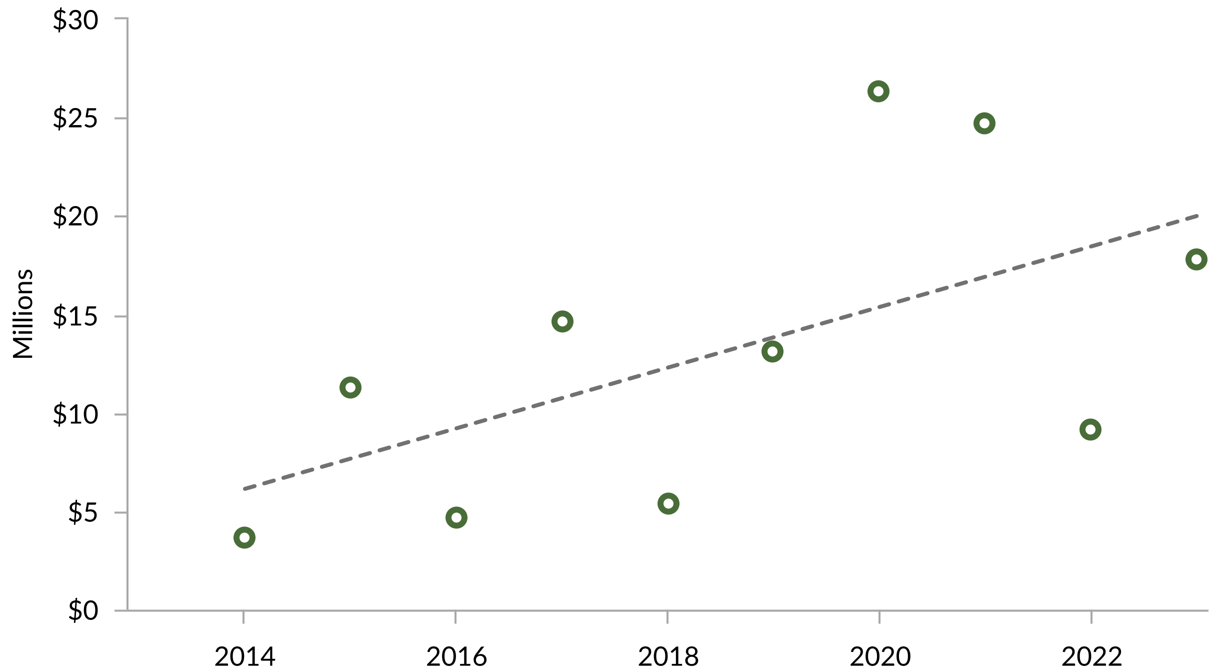
Source: Pew analysis of data from Congressional Budget Office, "FEMA's Disaster Relief Fund: Budgetary History and Projections," 2022

Although, as Pew's 2018 research found, state disaster spending data is limited, the available evidence shows a pattern of expenditures similar to that of the federal level.[5] (See Figure 3.) Minnesota, for example, spent $18.3 million from its disaster contingency account in 2023, nearly five times what it spent in 2014, after accounting for inflation. The disaster contingency account provides funding to state agencies, local and Tribal governments, and certain private entities for disaster response and recovery. And in California, inflation-adjusted spending on wildfire suppression has tripled over the past two decades.

