



FEMA

FEMA National Advisory Council Annual Report

November 2022



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Letter from the NAC Chair

It is with great honor that I present this report from the National Advisory Council (NAC) to FEMA Administrator Deanne Criswell. Centered around the goals and objectives of the 2022–2026 FEMA Strategic Plan, the recommendations within this report focus on issues relating to climate change, readiness, workforce, and equity.

Leading up to the finalization of this report, the NAC traveled to Boise, Idaho, and Choctaw Nation, Oklahoma. During each trip, members engaged with stakeholders and toured facilities to fully explore two key issues: the wildfire hazard, and tribal nation emergency management considerations. The knowledge gleaned from these experiences influenced many of the recommendations in this report, specifically those that mention wildfire preparedness, response, recovery, and mitigation, and those that emphasize equitable outcomes for all communities.

This report represents agreement among the members of the NAC, who collectively strive for equitable, coordinated, and outcome-driven solutions for the emergency management field. I am pleased to share these recommendations that reflect the latest landscape of emergency management.

Sincerely,



Jeffrey Hansen, NAC Vice-Chair
Director, Department of Community Protection
Choctaw Nation of Oklahoma

Chapter 1: Current Events, Policy Recommendations

Section 1.1: Benefit Cost Analysis

This section examines issues with the FEMA Benefit Cost Analysis (BCA) process. As this report was being finalized, on October 7, 2022, FEMA announced policy changes to the BCA process. While the changes are a significant improvement, the NAC believes more program revisions should be considered. Thus, recommendations that have been under development this year remain in this report, as initially drafted.

Strategic Plan Objective

This set of recommendations, aiming to substantially change the FEMA BCA process, is associated with several 2022–2026 FEMA Strategic Plan objectives:

Objective 1.2 – Remove Barriers to FEMA Programs Through a People First Approach

Objective 1.3 – Achieve Equitable Outcomes for Those We Serve

Objective 2.2 – Build a Climate Resilient Nation

Objective 2.3 – Empower Risk-Informed Decision Making

Objective 3.3 – Unify Coordination and Delivery of Federal Assistance

Issue Examined

The FEMA BCA approach has relied on cost-effectiveness determined by *OMB Circular A-94 Guidelines and Discount Rates for Benefit Cost Analysis of Federal Programs (1992)*. Suggestions to modify this approach are mentioned in no fewer than six NAC recommendations over the past three years. The NAC has repeatedly called for change to the BCA, because we believe the current process is broken. As it currently stands, FEMA Hazard Mitigation Assistance (HMA) funds cannot achieve Strategic Plan objectives, nor can they reduce the impact of future disasters in an equitable manner. Projects that focus on long-term benefits are simply unable to meet the minimum BCA ratio of 1.0 required to move forward. As a result, applicants either drop out or are forced to hire costly consultants to try to achieve a higher score. The following recommendations touch upon a broad range of issues related to the current BCA process.

Recommended Solutions

It is our recommendation that FEMA should radically change the current BCA process used to determine cost effectiveness in the awarding of grants under its HMA programs. In so doing,



FEMA would (1) realize long-term benefits and future cost-avoidance, (2) eliminate overly complex and burdensome analyses that create a competitive disadvantage for sub-applicants with fewer resources, which discourages attempts to access mitigation funds, (3) improve the equitable distribution of funds, (4) incorporate multiple or secondary benefits and system-wide impacts, and (5) ensure coordination with other federal agencies that also require a cost-effectiveness standard to provide programmatic consistency to the greatest extent possible.

Recommendation 2022-01: Revise the discount rate used in FEMA BCA calculations.

FEMA has the statutory and regulatory ability to change, amend, or revise current policies, processes, and procedures associated with determining cost effectiveness. Alternative approaches should consider the level of pre-disaster spending on a project compared to the level of post-disaster spending in the absence of that project. If a discount rate is used, it should emphasize long-term benefits by using a much lower discount rate.

The current 7 percent discount rate discourages long-term resilience in communities because it discriminates against projects that are cost-effective over a longer time period. Nature-based solutions are particularly vulnerable to this high discount rate. The importance of using a lower discount rate for long-term programs is made evident in the example below, which illustrates the value of mitigation investments with a useful life of 50, 75, or 100 years. This example compares the value of \$1 of annual benefit in future years toward the present value. As the table shows, \$1 of benefit in Year 75 barely registers in the analysis as \$0.01, and \$1 of benefit value in Year 100 gets included only as \$0.001.

Table 1: Impact of Discount Rates Percentage on the Value of \$1 in Future Years for Long-term Programs			
Discount Rate	Value of \$1 of Benefit in Year 50	Value of \$1 of Benefit in Year 75	Value of \$1 of Benefit in Year 100
1.50%	\$0.48	\$0.33	\$0.23
3.00%	\$0.23	\$0.11	\$0.05
7.00%	\$0.03	\$0.01	\$0.001

FEMA has the authority to reduce the BCA discount rate. While the Stafford Act requires hazard mitigation programs to be cost effective, it does not specifically address the use of discount rates and completion of BCA. Consider Public Assistance (PA) program mitigation projects that are completed by public entities: these are typically public investments, similar in character to many federal investments. This indicates that alternative comparison models exist.

FEMA should compare cost-effectiveness processes implemented by other federal agencies, such as the U.S. Army Corps of Engineers, to determine if a discount rate is necessary in the FEMA BCA process. If so, at what rate should this be, and should this be applied in all

situations? This comparison may help in identifying alternative best practices, such as allowing broader selection of variables into the BCA.

Recommendation 2022-02: Prioritize equity impacts associated with the BCA.

The National Academies of Sciences report *Equitable and Resilient Infrastructure Investments, 2022* includes a section on the challenges of the current BCA in terms of equitable infrastructure. The report highlights that BCA approaches can “lead to inequitable outcomes, which can include discounting future generations, and inappropriately valuing or omitting non-monetizable community values, such as public health, community ownership, or resilience when that is not the primary objective. Benefit-cost analysis also omits equity considerations, such as failing to account for historic disinvestment in low-income communities, Indigenous communities, and communities of color. The tendency to assess cumulative benefits and costs of projects, rather than the distribution of these benefits and costs, frequently limits these analyses.”

The high discount rate and complex methodology currently being used discourages our nation’s historically marginalized communities from applying for HMA funds or creating successful applications. FEMA should prioritize HMA awards by measuring which communities will suffer the greatest impact from hazards, not necessarily the greatest hazard level. Criteria beyond the BCA and property values should be considered for historically marginalized communities in the methodology, including an emphasis on social and environmental benefits and prioritizing locations that have historically failed to compete for federal funding. Technical assistance to support these communities, including accessibility and guidance for community stakeholders and leaders, should also be made available. As was suggested in recommendation 2022-01, FEMA should investigate methods employed by other federal agencies that have incorporated equity considerations into their processes.

Additionally, the BCA process should encourage, rather than discourage, projects that provide multiple benefits. Benefits such as critical facility outage protection are allowed in some cases (e.g., hospitals), but not in others (e.g., schools, Emergency Operations Centers). In addition, many federally-recognized benefits such as resilience, climate mitigation, social equity, mobility, community health, environmental conditions, habitat, and others are not included or required.

Qualitative criteria related to environmental and social benefits – like enhanced equity, water and air quality improvements, habitat preservation, and fire protection – are either left out, or left up to, the sub-applicant to develop, justify, and document in new inputs for the BCA evaluation process. This produces an unfair playing field by benefitting jurisdictions that have the resources to collect and analyze data and/or hire consultants. Communities without such resources are put at a procedural disadvantage, and therefore a competitive disadvantage. The effect is to institutionalize inequities across jurisdictions.

A better approach would be to establish BCA pre-calculated benefits that are tailored for each hazard type. Examples include wildfire projects that address air quality and ecosystem improvements; extreme heat projects that address urban conditions and recreational or other health needs; and seismic safety programs and retrofits for critical facilities (e.g., hospitals, shelters) and building types known to be at high risk of collapse (e.g., unreinforced masonry, soft story).

The NAC's Assessment of the Newly Announced Alternative Cost-Effectiveness Method

On October 7, 2022, FEMA implemented an Alternative Cost-Effectiveness Method for its BCA process. The new process is a more flexible method for calculating a BCA and was designed to increase program accessibility for two hazard mitigation grants, the Flood Mitigation Assistance (FMA) and Building Resilient Infrastructure and Communities (BRIC) programs.

For the Fiscal Year 2022 FMA and BRIC application cycle, the agency is introducing an alternative cost-effectiveness method that will modify the threshold for mitigation projects to be considered cost effective under limited conditions. By modifying the threshold for BCA calculations, FEMA expects more projects will be submitted and approved that will benefit underserved and historically marginalized communities and address the effects of climate change. The NAC commends FEMA leadership for authorizing the changes described in the announcement.

The NAC believes these changes are aligned with the recommendations included above. The alternative method will help communities that have historically faced accessibility barriers to take better advantage of available mitigation investment assistance. It will also greatly extend the reach of hazard mitigation funding and mitigation projects to more communities.