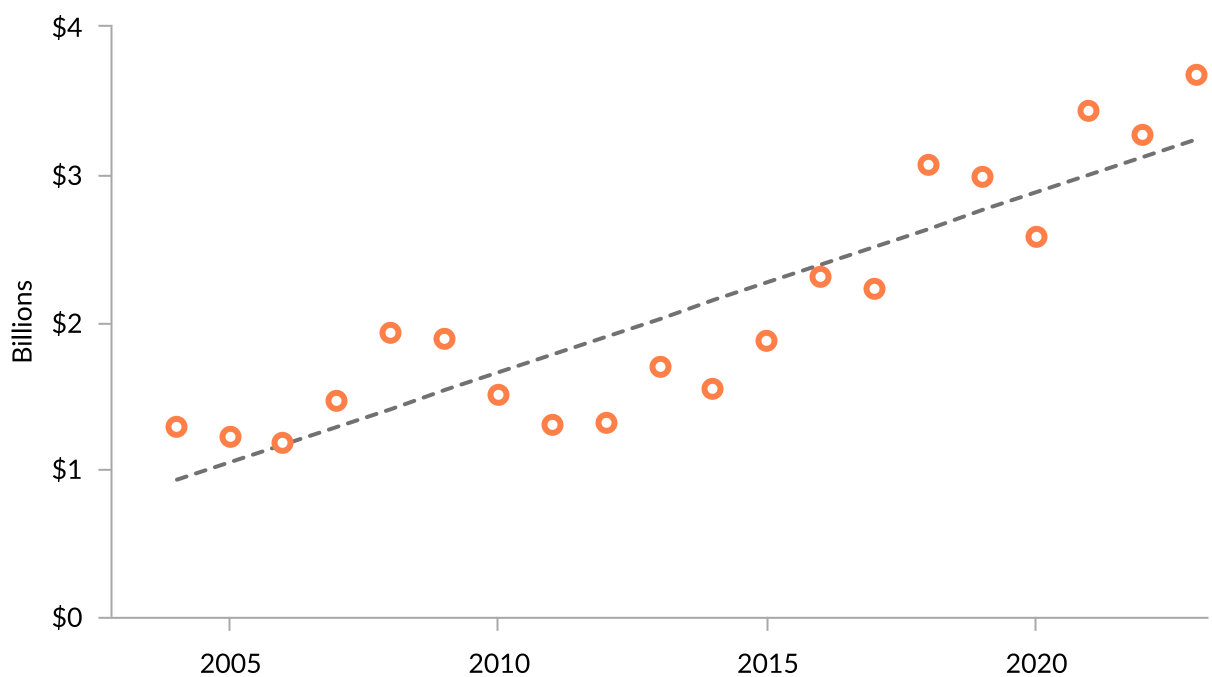
Figure 3

Disaster Spending in Minnesota and California Grew Dramatically in Recent Decades

Inflation-adjusted expenditures from Minnesota's disaster contingency account, 2014-23



California's fire protection expenditures, FY 2004-23



Sources: Pew analysis of data from Minnesota Management and Budget, "Disaster Assistance Contingency Account Report." California Department of Finance, Governor's Proposed Budget for Department of Forestry and Fire Protection, 2004-23

State budgeting practices for disaster management fall short

Rising government costs are exposing weaknesses in the ways that states have traditionally budgeted for natural disasters. Pew's research has identified three primary limitations of current budgeting practices that leave states vulnerable to fiscal disruption from severe weather events.

States do not have comprehensive disaster spending data

Disaster management is a critical function of government and a significant public expense, but its total cost to states is largely unknown. Previous Pew research has found that most states do not comprehensively track their disaster spending, leaving gaps in the information that policymakers use to make financial planning decisions.[6] Although states may be able to report the operating budgets of their emergency services agencies or individual disaster response costs, data is lacking for disaster-related spending across state government and for other disaster phases. Without clarity on the total amount and distribution of their disaster spending, states can neither effectively demonstrate their role in disaster management nor thoughtfully assess the adequacy of investments.

Outdated funding approaches disrupt budgets and hinder planning

Because disasters and their costs are difficult to predict, many states budget for them reactively, waiting until a catastrophe strikes to determine what costs they will cover and where the money will come from. Therefore, disaster spending decisions are often made outside of—and without the analysis and deliberation of—the formal budget process. As a result, states are often ill-prepared for the fiscal impact of severe disasters and forced to redirect funds from other policy priorities. And although the federal government historically has stepped in when costs overwhelm state and local resources, that help comes in the form of a protracted reimbursement process that requires states and localities to pay first and then wait, sometimes for years, to get some of their money back.

Ad hoc decision-making also affects the type and amount of financial support that states provide. Many states do not have criteria that outlines what assistance they provide for various disaster scenarios, creating added uncertainty for affected communities and responsible state agencies.

The absence of proactive funding strategies, fiscal decision-making, and resource planning make states less prepared to withstand the impact of frequent major disasters and less able to ensure prompt and comprehensive disaster response and recovery.

States do not prioritize investments that reduce disaster risk

Mitigation programs have immense potential to reduce the damage done to communities and slow the growth of disaster spending, but current investments are neither sufficiently funded nor strategically designed to deliver meaningful impact. Most funding for disaster mitigation has come from federal grants to states or localities.[7] And although state-level efforts have increased in recent years, most states still have few or no mitigation programs of their own, and some do not help local governments meet federal cost-sharing requirements.[8]

Strategies for better disaster budgeting

To help address disaster budgeting challenges, Pew recommends that states adopt practices to fulfill three key aims: measure disaster spending across state government, manage disaster funding proactively and transparently, and mitigate the risks, financial and otherwise, of worsening disasters. (See Table 1.) Drawing from Pew's previous research and feedback from practitioners with expertise in disaster finance and management, researchers developed specific recommended practices with detailed steps that states can take to incorporate these principles into their budget processes.

Table 1

States Can Adopt Key Strategies for Better Natural Disaster Budgeting

Summary of principles and activities for effective management of rising costs

Measure	Manage	Mitigate
Collect comprehensive data	**Budget proactively**	**Invest in mitigation and resilience**
✓ Identify the data that should be tracked to capture all disaster management investments ✓ Collect the identified data uniformly and regularly ✓ Coordinate data identification and collection across agencies	✓ Provide regular funding for disasters before they occur ✓ Assess spending trends to inform funding amounts ✓ Set aside federal reimbursements to help pay for future costs	✓ Provide sustained funding for disaster mitigation programs ✓ Invest in resilience planning capacity
Produce meaningful disaster spending reports	**Define state responsibilities**	**Maximize investments from nonstate sources**
✓ Regularly report disaster costs to policymakers and the public ✓ Include key context in spending reports	✓ Set criteria for the state's role in and processes for response and recovery ✓ Clarify reimbursement policy for agencies other than emergency management	✓ Enhance administrative capacity to effectively deploy federal funds ✓ Support increased local investment in mitigation activity

Measure

Pew's research has shown that a lack of meaningful data undercuts states' ability to understand the complete financial impact of natural disasters. To fill this information gap, governments need to assess how much they spend across the disaster management cycle. Knowing the total cost of natural disasters can help states plan for the future, avoid the need to abruptly shift funds from other policy priorities to cover disaster expenses, and observe how trends in preparedness and mitigation investments correlate with response and recovery costs. This data may also produce evidence of states' contributions to disaster spending that can inform debates over the appropriate distribution of costs across levels of government.

However, accurately measuring disaster spending presents several technical challenges. Costs are spread across multiple agencies, and intergovernmental payments often take years to fully resolve, necessitating long-term tracking. Further, because states receive reimbursements from various jurisdictions—including the federal government, local governments, and other states—disentangling the total fiscal burden on the state can be difficult. And lastly, existing cost reporting often excludes some essential information. Although tackling these issues can be resource-intensive, strategic decisions about data collection and tracking can facilitate routine reporting, and from there more evidence-based budget decisions.

Recommendation: Collect comprehensive data

Most states do not consistently collect disaster spending data from across state government.[9] For example, states that provided Pew with disaster spending information identified 13 agency types other than emergency management—including transportation, forestry, and human services—that are involved in disaster-related activities.[10] Collecting comprehensive cost data from all agencies and stages of disaster management is a large undertaking that necessitates leadership and a coordinated interagency initiative but is essential to give policymakers the full spending picture.

- **Identify the data that should be tracked to capture all disaster management investments**

  States should define the scope of data they intend to track. This includes defining what costs count as disaster-related, whether to set a minimum dollar amount for reported expenses, and whether or how to account for time that state employees take away from other policy priorities to engage in disaster-related activities.

  Defining costs will require states to examine the four phases of disaster management to identify all relevant programs and activities. Some straightforward examples include state programs that mirror FEMA's post-disaster assistance to local governments and individuals, mitigation programs, and cost-sharing agreements for federal disaster assistance. But for many states, this also will mean looking for disaster-related expenses in agencies and programs not traditionally thought of as having a significant role in emergency management, such as those engaged in watershed health or infrastructure maintenance. For instance, Virginia has agencies submit their disaster-related expenses to the state Department of Emergency Management for reimbursement, and the department's annual report on its Disaster Recovery Fund provides transparency about those expenditures.[11]

  Additionally, although local government spending is a critical piece of the natural disaster cost landscape, states may not be able to collect detailed local or regional spending data. But whenever possible, information about how state and local governments divide costs should be tracked, especially when the state contributes resources toward local cost-sharing requirements for federal grants.