Recommendation 2022-03: Extend the Alternative Cost-Effectiveness Method to the Stafford Act – Section 406, Public Assistance Hazard Mitigation Program, and the Stafford Act – Section 404, Hazard Mitigation Grant Program.

While the NAC recognizes the alternative cost-effectiveness method as a significant move in the right direction, it has not been applied to either of the two disaster-related hazard mitigation grant programs: the Stafford Act - Section 406, Public Assistance (PA) Hazard Mitigation Program and the Stafford Act - Section 404, Hazard Mitigation Grant Program (HMGP).

The Section 406 - PA Hazard Mitigation Program is only available for disaster-damaged facilities. The Section 404 - HMGP is available for both disaster-damaged and undamaged facilities, based on a percentage of dollars obligated under Individual Assistance (IA) and PA for a particular disaster. These two programs fund hundreds of millions, or sometimes billions, of dollars annually in mitigation investments. Therefore, the NAC encourages FEMA to adopt these well-

designed, Alternative Cost-Effectiveness Methodologies to the 406 PA Hazard Mitigation Program and 404 HMGP as quickly as possible.

Chapter 2: Equity Recommendations

Section 2.1: A Programmatic Approach Towards Equity

Strategic Plan Objective

These recommendations focus on the methods with which FEMA manages and administers programs and policies that impact every aspect of equity. They are associated with the following *2022–2026 FEMA Strategic Plan* objectives:

Objective 1.2 – Remove Barriers to FEMA Programs Through a People First Approach
Objective 1.3 – Achieve Equitable Outcomes for Those We Serve

Issue Examined

The current equity activities underway at FEMA have the potential to create a positive impact on the agency’s workforce by helping to retain and advance diverse talent within FEMA and create the standard for the emergency management profession. To achieve the best outcomes, it is imperative that FEMA appropriately differentiate between ongoing efforts to advance systemic equity across programs and identifying factors that contribute to measuring aspects of equity. In other words, FEMA should focus on using both processes and outcome metrics to identify and measure advancements in equity.

To continue momentum and ensure appropriate scoping of equity efforts, it is important to restate the agency’s operating definitions of equity and clarify the intended outcomes of the equity activities, both for the FEMA workforce and the communities FEMA serves.

Recommended Solutions

Recommendation 2022-04: Advance the measurement of equity with a comprehensive review of equity lens, data metrics, and weighting.

To ensure FEMA processes are equitable, coordinated attention is required for their definition, development, and measurement. FEMA must intentionally advance and ensure that these efforts are conducted with the entire array of relevant stakeholders.

There are different types of equity to be considered that impact FEMA's work. Among them are racial equity, gender equity, distributional equity, and procedural equity. Noting that these

lenses require a complex understanding of communities and their underlying investments and needs, the way FEMA uses data and tools to understand the needs and vulnerabilities of a community can yield varied results.¹ By using data and tools, FEMA can create an empirical and consistent approach to the analysis of community-level needs and the impact of historical disinvestment and disenfranchisement, which is required to address the multi-layered needs of a community from multiple equity lenses.

While there are many analytical tools available, the underlying data and/or weighting of various factors can affect results, which if left unprobed can have an impact on the understanding of communities' needs. Such misinterpretations can result in an ineffective distribution of resources, or a distribution that is not aligned with actual community needs. Skewed understanding of a single community's needs can result from weighting that prioritizes wealth, economic status, or race for example, when broadly defined characteristics such as socio-geographic, socioeconomic, or the degree of rurality of a community may be more accurate measures. As such, it is important for FEMA to review the variables it incorporates into the tools currently being used to analyze various aspects of equity. In this review, the goal is to build a more consistent model that accounts for different equity lenses.

An outcome of reviewing and updating the use of equity measures should be the development of a suite of measurement tools tailored to populations, communities, and types of disasters, that can support the progression of equitable processes at FEMA. FEMA should regularly review and update its use of equity measures to incorporate data and methodologic advancements and identify and define processes, populations, and settings that are being targeted for equity measurement. In doing so, emerging factors such as inflation, the impact of the COVID-19 pandemic, or new data releases can be factored in to the methodologies. As a step towards accomplishing this recommendation, the Administrator should empower the FEMA NAC in 2023 to advance equity at FEMA with comprehensive reviews aimed at improving the use of data, geospatial tools, and analytics. This should be done with regular communication and collaboration with essential partners such as the Equity Enterprise Steering Group, the FEMA Chief Technology Officer, and others as needed. FEMA should also endeavor to include other departments and agencies that are making advancements in this area.

¹ "A Landscape Study of Social Equity Data Needs, and its Access and Availability to Support the Disaster Resilience of Marginalized Communities," July 14, 2022 presentation to FEMA NAC by Cassandra R. Davis, PhD, et al, Coastal Resilience Center (a U.S. D.H.S. Center of Excellence), University of North Carolina at Chapel Hill.

"Considerations on Creating Equity Standards for Disaster Assistance Programs," April 21, 2022 presentation to FEMA NAC by Melissa L. Finucane, PhD, Homeland Security Operational Analysis Center, RAND Corporation.

Recommendation 2022-05: Consider a distributional equity lens to refocus support on small communities, tribes, territories, and local jurisdictions by providing technical assistance relevant to each entity.

The NAC recommends that FEMA consider retooling approaches, programs, and policies to best equip jurisdictions with insufficient emergency management resources. FEMA must focus on making resources available at the community level to support all populations facing disaster threats. FEMA should encourage existing local efforts to improve community preparedness and resilience driven by trusted partners, such as local non-profit organizations, community leaders, and stakeholders.

While incorporating information gleaned from a variety of equity lenses, FEMA must also distribute resources relative to the need that exists. Thus, we recommend FEMA adopt a distributional equity lens in supporting state, local, tribal, and territorial emergency management, and community-led grassroots efforts. FEMA should achieve equitable resourcing for nationwide emergency management capabilities and remove barriers to grant application processes.

Metrics and analysis should identify localities with high disaster risk that also have limited community capability to respond in the event of that disaster. Metrics to consider when determining the capability could include size/funding of the locality's emergency management function; budget for emergency management, including mitigation; and linkages with other relevant agencies and local stakeholders critical in response. Based on findings, those communities at the highest risk with the lowest capability of response should receive technical assistance from FEMA to apply for funds that would help those communities prepare for a disaster.

FEMA must actively seek to remove barriers that may exist for small communities, including tribes, territories, and local jurisdictions, that are failing to compete and/or complete grant applications. Many smaller and underserved or historically marginalized communities have neither the resources to respond to disaster, nor the resources or capacity to create a competitive mitigation or preparedness proposal. These are the communities that could benefit most from this funding to ensure readiness for future disasters. Focusing on smaller communities with supportive resources could be the key to rectifying historical underinvestment in these communities, while protecting them from future disasters.

Chapter 3: Climate Change Recommendations

Section 3.1: Enhance Climate Literacy

Strategic Plan Objective

These recommendations are associated with the following *2022–2026 FEMA Strategic Plan* objective:

Objective 2.1 – Increase Climate Literacy Among the Emergency Management Community

Issues Examined

There is a great need to expand the resources available to emergency managers for building climate adaptation-related capacity, including training, education, qualifications, and innovation.

For over 70 years, the Emergency Management Institute (EMI) has provided emergency management training resources for all hazards and disasters. Thanks to EMI, many emergency managers today are well-trained on the impacts of weather on their communities. These professionals know how to connect critical climatic and environmental intelligence, driving preparedness and response actions and directly reducing the adverse impacts on their communities from weather-related events. However, the education, tools, and training currently available to emergency managers fall short of addressing the emerging risks and future conditions caused by climate change. As such, they do not support contemporary emergency managers by providing them with the knowledge and resources they require to facilitate mitigation actions.

Normalize and Standardize Climate Literacy

The body of knowledge surrounding our changing climate and the impacts of extreme weather events on the built environment is rapidly evolving as the scientific community – rooted in our nation’s universities, national labs, and science agencies – continuously advances its own knowledge. As this knowledge expands, our leaders and institutions are increasingly alert to this crisis. President Biden’s *Executive Order on Tackling the Climate Crisis at Home and Abroad*² states that “the United States and the world face a profound climate crisis,” and asserts that,

² <https://www.whitehouse.gov/briefing-room/presidential-actions/2021/01/27/executive-order-on-tackling-the-climate-crisis-at-home-and-abroad/>, January 2021

“together, we must listen to science and meet the moment.” Such notions are similarly echoed in FEMA’s report on *Resources for Climate Resilience*³, stating that, “BRIC seeks to categorically shift the federal focus from reactive disaster spending toward research-supported, proactive investment in community resilience as identified in planning, so when the hurricane, flood, or wildfire comes, communities are better prepared.”

As our leaders and institutions embrace climate literacy, so must our frontline personnel. As noted in the FEMA *Resources for Climate Resilience*, “all over the United States, communities are working to increase their resilience against hazards, including extreme heat, drought, flooding, sea level rise, and wildfires... emergency managers must adapt to both immediate challenges and the long-term impacts of emerging climate risks.”