- **Collect the identified data uniformly and regularly**

  After defining the types of investments and expenditures they want to capture in their overall measurement of natural disaster costs, decision-makers should develop a methodology for tracking expenditures on an ongoing basis. States already track some disaster spending—particularly expenditures related to federally declared disasters—and those efforts can serve as a starting point for more comprehensive tracking.[12]

  For example, Ohio piloted a statewide emergency response and recovery cost-tracking policy after a 2018 flood. The state's Emergency Management Agency coordinates disaster response activities of key agencies, and when an event reaches a certain degree of severity, it notifies those agencies' fiscal officers to begin tracking all spending associated with the disaster.[13]

  Additionally, housing data collection within executive or legislative budget offices relieves mission-critical agency staff of the burden and limits their role to identifying disaster-related expenditures in real time, although central budget offices may also have capacity challenges that prevent them from implementing a data collection system. Ohio considered incorporating a standardized tracking mechanism into the state's accounting system but encountered technological limitations that forced the state to track its costs on a more case-by-case basis.[14]

  Pew's previous research has found that states that used a designated fund to cover disaster expenses were better able to monitor costs.[15] Florida, for example, has fairly uniform records of its disaster spending because its Division of Emergency Management reimburses other state agencies for their costs using a central fund and reports those outlays.[16]

- **Coordinate data identification and collection across agencies**

  One tool for capturing government-wide disaster spending is a crosscut budget, which the federal government historically has used to track costs on policy priorities that span multiple agencies. The National Invasive Species Council, for instance, uses data collected from 10 departments to produce an annual crosscut budget that tracks the resources each agency used for invasive species-related activities by functional category, such as prevention, rapid response, research, or restoration. This allows policymakers to understand not only individual agencies' roles but also the entire landscape of public investment in invasive species management.[17]

  By contrast, disjointed tracking efforts will yield inconsistent data. When Pew surveyed states in 2018 about natural disaster spending, agency staff often struggled to complete the requested data collection within the allotted time because of immediate mission-critical demands and resource constraints.[18] Data collection was easier for states that had a coordinating body or centralized fund for disaster expenses. For example, Arizona's interagency Emergency Council operates a reporting system and reviews all disasters costing more than $200,000.[19]

  States can dedicate resources to interagency collaboration to make tracking easier and to entrench it in the financial planning process. To ensure coordinated data collection, representatives from all appropriate agencies should collaborate in identifying relevant spending, aligning data collection methods, and developing shared spending categories and definitions.

Recommendation: Produce meaningful disaster spending reports

Occasional reports on natural disaster costs can provide valuable snapshots. But to make well-informed budgeting decisions, policymakers need regular updates that outline trends in disaster frequency, severity, and expenditures and provide relevant context and detail about the spending.

- **Regularly report disaster costs to policymakers and the public**

  Reporting of disaster costs should be a systematic and routine component of states' fiscal analysis and oversight. Better, more frequent data would inform debates about how much each level of government can afford, highlight opportunities to manage growth in overall costs, and help states be prepared to deliver disaster assistance while maintaining budget stability.[20]

  States will need to determine an appropriate reporting frequency, weighing the benefits of more information against the burden on staff, but reports should be produced on a regular schedule to keep policymakers informed. Arizona's emergency management agency, for example, generates a quarterly report verifying allocations and expenditures for disasters in the response and recovery phases, as well as an annual report on the governor's emergency fund.[21]

- **Include key context in spending reports**

  To be most useful, spending reports should provide enough detail to contextualize expenditure data, but at minimum, they should categorize spending by management phase, type of disaster, and funding source. States can choose to include other details, such as information about how they share costs with local governments and, for each expense, the associated location and status of the disaster or project. Arizona, for instance, includes descriptions of each emergency proclamation in its annual report. And California's Wildfire and Forest Resilience Task Force maintains an online dashboard that tracks $2.7 billion in state appropriations for mitigation programs and projects, including the location of projects and their progress toward completion.[22]

Manage

As disaster costs and their fiscal impact continue to grow, states should adopt budgeting approaches that anticipate future needs and minimize the negative effects on other policy areas. In particular, decision-makers should prioritize sustainable, proactive funding mechanisms and should clearly define the state's disaster-related responsibilities.

States have a variety of budgeting tools available to fund disaster management. The federal Government Accountability Office, the National Association of State Budget Officers, and previous Pew research have identified common natural disaster funding mechanisms across two broad budgetary categories:

- Preemptive: Statewide disaster accounts and rainy day funds are reserves that states designate for specific circumstances. These dedicated funds allow states to appropriate resources in anticipation of disasters.
- Responsive: Supplemental appropriations and transfer authority allow the legislature, governor, or another designated entity to increase or move funds as needed, providing flexibility when unexpected expenses arise.

In addition, state agency budgets can be preemptive and responsive, depending on how they are structured; some agencies have designated contingency funding, and others rely on transfers from other policy priorities to meet disaster needs.[23]

Although the flexibility afforded by reactive measures can be helpful in certain circumstances, Pew's research has found that overreliance on responsive tools can impede long-term budget planning.

Recommendation: Budget proactively

Pew has found that states frequently use reactive tools to allocate emergency response funds, and that this practice is becoming increasingly disruptive to state budgets.[24] Relying on emergency budgeting tools obscures the true cost of natural disasters by excluding those expenditures from the formal annual budget development process and thus from critical policymaker and public discussions about how to allocate limited resources. States can address these issues by proactively budgeting for disaster management, including regularly providing funding for disasters and assessing actual spending needs to determine the amount to allocate for future years. For example, North Carolina has provided consistent funding for its rainy day fund and designated disaster response and recovery as an approved use for those dollars. That allowed the state Legislature to appropriate more than $1 billion (3% of the state's budget) after Hurricane Helene struck in 2024.[25]

- **Provide regular funding for disasters before they occur**

  States can proactively budget for future response and recovery needs in multiple ways. One option is to create a statewide disaster account with a regular source of funding that can accumulate in years with lower spending to help offset years with significant events. Most states already have dedicated accounts, but many fund their accounts only after a disaster strikes.[26] States can proactively fund these accounts through annual general fund deposits, systematic deposits of surplus one-time revenue, or dedicated revenue streams.

  Devoting a revenue source to fund disaster accounts ensures consistency and avoids competition for general fund dollars. North Dakota, for example, deposits oil revenue in its disaster relief fund up to a balance of $15 million.[27] Montana allocates some excess general fund revenue to the state's fire suppression fund at the end of each budget cycle, targeting a fund balance of 6% of general fund expenditures.[28]

  Another approach is to plan for disaster spending within individual agency budgets. All states allow agencies to cover disaster response and recovery costs from their own budgets, but the degree of planning varies. Some states, especially those that have frequent recurring events, give agencies access either to a flexible pot of money that can be used for disaster needs or to money specifically designated for disasters. For example, Alaska's division of forestry has an annual budget line item for wildfire suppression, and many northeastern states' transportation departments have line items for snow and ice removal. This approach allows the agencies to avoid using their general operating funds for "routine" disaster purposes, which would require them to shift resources away from other priorities.

- **Assess spending trends to inform funding amounts**

  As disasters become more frequent and severe, historical spending levels may not be sufficient to project future needs. In interviews with Pew, states said that historically driven cost estimates for fire suppression have been falling short of actual expenses in the past five to 10 years.[29] States should use a combination of historical cost data and projections from scientific models and other tools to estimate the potential fiscal impact of future disasters. Budget officials should work with state resilience offices to understand and incorporate projection data into the budget process.

  Additionally, most states have a hazard mitigation or climate adaptation plan that assesses the state's risk of various disasters. Budget staff and legislators should draw on those analyses and their states' emergency planning experts when evaluating appropriations requests. If models and other advanced projection methods are not available, states could base their forward-looking cost estimates on recent disaster spending trends.

- **Set aside federal reimbursements to help pay for future costs**

  The cross-jurisdictional nature of disaster management creates a complex network of local, state, and federal government spending. Because many federal disaster assistance programs have provided funding only as a reimbursement of previous state or local government spending, states and localities must cover disaster response and recovery costs up front, document how expenditures meet federal requirements, and then wait—potentially years—to be paid back, creating a hole in their finances.

  Many states deposit federal reimbursements into their general funds, which disconnects the federal payments from the original expenditures, often creating accounting confusion and cash flow problems for the account or agency that initially incurred the costs. To avoid this, states should set reimbursement dollars aside to pay for up-front costs of future disasters. For instance, Montana deposits federal wildfire reimbursements into the state's fire suppression account, providing resources for future fires and reducing the need to appropriate additional state funds each year.

Recommendation: Define state responsibilities

Because disaster assistance involves a complex relationship across levels of government, establishing clear criteria ahead of time for when state resources will be deployed—rather than making those decisions after disaster strikes—can increase the accuracy of fiscal planning, remove uncertainty for affected communities, limit disruption of funding for other priorities, and promote equitable service delivery. This is particularly important for events that are not declared federal emergencies and so are not eligible for federal support.