While the intent to look to science to drive our preparedness and adaptation actions is being emphatically expressed, very few mechanisms exist to facilitate the transfer of climate science research and development into effective education, training, operational tools, programs, and capabilities for our nation’s emergency management workforce. FEMA has limited programmatic opportunities at its disposal to bring advancements in science and research into emergency management training, education, operational tools, policies, systems, and processes. So, we must be deliberate in shifting FEMA’s focus. Our emergency management workforce should no longer be reactive to major disasters, but proactive in seeking science-based solutions that are operationalized for decision-making. While we train for today, we must educate for tomorrow. We need to build our national capacity, deliberately focusing all available FEMA resources on addressing current and future climate risks. It is incumbent on FEMA to do everything possible to develop an emergency management workforce pipeline that is climate-literate, climate-aware, and that will contribute to a climate-resilient nation.

Recommended Solutions

Recommendation 2022-06: Strengthen and develop programs that enhance climate literacy of the nation’s current and future emergency management workforce.

While the Department of Homeland Security (DHS) and FEMA have well-established relationships with select universities, university consortia, and national labs through congressionally authorized and/or competitively awarded funding mechanisms, more needs to be done to effectuate the transfer of knowledge from these institutions to the emergency management workforce. The NAC recommends that the National Emergency Management College (NEMC) establish an Office for Disaster Research, or equivalent functionary, that works closely with existing research centers and universities, national labs, DHS Office of Science and Technology Centers for Excellence, the National Oceanic and Atmospheric Administration

³ https://www.fema.gov/sites/default/files/documents/fema_resources-climate-resilience.pdf, December 2021

(NOAA), the National Institute of Standards and Technology (NIST), U.S. Geological Survey (USGS), and other appropriate entities and organizations, to transfer climate- and disaster-related research most effectively into operationalized information for emergency managers. The Office of Disaster Research should review, aggregate, and solicit disaster research and lessons learned to update curricula and circulate knowledge to the emergency management community rapidly.

To further improve the transfer of disaster-related science and information to stakeholders and the public, FEMA should:

- Partner with national labs and research universities – including historically black colleges and universities (HBCUs) and minority serving institutions (MSIs) – to facilitate the translation of climate change and climate justice related research into improved educational and qualification opportunities for emergency managers, including academic and professional degrees, courses, workshops, and certifications. This partnership should also develop educational campaigns aimed at increasing climate literacy of the public.
- Increase the number of partnerships of the National Training and Education Division (NTED) and NEMC with 2-year community and technical colleges, and 4-year universities, particularly with public and research universities, as well as MSIs and HBCUs.
- In concert with Congress, fully support and fund the ongoing efforts of EMI to enhance the climate literacy of the emergency management workforce through the continued modernization and revitalization of EMI into the NEMC. This modernization of EMI should further the development of e-campus tools, advance the establishment of satellite programs around the nation, improve curricula, and build strategic thinking and leadership networks for emergency managers.
- Where feasible, we encourage FEMA to continue expanding partnerships with K-12 school systems, faith-based networks, non-government organizations, and civic organizations in order to build the next generation of emergency managers and enhance climate literacy for the public.

Addressing complex and compounding climate change issues will require a fundamental shift in the way we as a nation think about the emergency management workforce. Addressing these problems at scale will require a revitalized emergency management workforce. Building a climate resilient nation should be a shared responsibility, so these efforts must involve everyone, including regular citizens and FEMA employees.

If accomplished, outcomes of this recommendation could include the following:

- Emergency managers will have ready access to the most recent scientific climate change knowledge and impacts through research-informed and FEMA-approved courses and/or certifications at their local research university or community college.

- The emergency management workforce will be better prepared to protect all communities from the impacts of a rapidly changing climate.
- Public research universities will serve as cornerstones of resilience by partnering with FEMA in research and development, workforce development, and training activities in their communities.
- Scientific climate data and lessons learned will be reliably used to develop training and education programs for emergency managers.
- Robust FEMA and academic training programs will ensure that climate data is used appropriately by emergency managers at all levels, including by states, locals, tribes, and territories (SLTT) and by the public.

Section 3.2: Promote the Understanding of Climate Risks

Strategic Plan Objective

These recommendations relate to FEMA’s efforts to enhance climate resiliency of the nation, SLTTs, and individuals, enabled by an improved understanding of climate risks. These recommendations are aligned to the following *2022–2026 FEMA Strategic Plan* objective:

Objective 2.2 – Build a Climate Resilient Nation

Issues Examined

Climate change is not consistently integrated into local planning. To build a truly resilient nation based on risk-informed decision making at the local level, climate-related risks must be well-understood by citizens and governments. As the FEMA Strategic Plan states, “FEMA can better target investments to the most transformational projects when FEMA and its partners better understand the unique risks posed by climate change.”

Hazard Mitigation Planning at Local Levels

While FEMA requires that state-level hazard mitigation plans address climate change, it does not provide a consistent standardized source of climate data and does not require that local hazard mitigation plans address projected future climate conditions. Local governments need to be able to easily identify, access, and use credible local climate projection data appropriate to their planning processes. Local hazard mitigation planners may lack easy access to trusted and science-based climate data, making it hard for them to consistently integrate climate projections in their planning efforts. Thus, ensuring that their risk assessments – and the strategies they develop to address identified risks – are adequate in a changing climate is difficult. Because planning efforts generate projects that are appropriate for the FEMA BRIC program and other federal programs for funding support, it is particularly important that local planning processes robustly incorporate hazards that are evolving due to climate change. Doing

so ensures funds are invested wisely. Omission of climate change considerations from planning processes prevents local governments from fully understanding their risk or adequately preparing their emergency management programs, and causes ineffective communication of risk to families, businesses, and communities.

Over the past few years, the federal government has made a patchwork of climate change science portals available. However, they are mostly intended to assist specific audiences in completing a particular type of plan or to address a single hazard type. While the number of these portals has grown, there has been no strategy behind this growth. In addition, there was no apparent effort to provide coordinated, easy access for end-users including individuals, businesses, communities, or local government leaders. Examples include climate.data.gov, heat.gov, and earthquake.gov, among others.

Recommended Solutions

Recommendation 2022-07: Develop and ensure Hazard Mitigation Plans (HMPs) at the SLTT levels account for climate-driven impacts and ensure FEMA facilitates this requirement with the development of informational data products, robust training, and technical support.

FEMA should require SLTT governments to integrate projections of future climate conditions in their HMPs. The NAC urges that FEMA develop protocols and templates – an HMP Toolkit – to help communities integrate their local climate-related future conditions data into their plans, in addition to providing the necessary training and technical assistance for such planning.

While it is beneficial that all SLTT communities develop such HMPs, the NAC recognizes the lack of capacity in several small communities across the U.S. to develop such plans. *One size doesn't fit all.* As such, the NAC recommends flexibility in the complexity required for climate analysis of HMPs, based on jurisdictional capability and capacity.

The NAC notes, with appreciation, efforts of FEMA leaders to coalesce around the White House/NOAA Climate Mapping for Resilience and Adaptation (CMRA) and the FEMA Resilience Analysis and Planning Tool (RAPT). We encourage FEMA to expand all building-level attributes currently in U.S. structures and integrate these data, Homeland Infrastructure Foundation-Level Data (HIFLD), and all layers in FEMA's Hazus data as standard features in CMRA and RAPT, to facilitate the identification of climate impacts.

To help support local governments in addressing climate change in HMPs, FEMA should continue its work with other agencies to further develop and promote CMRA and RAPT climate data repositories and informational tools to be used for planning at all levels, making the best available scientific data accessible from across the whole-of-government. FEMA should continue expanding the use of data and modeling across all FEMA programs to help build local

HMPs, drive investments in mitigation and infrastructure enhancements, and inform experiential training and education programs. Risk models and tools such as CMRA and RAPT should be designed to provide granular and actionable information related to all-hazards climate disasters to SLTTs. FEMA should provide user support to ensure inclusion and access to these models and tools.

While CMRA and RAPT portals provide access to climate and consequence data, we encourage FEMA to continue the development of capabilities that will provide SLTT leaders with an understanding of what they can proactively implement in terms of appropriate interventions, and scenario modeling to help them measure the greatest positive impacts.

Further, we encourage FEMA to provide local, tribal, and territorial government officials and staff the training and technical assistance they need to integrate climate change data into local planning, including hazard mitigation, emergency management, and community planning processes.

Finally, the NAC recommends that FEMA provide SLTT governments the training and technical support they need to use these data and tools appropriately. Care should be taken to ensure that this support is tailored and scaled to the needs of underserved and historically marginalized communities. We urge FEMA to work with other agencies to develop a robust training program to help planners understand how to use climate data effectively in various planning processes, while FEMA takes the lead on emergency management-related planning. Climate data available through this cross-agency effort should include locally-relevant data on future conditions, vulnerabilities, and risks, with a special focus on the inclusion of data related to at-risk, underserved, and historically marginalized communities.