- **Set criteria for the state's role in and processes for response and recovery**

  Thirty-two states have established their own disaster assistance programs, but these programs vary in the type of assistance they provide, their eligibility criteria for aid, and their funding sources and mechanisms.[30] But regardless of whether a state has a program, budget officials should work with relevant state agencies to identify the types of response and recovery expenditures the state will pay for. They should also determine which forms of support the state will provide to local governments: 37 states share the 25% matching requirement for FEMA Public Assistance grants with their local governments, but most decide how much of the cost they will cover on a case-by-case basis.[31]

  In addition, some states have offered bridge loans to local governments to help accelerate recovery. For example, New Mexico appropriated $100 million after major wildfires in 2023 to provide loans to affected local governments so that recovery work could begin immediately, with the expectation that those expenditures would eventually be repaid with federal reimbursements.[32] Tennessee established a similar program in 2024, providing $100 million for loans to local governments affected by Hurricane Helene.[33] To ensure that these types of programs can bring relief to communities when it is needed most and to prepare for their budget impact, states should establish programs and define loan eligibility in advance.

  Establishing parameters for who will receive state assistance and how much could also reduce power imbalances between jurisdictions with different resource levels and capacity to advocate for help. Multiple studies have demonstrated that disaster aid tends to be unevenly distributed among racial, ethnic, and socioeconomic groups, leading to disparities in recovery that reflect and reinforce underlying social inequities.[34] By proactively laying out the processes and policies that determine the type and amount of support available to various localities or individuals, rather than doing so after a disaster strikes, states can ensure that aid is delivered equitably across communities and disaster events.

- **Clarify reimbursement policy for agencies other than emergency management**

  Because the fiscal impacts of disasters are not limited to state agencies that are specifically responsible for emergency management, the state can benefit from having flexibility to redirect funds and personnel for response and recovery measures. However, if that flexibility is not paired with a plan to replace those resources, the foundational missions and functions of nonemergency agencies may be undermined, so states should minimize the extent to which disaster-related costs are paid for at the expense of other ongoing priorities. In Michigan and Florida, state agencies report their disaster-related purchases and activities to the emergency management departments, which then reimburse those agencies using a centralized fund.[35]

Mitigate

Research shows that taxpayers save an average of $6 on disaster response and recovery costs for every $1 the federal government spends on mitigation activities, such as elevating homes, strengthening or retrofitting infrastructure, and purchasing flood-prone properties for removal.[36] But when urgent disaster needs compete with mitigation efforts for the same resources, policymakers often prioritize immediate expenses and postpone the preventive investments that could reduce the damage from and costs of disasters.

Most mitigation funding in the U.S. historically has come from the federal government and is tied to declared disasters, which limits state and local opportunities for mitigation investments mainly to the locations and consequence of those specific disasters.[37] In recent years, the federal government has increased pre-disaster mitigation funding, including significant one-time investments through the Infrastructure Investment and Jobs Act and Inflation Reduction Act. Additionally, some states have boosted their own investments in mitigation activities.

However, even with these recent efforts, the scale of mitigation needs, especially over the long term, far outstrips current investments, and one-time cash infusions are not sufficient to slow the growth of disaster spending or reduce the extent of damage.[38] Instead, building resilient environments, communities, and infrastructure requires sustained investments from all levels of government.

Recommendation: Invest in mitigation and resilience

Funding risk reduction is a critical element of disaster budgeting. Beyond that, long-term progress toward resilience requires more than just additional funding for mitigation projects. Instead, it needs sustained investment in governmental capacity to help states plan for and implement those projects so they can be ready to take advantage of often-unpredictable federal mitigation funding when it becomes available. To see the greatest impact, states should have a consistent, dedicated funding stream that supports continual, evidence-backed mitigation initiatives.

- **Provide sustained funding for disaster mitigation programs**

  Building dedicated funding into the state's operating, or recurring, budget will ensure that mitigation initiatives are supported each year, even when legislative attention is elsewhere. It also can enable ongoing mitigation activities, rather than individual projects funded with one-time money, and ensure steady progress toward reducing a state's risk.

  To enable oversight after the initial appropriation, recurring mitigation funds should come with accountability and transparency controls, such as requirements that agencies submit annual plans for how they will spend the funding and that individual projects be approved by the legislature or another body. For example, Iowa's Flood Mitigation Program—which provides funds to local governments for projects to reduce flooding risks and impacts—is administered by a board and supported with three revenue sources:

a flood mitigation fund, a flood recovery fund, and diversion of a portion of state sales tax revenue, up to $30 million annually, into an account maintained by the state treasurer. The sales tax funds are then made available to the local jurisdictions where they were collected and provide a continuous revenue stream for the state's flood mitigation program, which also receives one-time appropriations made to the mitigation and recovery funds.[39]

When creating programs and funding streams, states must decide whether to separate funding for mitigation from other disaster funds. States that provide a common pool of mitigation and recovery funds frequently find that recovery needs consume a greater share of that combined resource.

States should also be aware of "disaster borrowing"—redirecting resources from mitigation and other priorities to address immediate needs—and structure their response and recovery funding so that those needs can be met without undercutting mitigation programs.

- **Invest in resilience planning capacity**

  Investing in state-level capacity to plan for resilience can help build and maintain the expertise and continuity necessary to make the most of one-time, project-oriented funding. States should invest in staff and programs that can identify vulnerabilities and vet potential projects so that funding can be put to effective and equitable use as soon as it becomes available.

  Some degree of disaster risk planning is already standard: All 50 states have FEMA-approved hazard mitigation plans, and 16 states have produced enhanced plans, meaning they surpass basic requirements and performance minimums.[40] But several states have taken additional steps to boost capacity, such as establishing a statewide resilience office or officer, creating a hazard-specific task force to focus on a particular threat, investing in tools to map and coordinate public and private mitigation efforts, or providing funding and assistance for local planning.

  At least 13 states have established a state resilience office or similar program. The South Carolina Legislature created an Office of Resilience to coordinate resilience and recovery efforts and develop the state's resilience plan, which identifies major flood risks and associated potential losses and recommends strategies that local governments can use to reduce extreme weather risks in their communities. The Office of Resilience maintains a staff of at least 60, with teams dedicated to resilience planning, operations, mitigation, disaster recovery, disaster case management, and state recovery and resilience funds.[41]

Recommendation: Maximize investments from nonstate sources

Although states do not have direct control over how much money the federal government, local governments, or private entities invest in mitigation, they can leverage their own resources to increase the impact of contributions from other sources. For example, federal mitigation grants require cost shares as well as state and local personnel to manage project implementation. And researching and applying for those grants often requires staff time and effort on the front end. States can build this capacity in their agencies to help local governments that have fewer resources and to improve their own chances of receiving and implementing federal awards.

- **Enhance administrative capacity to effectively deploy federal funds**

  States should take steps to ensure that they receive as much federal mitigation funding as possible and that those dollars are used to maximum effect. One such step is building and maintaining state-level administrative capacity to identify, secure, and effectively administer federal grants.

  New York's hazard mitigation program assists communities with long-term planning and projects to reduce the impact of disasters.[42] This work includes administering FEMA's hazard mitigation assistance programs, providing details on funding opportunities, and maintaining the State Hazard Mitigation Plan, which is a web-based planning tool rather than a static document. Additionally, state agencies that contribute to risk analysis and reduction collaborate in the management of programs and funding opportunities through the Interagency Climate Adaptation and Resilience Work Group. One of the group's initiatives focuses on identifying agencies' informational, technical, and financial capacity needs regarding resilience planning.

- **Support increased local investment in mitigation activity**

  Local governments and community organizations often lack the capacity or expertise to pursue federal grants, so states should provide technical assistance to localities seeking federal funding for mitigation. Efforts may include providing direct financial incentives to local governments that make mitigation investments and facilitating access to credit to expedite investments from local resources.

  Some states have taken steps to mandate and support planning activities at the local level. In 2017, Utah implemented a system intended to encourage local risk reduction.[43] The state pays most of the costs of catastrophic fires in exchange for local governments implementing evidence-based prevention, preparedness, and mitigation efforts to reduce the long-term risk and costs of wildland fires.

  For federally declared disasters, Vermont provides local governments with funding through the state's Emergency Relief and Assistance Fund equal to what the localities receive in federal assistance.[44] The fund provides at least 7.5% of post-disaster costs for all communities in the state, but communities that act to reduce risk can receive 12.5% or 17.5%, depending on the steps they take.