Desired outcomes for this recommendation include:

- A single source of trusted climate data will be created, searchable by the type of planning (e.g., HMPs, emergency management plans, comprehensive plans, economic development plans), to serve local, tribal, and territorial communities as they move through the myriad of planning efforts. This information will be used by people with a variety of technical backgrounds due to the robust training program offered to complement the data.
- Local governments in underserved and historically marginalized communities will have the tools and training they need to appropriately identify and address climate-related hazards and will be well assisted in developing effective climate resilience projects for funding.
- BRIC and other federal funding will consistently invest in high-quality projects that build climate resilience, flowing from robust planning processes that integrate the best available climate change data.
- The latest historical and future climate projections data will be easily accessible to local government officials and staff as they embark on a variety of planning processes. This

data will address elements of climate resilience and give local governments confidence to move processes forward in their communities.

- The federal government’s various climate data programs will be more effective at translating this data into action, because officials at SLTT levels will know where to go to get the information they need. Assistance will be available to help them discern the best climate data points to use in different planning processes.
- Local emergency managers will be able to access the climate projections data in development of their local hazard mitigation plans.
- Local HMPs will consistently integrate climate change data for the better protection of all residents, particularly those in underserved and historically marginalized communities, by addressing rapidly changing conditions.
- Having climate projections consistently integrated into HMPs across the nation will encourage other local government planning processes such as calculating investments for future mitigation and infrastructure enhancements.

Section 3.3: Identify Communities Susceptible to Greatest Impacts

Strategic Plan Objective

These recommendations relate to FEMA’s efforts to empower risk-informed decision making by ensuring that risk analysis tools consider the impacts of climate disasters on underserved and historically marginalized communities and populations. These recommendations are aligned to the following *2022–2026 FEMA Strategic Plan* objective:

Objective 2.3 – Empower Risk-Informed Decision Making

Issues Examined

Understanding risk is complicated. Climate-related risks are even more complex. Climate-related risks are created by a range of hazards. Some are slow in their onset, such as changes in temperature and precipitation leading to droughts, or agricultural losses. Others happen more suddenly, such as tropical storms and floods. It is now widely recognized that climate-related impacts are worsening and will continue to challenge populations across the globe for generations to come.

Inequity of Climate Impacts

Unfortunately, the climate risk models in use today rarely consider vectors of vulnerability such as race, gender, and other socioeconomic factors. The unintended consequences of such vulnerabilities include added damage and human suffering when disaster strikes. The same

storm, flood, heatwave, or wildfire has vastly different impacts on one community versus another. This is due to complicated factors such as affluence, systemic and structural racism, environmental conditions, historic redlining, geography, education, connectedness, socioeconomic drivers, and how the community has settled the landscape. Underserved and historically marginalized communities face a wide range of stressors prior to disasters that are often exacerbated by the event. Climate risk models should be capable of factoring in these differences to better assess the recovery needs of different individuals and/or communities.

Speed and Scale of Climate Science Innovation

The nation's research universities and national laboratories are advancing climate risk models at a dizzying pace with advances in computational modeling; artificial intelligence and machine learning in climate risk analytics; and factors beyond specific climate-related disasters, like population migration. Staying current with data sets and analytical tools is a perpetual challenge for emergency managers at all SLTT levels, and the public. Access to appropriate and trusted science-based risk models is one problem; another challenge is giving emergency managers the knowledge and training so they can translate these risk models into risk-informed decision-making.

Recommended Solutions

Recommendation 2022-08: Ensure that risk models consider the disproportionate impacts of climate change on diverse, underserved, and historically marginalized communities.

Risk models should be designed to 1) communicate climate-related threats and consequences to SLTTs and their specific jurisdictions in a clear fashion; 2) assist SLTT governments to easily identify at-risk communities, and the most vulnerable individuals within those communities; and 3) provide SLTT governments access to these climate data and tools to assist them in identifying and mitigating risks in an easy, intuitive, and familiar manner.

To be effective, these climate risk models and tools need to be simple and familiar. As such, the NAC recommends that FEMA identify and provide SLTTs the necessary guidance on the right tool for the right job, to the greatest extent possible. To that end, we recommend defining a Capability Maturity Model for more detailed analyses and actions.

Additionally, the NAC recognizes that in order to minimize barriers to entry, emergency managers and planners at the local, tribal, and territorial levels need access to climate risk data and models in familiar and accessible technology platforms and processes. As such, the NAC recommends that FEMA explore the seamless integration of climate data and tools into processes and systems familiar to emergency managers, such as Hazard Identification and Risk

Analysis (HIRA), Threat and Hazard Identification and Risk Analysis (THIRA) and consequence analysis.

In addition, emergency managers in underserved, under-resourced, and historically marginalized communities should receive the resources and technical support needed to access risk analytics that can consistently and efficiently inform their decisions. FEMA training and professional development efforts should focus on providing emergency managers the opportunity to be current on the social, historical, racial, and cultural issues associated with climate justice.

If accomplished, outcomes of this recommendation include the following:

- Emergency managers will plan more effectively, recognizing that particularly high-risk communities or individuals may need earlier intervention or response and longer direct support in the recovery phase.
- Climate-related risk tools will incorporate considerations of race, education, housing, and other such socioeconomic factors that contribute to risk.
- Tools such as CMRA and RAPT will include data and models for all hazards, including capabilities to assess local risks such that the needs of the most vulnerable community members are prioritized.
- Underserved and historically marginalized communities will be protected from, and resilient to, climate disasters because their differential vulnerabilities will be better understood and factored into mitigation efforts that reduce vulnerability.
- Community vulnerability to all hazards will decrease due to improvements in – and more effective use of – climate-risk tools.
- Investments will be made to identify and reduce risks, including training and capacity building, and will be targeted to meet the needs of underserved and historically marginalized communities.

Recommendation 2022-09: Facilitate the transition of state-of-the-art research into the development of climate science-based operational tools.

Facing a crisis as complex and challenging as climate change could be well supported by an effort like the Advanced Technologies Program (ATP) at NIST, the Defense Advanced Research Projects Agency (DARPA), or its more recent derivatives APRA-Energy, or ARPA-Health. These efforts have allowed the federal government to support use-inspired, high-risk, high-reward academic research into transformative solutions that advance the safety and well-being of all Americans. Enhancing the climate resiliency and adaptation of the nation will require a similarly inspired and ambitious approach.

The NAC encourages FEMA to engage the ingenuity and innovation capacity of our nation’s research universities and national labs by calling on them to fully participate with the federal

government in enhancing our nation’s climate resilience. In addition, FEMA should consider the use of applied research contracts, challenge grants, and other formal or informal mechanisms in order to enhance the operational capabilities and capacities of emergency management in the U.S. FEMA should encourage partnerships between organizations receiving federal research funds and those able to translate those research findings into operational tools and technologies. These partnerships will be instrumental in enhancing the nation’s emergency management capabilities and capacities.

If accomplished, outcomes of this recommendation include the following:

- Emergency managers will be able to harness the research and innovation capacity of American universities and national labs to proactively address emerging threats to public safety from climate change-driven threats.
- FEMA workforce and emergency managers will receive support from national labs and research universities in communities across the U.S. related to the research, development, training, and capacity building on operational emergency management tools.
- Improved outcomes, including measures showing increased resilience, will be evident and result from more informed decision-making.

Section 3.4: Whole-of-Government Approach for Climate Programs and Policies

Strategic Plan

This recommendation relates to the need for FEMA to coordinate with other federal agencies that are involved in their respective climate adaptation efforts. This recommendation impacts the following *2022–2026 FEMA Strategic Plan* objectives:

Objective 2.1 – Increase Climate Literacy Among the Emergency Management Community

Objective 2.2 – Build a Climate Resilient Nation

Objective 2.3 – Empower Risk-Informed Decision Making

Objective 3.3 – Unify Coordination and Delivery of Federal Assistance

Issue Examined

While FEMA is the lead federal agency responsible for enhancing our nation’s resilience, including climate resiliency, it is important to recognize that nationwide climate resilience is not only about emergency management. FEMA is not the only federal agency working on climate change and adaptation.

To become climate-resilient, communities must become economically resilient. America’s local economies and small businesses must learn to survive and thrive despite increasing climate change-driven disruptions. It requires that, as a nation, we continue to explore cleaner and greener energy sources to reduce the overall extent of the climate crisis and ensure energy resilience in the face of increasing natural disasters and supply chain disruptions. It mandates that natural systems providing important protective buffers for communities are themselves protected in the face of changing climate conditions. It requires that our health and social services programs help residents – especially those in underserved areas – to become personally resilient and able to withstand the impacts of increasingly devastating disasters. These efforts reside at the local level, but the responsibility for assisting those efforts reside across various federal agencies, necessitating a whole-of-government approach to address climate resilience in ways that both reduce greenhouse gas emissions as well as adapt to changing climate conditions.

Recommended Solution

Recommendation 2022-10: Partner with other federal agencies in coordinating climate-related policies, priorities, funding programs, and federal assistance.