Conclusion

Besides their human costs, natural disasters can be a financial shock to the governments responsible for assisting affected residents. To overcome the challenges of budgeting for disasters, state decision-makers should focus on three objectives. The first is to measure, track, and report the total fiscal impact of disasters to inform policymakers about the full spectrum of disaster management costs. The second is to manage disaster funds proactively to minimize volatility, clarify overlapping government roles, and streamline resource deployment. And the third is to mitigate risk through increased strategic planning and investments that build resilience.

The recommended policy actions in this brief give states tangible strategies for pursuing these goals according to their individual needs. As natural disasters continue to grow more frequent, severe, and expensive across the country, policymakers will need to assess whether their states are prepared to withstand repeated, significant fiscal impacts and act to create more disaster-ready budgets.

Appendix: Research summary

In preparing this brief, Pew researchers reviewed and synthesized five previous Pew publications on natural disaster spending and budgeting practices in states: "What We Don't Know About State Spending on Natural Disasters Could Cost Us" (2018); "Natural Disaster Mitigation Spending Not Comprehensively Tracked" (2018); "How States Pay for Natural Disasters in an Era of Rising Costs" (2020); "How States Can Manage the Challenges of Paying for Natural Disasters" (2020); and "Wildfires: Burning Through State Budgets" (2022).

Those studies employed several methods, including original data collection through a survey tool sent to state emergency management agencies; semi-structured qualitative interviews and informal conversations with state officials and disaster experts; analysis of publicly available federal and state disaster spending data; analysis of publicly available reports and statutes; and literature reviews. The conclusions and recommendations in this brief are based on the findings of that previous research, and examples of state practices derive from those previously published studies as well as new research and outreach to state officials conducted after their publication.

In July 2024, Pew researchers convened virtual workshops with four groups of stakeholders—including practitioners with experience in state budgeting, disaster and emergency management, and climate and disaster resilience—to provide input on the framing and policy recommendations in this brief. Participants were provided with an early draft of the brief before gathering in an informal workshop setting to discuss it with their peers and offer feedback to the research team. Workshop attendees were asked for their initial reactions to each set of recommendations and were asked follow-up questions informed by the conversation as it took place.

Overall, workshop participants validated the issues that Pew had identified by providing supporting examples from states they had worked in or with. They also offered perspectives on the potential challenges of implementing Pew's draft recommendations. Certain topics were particularly influential as researchers clarified the problems being addressed and refined the policy solutions presented. These included:

- The importance and difficulty of defining disaster spending, particularly beyond direct recovery costs, in order to comprehensively track those expenses.
- Effects of federal funding and reimbursement delays on state disaster recovery and budget management.
- Challenges faced by local governments in accessing and managing federal funds, and the states' role in providing them with technical assistance and financial support.
- Additional state and local fiscal challenges created by disasters that do not qualify for a federal declaration.
- The value of defining the state's role in disaster management and the parameters for assistance in advance.
- The need for evidence of return on investment to support increased mitigation funding.

Expert workshop participants

Although this brief and its policy recommendations benefited from the insights of the workshop participants, neither they nor their organizations necessarily endorse the full findings and conclusions. The participants were:

- Amy Carlson, Montana Legislative Fiscal Division
- Andrew Phelps, AC Disaster Consulting
- Anna Sierra, Maryland Department of Emergency Management
- Catie Robertson, Virginia Senate Finance and Appropriations Committee
- Keely Bosler, Keely MB Strategies
- Kendra Shifflett, Virginia Senate Finance and Appropriations Committee
- Kim Murnieks, Ohio Office of Budget and Management
- Kimiko Barrett, Headwaters Economics
- Kirk Fulford, Alabama Legislative Services Agency
- Kristin Walker, North Carolina Office of State Budget and Management
- Mark Ghilarducci, Emergent Global Solutions
- Matt Cowles, National Emergency Management Association
- Mike Hinson, Maryland Office of Resilience
- Natalie Enclade, BuildStrong America
- Nick Angarone, New Jersey Office of Climate Resilience
- Sherry Wolfe, Colorado Office of State Planning and Budgeting

External reviewers

This report benefited from the insights and expertise of outside reviewers Erica Bornemann, vice president of planning and risk reduction, AC Disaster Consulting, and Kathryn Vesey White, director of budget process studies, National Association of State Budget Officers. Although they have reviewed the brief, neither they nor their organizations necessarily endorse its findings or conclusions.

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For more information, please visit:
pewtrusts.org/projects/managing-fiscal-risks

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