FEMA should assist in coordinating the efforts of federal climate resilience programs across the many federal agencies with responsibility for related research, education, funding, and policy development. While FEMA is responsible for enhancing climate resilience nationwide, it is not the lead scientific agency for advancing climate science. Agencies and departments such as the White House Office of Science and Technology Policy (OSTP), NIST, NOAA, USGS, the Small Business Administration, Department of Energy, Environmental Protection Agency, and Housing and Urban Development are working to help communities build climate resilience. FEMA should facilitate the establishment of a White House Interagency Climate Resilience Committee to advance multiple linked efforts including climate literacy, climate change and impact modeling, a climate data portal, and funding other programs to enhance climate resilience.

To be successful, this whole-of-government approach must include partnering with SLTT governments, academic institutions, and civic organizations to ensure that tools and resources developed within the federal family are effective and well distributed to local governments. At the same time, information from local sources is needed to identify the emerging needs of local governments to build climate resilience. A climate services system is needed that connects local governments with each other and helps them navigate an increasingly complex landscape of climate tools and resources. Public-private partnerships with states as well as academia and civic organizations are encouraged so that federal investments are married to organizations that have the best understanding of the needs of local communities. The National Disaster Recovery Framework (NDRF)⁴ serves as a useful reference to help inform how such a multi-

⁴ <https://www.fema.gov/emergency-managers/national-preparedness/frameworks/recovery>

agency coordination could produce lasting and meaningful results for citizens and guide the design of the envisioned multi-stakeholder collaboration.

Chapter 4: Readiness Recommendations

The Readiness Committee has identified several recommendations. While these recommendations specifically relate to wildfire, they should be applied to all hazards.

Section 4.1: Environmental and Historic Preservation

Strategic Plan Objective

This recommendation relates to the following *2022–2026 FEMA Strategic Plan* objective:

Objective 3.2 – Posture FEMA to Meet Current and Emergent Threats

Issue Examined

Environmental Historic Preservation (EHP) reviews have become lengthy for HMA proposals, and specifically for wildfire mitigation proposals.

Managing EHP reviews remains an issue across all hazards. They also remain a significant issue both pre- and post-wildfire. Environmental reviews represent an integral part of the preparedness and recovery for areas most affected by wildfires. However, EHP reviews are cumbersome for wildfire recovery and mitigation proposals. The lengthy timeline is often due to the lack of applicable Categorical Exclusions under the National Environmental Policy Act (NEPA). This leads to requirements for full environmental assessments, which can take multiple years to complete. Despite a mitigation objective as reasonable as simple targeted pruning and thinning in rural-residential neighborhoods or planting native samplings on a burned hillside, administrative delays can stall progress in communities that need quick and simple mitigation tactics.

The NAC envisions a culture of proactive mitigation where actions can be taken in an effective timeframe, while ensuring environmental protections are appropriately applied.

Recommended Solution

Recommendation 2022-11: Conduct a full review of the EHP process and explore metrics for all mitigation projects to be processed more expeditiously.

The EHP process should be reviewed to allow for creative approaches and flexibility in the grant application timeframe, particularly for underserved and historically marginalized communities. Many of these concerns can be improved by developing Programmatic Biological Opinions (BO) with other federal regulatory agencies such as the U.S. Fish and Wildlife Service and National Marine Fisheries Service for wildfire response, recovery, and mitigation activities. These BOs can pave the way for federal agencies to streamline approval of these activities via pre-determined avoidance and minimization measures.

If accomplished, outcomes of this recommendation may include the following:

- A reduction in risk of post-wildfire debris flows and landslides.
- The equal application of environmental protection on federal, state, local, tribal, and territorial lands.

Section 4.2: Limitations for Wildfire Mitigation

Strategic Plan Objective

This recommendation relates to the following *2022–2026 FEMA Strategic Plan* objective:

Objective 3.2 – Posture FEMA to Meet Current and Emergent Threats

Issue Examined

FEMA policies for mitigation programs currently limit the effective execution of mitigation activities necessary to reduce wildfire threats to SLTT communities.

Current HMA programmatic guidance prohibits actions related to improving or increasing water supply in high-risk wildfire areas, based on the premise that these actions constitute preparedness or even response support rather than mitigation. Water utilities and special-purpose districts serving Wildland Urban Interface (WUI) neighborhoods need encouragement to upgrade and expand their storage and delivery systems to accommodate and support wildfire threats, including the purchase and installation of dry-hydrants and heli-hydrants in extreme-risk areas.

Recommended Solution

Recommendation 2022-12: Reconsider wildfire mitigation interpretations.

Current HMA guidance already allows for other wildfire-related upgrades and expansions of WUI water systems, such as installing backup power generators on wellheads and retrofitting system components with ignition-resistant materials. This approach could easily be broadened within programmatic guidelines. As populations continue to grow in WUI areas, city fire departments across the country are increasingly being called upon to respond to WUI fires. Counties and cities are looking for an option to expand their water storage capability, however currently this is not considered an eligible mitigation project.

If accomplished, outcomes of this recommendation may include:

- An increase in mitigation funding applied to wildfire risk reduction projects.
- A broader range of eligibility for mitigation funding related to wildland fire.

Section 4.3: Limitations for Wildfire Operations

Strategic Plan Objective

This recommendation relates to the following *2022–2026 FEMA Strategic Plan* objective:

Objective 3.3 – Unify Coordination and Delivery of Federal Assistance

Issue Examined

Mitigating wildfires cannot fall solely to fire service responders and land management agencies. The federal government owns around 640 million acres of land across the nation. The Bureau of Land Management, Forest Service, Fish and Wildlife Service, and the National Park Service own 94 percent of that total. Each wildfire that burns on federal land presents cascading effects for state, local, tribal, and territorial governments, so policy coordination and land-use agreements are critical prior to heightened wildfire activity so there are no delays in recovery due to ownership issues.

In addition, large fires expose burn scars to erosion from wind and soil saturation, leading to landslides and mudslides. The federal firefighting services recognize this hazard and take emergency protective measures to protect property within their jurisdiction under the Burned Area Emergency Response (BAER) and Emergency Stabilization and Rehabilitation (ESR) programs. Similar emergency stabilization measures taken by state and local governments are

eligible Category B measures under FEMA PA declarations. In managing a Fire Management Assistance Grant (FMAG), however, emergency protective measures outside the FMAG incident period are ineligible, putting additional strain on SLTT resources.

FEMA should take the role of the lead coordinating agency for all multi-agency fire incidents across all phases of a wildfire, including recovery. This would include ensuring FEMA's capacity to successfully achieve interagency coordination through appropriate resourcing, staffing (e.g., wildfire subject matter expertise), and authorities.

In addition, it would be meaningful for the FMAG program to update guidance to allow emergency protective measures for issues associated with wildland fires. As a result, there would be fewer costs in the long term associated with debris and landslides.

Recommended Solutions

Recommendation 2022-13: Take a stronger role in wildland fire interagency coordination.

FEMA should engage with the Wildland Fire Mitigation and Management Interagency Commission to encourage integrating non-natural resource/non-firefighting federal agencies into wildfire risk reduction, response, and recovery planning and operations. FEMA should take a stronger role in interagency coordination for the federal government in multi-agency incidents across all phases of a wildfire, including recovery. FEMA should have the authority to work with and help direct those federal agencies that own and manage land to reduce wildfire risk and recovery that impact state, local, tribal, and territorial-owned lands. This should include coordinating with and directing agencies – whose missions are to sustain environmental and energy resources – on risk reduction and recovery planning and operations. Existing programs within response, recovery, and mitigation could be tailored to meet the evolving wildfire threat.

As the areas under threat of wildland fires continue to spread and have broader impacts, these fires become a whole-of-community hazard which must be countered with robust prevention, response, and recovery activities. Wildfires are complex threats, with factors including forest management, drought, and the interplay with existing programs at FEMA.

To accomplish this recommendation, the following should be considered:

- FEMA or the Wildland Fire Mitigation and Management Interagency Commission should consider hosting an annual Wildfire Summit at the National Interagency Fire Center.
- Include state, local, tribal, and territorial government in BAER and ESR programs to ensure local community input on impacts and concerns.

Recommendation 2022-14: Update FMAG program guidance.

The provision of funding for FMAGs comes from linking the Stafford Act authorities Section 403 on Essential Assistance with Section 420 on Fire Management Assistance. Section 403 also authorizes the provisions of funding for the FEMA PA program. Despite being authorized under the same section of the Stafford Act and having identical definitions of entities eligible to receive assistance, these programs operate under different timeframes. FEMA should allow the timeframes available within the PA program to be available under FMAG. This would enable some Category B activities to occur outside of the incident period. Currently, all eligible activities in an FMAG must occur between the start and the end of the incident period; however, some actions, such as hazardous tree removal or water treatment emergency protective measures, should be eligible even though they occur after the close of the incident period.

The NAC believes the authorities given to FEMA under Stafford Act Section 420 allow FEMA to expand the use of its jurisdiction to allow some pre-positioned items to be covered. FEMA should broaden the use of this authority and broaden the policy—for example, by allowing the eligibility of state, local, tribal, and territorial pre-positioned resources to immediately begin efforts to reduce the initial fire outbreak. Encouraging immediate action by all parties near the fire will significantly reduce the fire’s impact, size, and overall costs.

FEMA should amend forms to ensure the preposition resource option is noted in FMAG applications. If accomplished, outcomes will include a reduction in overall fire costs and the devastating social and environmental impacts of prolonged fire incidents.

Chapter 5: Workforce Recommendations

Section 5.1: Workforce Realignment

Strategic Plan Objective

These recommendations address the realignment of the FEMA workforce to today’s disaster environment, and the ability to recruit and retain highly qualified and skilled personnel who are committed to the equitable delivery of disaster services. This applies to the following 2022–2026 FEMA Strategic Plan objective:

Objective 1.1 – Cultivate a FEMA that Prioritizes and Harnesses a Diverse Workforce

Issue Examined

Outside of traditional public safety or emergency response roles, emergency management is not broadly recognized as a desirable career for individuals who have appropriate knowledge, skills, and abilities (KSAs). Additionally, the field of emergency management has not focused on addressing the deeply rooted inequities that increase vulnerabilities and negative impacts in underserved and historically marginalized communities. The federal and SLTT public sector are experiencing significant employee turnover, vacancies, and limited recruitment pools due to the impact of COVID-19, “The Great Resignation”, burnout from the frequency of disaster events, and competition from the private sector. These factors are impacting the ability of FEMA and SLTTs to recruit and retain highly qualified individuals who have chosen emergency management as a long-term career.

In the future, we envision that:

- Emergency management will be an attractive career for individuals with a broad range of KSAs and experience.
- Increased awareness and understanding of emergency management concepts will increase interest in volunteer and career opportunities.
- Innovative recruitment and training initiatives will highlight the broad range of expertise and job skills that are needed and will include outreach to underserved and historically marginalized communities.
- The workforce at all levels will reflect the diversity of communities served, and the delivery of preparedness, response, recovery, and mitigation assistance by FEMA and SLTTs will be equitable.

Recommended Solutions

Recommendation 2022-15: Reassess and realign the FEMA workforce.

The FEMA workforce should remain nimble and adapt itself to the constantly changing demands brought on by more frequent, long-term catastrophic events. FEMA has become, and therefore the workforce must be prepared to be part of, the “go-to” response and recovery agency for events, such as the COVID-19 pandemic, that have not traditionally been part of the agency’s primary portfolio. Research continues to demonstrate that underserved and historically marginalized communities do not receive equitable services and resources before, during, and after a disaster, so it is further essential that the workforce is capable of and fully committed to equity in all programs.⁵

Initiatives that FEMA could consider include:

- Increase training and the development of outcome metrics to ensure that employees are aware of their obligation and responsibility to equitably deliver services and resources to all communities and disaster survivors.
- Reassess and update job requirements to align with the demands of today’s disaster environment, while taking into consideration increasingly bleak forecasts of larger and more frequent catastrophic events.
- Assess transitioning some FEMA reservists and other part-time positions to full-time positions, ensuring continuity and consistency of operations for long-term recovery and mitigation projects.
- Identify strategies to increase training opportunities for FEMA reservists and part-time employees with a goal of strengthening continuity, consistency of operations, and equitable delivery of services.

Recommendation 2022-16: Develop a nationwide campaign to promote the availability of free, online courses delivered by FEMA’s Emergency Management Institute (EMI).

FEMA should increase public awareness of disaster preparedness, response, recovery, and mitigation. The campaign could be designed to reach specific segments of the population, such as business and industry; volunteer, neighborhood-based organizations, and faith-based

⁵ “Targeting Support Strategies for Underrepresented Neighborhoods Likely Impacted by Natural Hazards”, June 1, 2020 presentation to FEMA NAC by C.R. Davis, PhD, University of North Carolina at Chapel Hill.

“Emerging evidence suggests that federal aid support disproportionately impacts marginalized communities” (Howell & Elliot, 2019)

organizations; high school, vocational school, and college students; and members of the general public, including those living in diverse, underserved, and historically marginalized communities. EMI's catalog of courses in Spanish could be promoted in communities with a large percentage of Spanish-speaking individuals. The NAC recommends focusing on outcomes that will increase personal preparedness, increase the engagement of community organizations, stimulate participation in CERT teams and FEMA Corps, and develop interest in careers in emergency management. Developing this campaign may require feedback from focus groups of target segments, partnering with community and industry leaders and organizations, and identifying spokespersons with leadership or celebrity status.

Section 5.2: Workforce Resilience

Strategic Plan Objective

These recommendations apply to the following *2022–2026 FEMA Strategic Plan* objective:

Objective 3.1 – Strengthen the Emergency Management Workforce

Issue Examined

Frequent, long-term disasters have a significant impact on the federal, state, local, tribal, and territorial emergency management workforce. Psychological and emotional effects and deterioration in work performance factors have resulted in a rise in resignations, early retirements, and employee transitions to other jobs and careers. Loss of skilled and experienced emergency management personnel with considerable institutional knowledge can have large and long-lasting negative effects on agencies and the communities they serve.

Individuals who pursue a career in emergency management are expected to be in a constant state of readiness and be willing to answer the call for service, regardless of the impact on their personal lives. Frequent long-term deployments to catastrophic events can take a heavy psychological and emotional toll on the FEMA workforce. Deployments disrupt normal life patterns, diminish coping mechanisms, and place personnel into unfamiliar environments, sometimes with rudimentary living conditions. Field personnel and personnel assigned to emergency operations centers (EOCs) and other support functions must endure exhausting days, often in hazardous and high-stress conditions, for weeks or months at a time. Sometimes, emergency management personnel and their families are themselves survivors of a disaster, which can amplify the stress on those workers.

The COVID-19 pandemic highlighted serious risks for emergency management personnel and their families. For many, a virtual office setting was not an option. Whether assigned to crowded EOCs, mass vaccination sites, or field hospitals, exposure risks were extremely high, particularly before the availability of vaccines. COVID-19 also increased the risk to emergency

management personnel who were deployed to “normal” disaster events. COVID-19 placed additional stress on personnel because of the unavailability of normal support systems such as in-person school, childcare, and off-duty social events.

In the public sector, most employers provide employee assistance programs (EAP) as a confidential resource when an employee needs psychological or emotional support for both job-related and non-job-related issues. In particular, the fire service has embraced support programs for critical incident stress and post-traumatic stress disorder (PTSD). In many fire departments, a critical incident stress debriefing is required of all responders and support personnel who have dealt with a particularly tragic or difficult incident. Unfortunately, similar processes and procedures are not in place for most emergency management agencies. Supervisors and employees may not have the awareness and training to recognize signs of critical incident stress or PTSD, and employees may not trust that their organization’s EAP understands their work environment and related stresses.

Ideally, a career in emergency management offers employees and leaders the ability to serve communities during extremely difficult times with a manageable amount of personal trauma and stress. It is not expected that a career in emergency management should be completely without difficulty, stress, or strain. However, a compassionate work environment can go a long way to supporting employees throughout their careers.

We envision a future where the psychological and emotional health of emergency management workers is fully supported by policies and procedures, training and awareness programs, intervention strategies, and up-to-date research. The fire service experience can be looked to as a model to emulate. Employers and employees will be challenged to overcome the stigma of mental health issues that are associated with the stress of responding to disasters.

Recommended Solution

Recommendation 2022-17: Develop policies, procedures, training, and research that reduces the potential for critical incident stress and PTSD for emergency management personnel.

FEMA should ensure that emergency management personnel have an awareness of, and ready access to, intervention and treatment programs that address the significant stresses from working in the disaster response and recovery environment. Not only should FEMA address these issues with its own employees, but the agency is well-positioned to lead and coordinate efforts across all levels of emergency management. Examples of steps that could be taken include:

- Identifying and promoting best practices that can be shared and instituted at the federal (including federal agencies that share disaster response and recovery missions) and SLTT level.
- Establishing awareness and training programs through EMI that can be delivered in-person and/or virtually; programs should strive to establish a culture of acceptance and mutual support in the emergency management community.
- Creating on-site resources for employee critical incident stress and PTSD intervention during disaster response and recovery operations.
- Sponsoring and collaborating on research that measures the scope of the problem, developing improved intervention and treatment methodologies, and exploring the feasibility of scientifically based testing that could screen personnel for suitability to work in highly stressful environments.

FEMA could consider partnering with organizations such as the National Emergency Management Association (NEMA), the International Association of Emergency Managers (IAEM), and leading mental health advocacy, treatment, and research entities. Critical resources should be committed to the FEMA Human Capital Governance Board and EMI to support implementation of this recommendation.

Section 5.3: Staffing Long-Term Operations

Strategic Plan Objective

These recommendations apply to the following *2022–2026 FEMA Strategic Plan* objective:

Objective 3.1 – Strengthen the Emergency Management Workforce

Issue Examined

FEMA staff, both full-time and reservists, are typically deployed to federally declared disasters for a period of 30 days before being relieved by another staff member. The deployment period can be extended, sometimes significantly. Positive and trusting working relationships between FEMA and SLTT staff are critically important to successful disaster response and recovery. When FEMA staff assignments change, it takes time for new relationships with SLTT personnel to be formed. If the new FEMA personnel are not properly trained, briefed, or familiar with the location and its culture, administrative processes may be repeated or decisions may be delayed; this results in added frustration for SLTT personnel, or in some cases, applicants and sub-applicants. The regular rotations of FEMA staff is particularly impactful for long-term recovery operations that may last years (e.g., Hurricane Katrina, Superstorm Sandy).

Our future vision is for FEMA to have a response and recovery staffing capability for long-term events that ensures familiarity with local conditions, practices, language, and culture, as well as

minimal personnel changes. The intended outcome will be to strengthen operational capabilities and coordination with SLTT agencies, ensuring consistency in decision-making and reduced administrative barriers and delays.

Recommended Solution

Recommendation 2022-18: Establish hazard-specific recovery teams.

Hazard-specific recovery teams should be established for the most frequent and catastrophic types of events that are experienced in the U.S., such as hurricanes, wildfire, and flooding, which typically result in long-term recovery operations.

Teams should be stationed in the Regions most prone to the relevant hazard. These teams should be leveraged to establish and maintain trusting relationships with the SLTT staff, as well as the FEMA regional office staff they would most likely work with following a disaster. By virtue of their permanent assignment to an area, these teams should be intentionally acclimated to cultural and equity concerns with tribal nations and underserved and historically marginalized communities in that area. While it may be necessary to supplement these teams with reservists and other FEMA staff during the initial stages of a recovery, the oversight and final decision-making would be most consistently coordinated by the permanent staff. The intended outcome is rapid initiation of recovery operations that are empowered to provide faster and more consistent decision making, to deliver speedy recovery.

Section 5.4: Language Barriers during Deployments

Strategic Plan Objective

These recommendations apply to the following 2022–2026 FEMA Strategic Plan objective:

Objective 3.1 – Strengthen the Emergency Management Workforce

Issue Examined

The U.S. Census Bureau reports that, since 1980, the number of people speaking only English at home has increased steadily. However, there was a proportionally greater increase in the population speaking a language other than English. Among languages other than English that are spoken in the U.S., Spanish or Spanish Creole are by far the most prevalent. 41,757,391 individuals speak Spanish or Spanish Creole in the home, and of those, 8 percent (3,340,591) report that they speak English “less than very well.” The number of Spanish speakers in the U.S.

has increased by 56.8 percent since 2000. Chinese is the second most frequently spoken non-English language (3,494,544).⁶

In Puerto Rico, not only is Spanish the primary language spoken, but territorial employees are not required to be fluent in English. During recent disaster declaration events, such as Hurricane Maria, English-speaking FEMA employees and Spanish-speaking territorial employees were significantly challenged by the language barrier when translation services were not available, especially during long-term recovery efforts. As a result, operational capabilities were hampered, administrative processes were delayed, and disaster victims were not afforded an equitable level of service when compared to events on the U.S mainland. Complex regulations and policies were difficult to understand and implement at the territorial level.

The NAC shares a concern that FEMA’s lack of foreign language readiness could have a negative impact on the agency’s ability to serve non-English speaking disaster survivors, especially those in underserved and historically marginalized communities. We commend EMI for establishing a catalog of training courses in Spanish that currently includes 25 free courses for emergency management personnel, government officials, CERT members, and the public.

In the future, FEMA should have the ability to readily communicate with non-English speaking emergency management personnel and disaster victims. Foreign language resources should be available for preparedness, response, recovery, and mitigation initiatives in communities with a high percentage of non-English speakers. While Spanish could be the priority, other major languages should not be ignored.

Recommended Solution

Recommendation 2022-19: Strengthen the ability to deliver services in languages other than English.

FEMA should improve the equitable delivery of disaster services in Puerto Rico and to non-English speaking disaster survivors everywhere. This can be approached from many angles, including translating public education materials, websites, social media, policies, and regulations; identifying current multilingual employees and establishing targets for future hiring; establishing criteria for the deployment of language specialists to disaster events; and language education. FEMA could also consider partnering with NGOs, including non-profit organizations, faith-based organizations, and academic institutions with foreign language capabilities to support FEMA’s mission.

⁶ *Language Use in the United States: 2019*; American Community Reports, U.S. Census Bureau
<https://www.census.gov/library/publications/2022/acs/acs-50.html>

Section 5.5: Public Assistance Program’s Administrative Burden on Workforce

Strategic Plan Objective

These recommendations apply to the following 2022–2026 FEMA Strategic Plan objective:

Objective 3.1 – Strengthen the Emergency Management Workforce

Issue Examined

The members of the NAC Workforce Subcommittee commend FEMA leadership and the entire agency staff for directly reducing the complexity and administrative burden of some of the FEMA programs.⁷ However, as indicated from our research and efforts over the last year, more needs to be done to reduce the administrative burden and complexity of FEMA programs.

Our future vision is for an administrative environment that eliminates redundant requirements; maintains policies and procedures that are strictly aligned with the Stafford Act and other applicable statutes; ensures policies and procedures maximize flexibility for field personnel and prioritize “getting to yes”; promotes seamless interagency coordination; and reduces the burden of financial audits.

Recommended Solution

Recommendation 2022-20: Streamline Public Assistance (PA) program requirements.

FEMA should streamline existing program requirements to reduce the administrative burden on both the FEMA and SLTT workforce, thereby enabling the emergency management workforce as a whole to prioritize the most important aspects of the program. The administrative burden and complexity of the PA program make it hard for some SLTTs to successfully implement the program, whereas states with more frequent disasters or significant capacity and resource advantages are less challenged. The PA program should be equitable across all jurisdictions and levels of government, which is not currently the case.

⁷ Please see Appendix A: NAC Workforce Subcommittee – Research and Accolades.



FEMA could consider the following actions to reduce the administrative burden and complexity of the PA program:

- FEMA should develop and prioritize clear pathways for SLTTs to implement long-lasting mitigation investments that include the ability to simultaneously apply multiple funding streams to individual projects. Opportunities for competitive mitigation funds should be equitable by providing “set-asides” for smaller and less-resourced jurisdictions.
- FEMA should provide resources that enable those jurisdictions with minimal resources to successfully apply for and implement competitive grants (e.g., flood mitigation grants, BRIC grants). Consistent with the Justice40 Initiative, FEMA should consider providing staff resources, guidance on the use of other federal funding streams to cover the SLTT match, and allocation of competitive grants based on known risk factors and actual dollar loss experience.
- FEMA could work with Congress to transition all Regional Administrator positions to career status. This would stabilize turnover in politically-appointed Regional Administrator positions and strengthen consistency in the delivery of services to SLTTs.

Appendix A: NAC Workforce Subcommittee – Research and Accolades

Members of the Workforce Subcommittee met and considered information from a wide variety of expert sources, both internal and external to FEMA, to obtain a deeper understanding of the FEMA workforce and programmatic operations and challenges. The subcommittee received general workforce briefings from the FEMA Field Operations Directorate (FOD), a briefing on the FEMA Professional Development Pathways Assessment (PDPA), and a facilitated discussion on the FEMA FOD Workforce Model & Readiness Cycle. The subcommittee also reviewed non-FEMA sources on the FEMA workforce and on the non-federal emergency management workforce, as well as equity issues within the federal and the non-federal emergency management workforce.

The subcommittee met with Dr. Jeff Stern, EMI Superintendent, on the resilience of the emergency management workforce and the future of the emergency management profession. The subcommittee also conducted internal discussions with members representing SLTT jurisdictions on the challenges faced by the non-FEMA workforce and the development of recommendations concerning the non-FEMA workforce resilience. The subcommittee met with Curtis Brown, co-founder of I-DIEM to discuss pathways for building a FEMA workforce with diversity and inclusion. Mr. Brown addressed the importance and need to promote and brand emergency management as a competent profession. The subcommittee also heard direct presentations from NAC members on the workforce and programmatic equity challenges faced by SLTT jurisdictions, and other internal FEMA presentations. Special thanks to Dr. Carra Sims, who spent significant time supporting the subcommittee.

The subcommittee referenced important documents discussing FEMA workforce and programmatic issues, ranging from the FEMA Strategic Plan, U.S. Government Accountability Office (GAO) reports, Congressional Testimony, RAND Corporation reports, public FEMA policy documents, and prior NAC Reports. Sources include:

- GAO – FEMA DISASTER WORKFORCE – Actions Needed to Address Deployment and Staff Development Challenges, May 2020 (GAO-20-360).
- GAO – FEMA WORKFORCE – Long-Standing and New Challenges Could Affect Mission Success, January 2022 (GAO-22-105631).
- FEMA: BUILDING A WORKFORCE PREPARED AND READY TO RESPOND – Joint Hearing Before the Subcommittee on Emergency Preparedness, Response and Recovery and the Subcommittee on Oversight, Management and Accountability of the Committee on Homeland Security – House of Representatives, January 20, 2022.
- Harassment and Discrimination on the Basis of Gender and Race/Ethnicity in the FEMA Workforce – Homeland Security Operations Center – The RAND Corporation, 2020.

- “FEMA Experiences ‘Mass Exit’ of Employees Amid Surge in Disasters”, Government Executive. By Eric Katz, January 20, 2022.

As the subcommittee pursued emergency management workforce recommendations, a recurring issue was the complexity and administrative burdens associated with FEMA programs. These burdens stand in the path of achieving each of the major goals of the FEMA Strategic Plan.

The subcommittee witnessed recent successes with FEMA’s implementation of multiple actions to reduce the complexity and administrative burden of FEMA programs, which are as follows:

- **Additional Individual Assistance Flexibilities to Provide Homeowner Assistance:** FEMA examined programs and processes to identify policy changes that can decrease barriers to assistance. Based on an analysis of statutory and regulatory authorities, FEMA amended the IA Program and Policy Guide (IAPPG), Version 1.1, to create additional flexibilities that ensure access to assistance is equitably provided to all survivors. The policy changes apply for disasters declared on or after August 23, 2021.
- **Reducing PA Administrative Burden:** HQ Memo #1 to Region I–X Administrators and Senior Staff (FCOs, CRCs, Recovery Directors) (3/27/22): The memo re-establishes the Public Assistance Steering Committee whose charge will be to review the efficiency and effectiveness of the PA program. The memo also implements several immediate steps to simplify the PA process including the following:
 - Allowing sampling to minimize administrative burden for all validation (e.g., obligation, payment, closeout).
 - Field review of all determination memos, requiring the Federal Coordinating Officer to ensure that "FEMA's most knowledgeable and seasoned field staff and regional staff are engaged in these reviews" for all determination memos denying FEMA PA funding.
 - Consolidated Resource Center (CRC) staff deployment, requiring CRC staff to deploy to field offices to participate in Applicant-facing work (e.g., site inspections, complex project formulation) to provide real response/recovery experience.
 - Immediate PA policy simplification steps related to deadlines for submitting documentation for completed projects and allowing Regional Administrators to approve time extensions for closeout deadlines.
- **Increase in the PA Small Project Threshold to \$1,000,000 (8/3/22):** FEMA made a major change to its PA program by increasing the Small Project threshold to \$1 million. Small Projects PA grants are subject to “simplified procedures” under the Stafford Act and federal regulation. This means that eligible government or private nonprofit entities implementing small projects are not required to take as many administrative steps (e.g., providing documentation and reconciling final project costs) to apply for and obtain PA funding. Prior to this change, the threshold was \$139,800. This measure could simplify

and expedite recovery for many communities. FEMA, citing past project data, indicates that if the threshold had always been \$1 million, 94 percent of PA projects historically awarded would have been Small Projects, but that due to the actual, much lower thresholds, only 77 percent of PA projects meet the past definition of a Small Project. Having a larger share of projects that meet the simplified procedures of the Small Project standard will reduce the administrative burden of the PA program. In turn, this will reduce the burden on the FEMA and SLTT workforce.

- **Reducing PA Administrative Burden: HQ Memo #2 to Region I–X Administrators and Senior Staff (FCOs, CRCs, Recovery Directors) (9/6/22)**: This memo set out four additional efforts being taken to simplify the PA program. These will be incorporated into the next edition of FEMA's PA Program and Policy Guide (PAPPG) and are generally applicable to all major disasters and emergencies declared on or after 9/6/2022 (i.e., memo issuance date). Simplifications include the following:
 - Power Restoration Work Categorization: FEMA will allow applicants to claim power restoration work as either Category B Emergency Protective Measures or Category F Permanent Work, provided permanent work is authorized.
 - Removal of Hazardous Trees, Limbs, and Stumps: FEMA is eliminating size requirements for the eligibility of the removal of hazardous trees, limbs, branches, and stumps.
 - Consensus-Based Codes and Standards in Replacement Determinations (50% Rule): FEMA is providing applicants the option to not use higher consensus-based codes, specifications, and standards in 50% rule calculations. However, this is only for the purpose of processing 50% rule calculations; PA Permanent Work funding still requires applicants to apply consensus-based codes, standards, and specifications above and beyond those that may be locally adopted, consistent with FEMA policy. This applies to future declarations and unobligated projects from disasters declared on or after 12/20/2019.
 - Emergency Management Assistance Compact (EMAC): FEMA will no longer perform a separate reasonable cost analysis of work performed through EMAC, as long as the project followed established EMAC rules.

The subcommittee is aware of other initiatives; however, we are certain that applicants across the country are welcoming these changes and that their appreciation will only increase as their familiarity grows with their use.

Acknowledgements

2022 Members of the National Advisory Council

W. Nim Kidd, *Chair, National Advisory Council*
Chief, Texas Division of Emergency
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Jeffrey Hansen, *Vice-Chair, National Advisory Council*
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Choctaw Nation of Oklahoma
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Carrie Speranza, *Secretary, National Advisory Council*
Director, Emergency Management Solutions
Esri
Springfield, Virginia

Jeanne Abadie
Area Manager, Office of Aging and Adult
Services
Louisiana Department of Health
Baton Rouge, Louisiana

Kathy Baughman McLeod
Senior Vice President, Atlantic Council and
Director, Adrienne Arsht-Rockefeller
Foundation Resilience Center
Washington, District of Columbia

Sue Anne Bell, *Vice-Chair, Equity Workgroup*
Assistant Professor
University of Michigan
Ann Arbor, Michigan

Donald Bliss, *Vice-Chair, Workforce Subcommittee*
Vice President, Field Operations (Retired)
National Fire Protection Association
Quincy, Massachusetts

Donna Boston
Senior Manager, Business Resilience &
Emergency Planning
Southern California Edison
Silverado, California

Paul Brennan
Director, Pre-Hospital EMS and Preparedness
Coordinator
Lawrence General Hospital
Lawrence, Massachusetts

Paul Downing
Indian Township Tribal Council Member
Passamaquoddy Tribe at Indian Township
Indian Township, Maine

Charles Esteves
Administrator
Guam Office of Civil Defense
Aagna Heights, Guam

Jody Ferguson
Director, Department of Emergency
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Pierce County
Tacoma, Washington

Tim Gleason
City Manager
City of Bloomington
Bloomington, Illinois

James Gore
Sonoma County Supervisor, and
President, California State Association of
Counties
Sonoma, California

Tonya Graham

City Councilor
City Council of Ashland
Ashland, Oregon

John Grathwol, *Chair, Workforce Subcommittee*

Deputy Director (Retired)
New York City Mayor’s Office of Management
and Budget
New York, New York

Lisa Jones

Director (Retired), Office of Homeland Security
and Emergency Management
City of Phoenix
Phoenix, Arizona

Ramesh Kolluru, *Chair, Climate Adaptation
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VP for Research, Innovation and Economic
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University of Louisiana
Lafayette, Louisiana

Ryan Lanclos

Director, Public Safety and Disaster Response
Solutions
Esri
Conroe, Texas

Anna Lang Ofstad, *Vice Chair, Climate
Adaptation Subcommittee*

Research Engineer, Founder
Zylient
Kalispell, Montana

Linda Long

Battalion Chief
Philadelphia Fire Department
Philadelphia, Pennsylvania

Nicolette Louissaint, *Chair, Equity Workgroup*

Senior Vice President, Policy and Strategic
Planning
Healthcare Distribution Alliance
Arlington, Virginia

Kelly McKinney

AVP, Emergency Management and Enterprise
Resilience
NYU Langone Health
New York City, New York

Paula Pagniez

Americas Practice Lead, Climate and Resilience
Hub
Willis Towers Watson
New York, New York

Jimmy Patronis

Chief Financial Officer
State of Florida
Tallahassee, Florida

William “Brad” Richy, *Chair, Readiness
Subcommittee*

Director, Office of Emergency Management
State of Idaho
Boise, Idaho

Carol Salas Pagán

Director, Puerto Rico University Center for
Excellence in Developmental Disabilities
University of Puerto Rico
San Juan, Puerto Rico

Brian Strong

Chief Resilience Officer and Director, Office of
Resilience and Capital Planning
City and County of San Francisco
San Francisco, California

Tina Titze, *Vice Chair, Readiness Subcommittee*

Director
South Dakota Office of Emergency Management
Pierre, South Dakota

James Waskom

Director (Retired)
Louisiana Governor’s Office of Homeland
Security and Emergency Preparedness
Baton Rouge, Louisiana

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Additional Information

For more information about the FEMA National Advisory Council, please visit <https://www.fema.gov/nac>.

Points of Contact

Rob Long, Designated Federal Officer, FEMA National Advisory Council

Sarah Byrne, Alternate Designated Federal Officer, FEMA National Advisory Council

FEMA-NAC@fema.dhs.gov

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Helping people before, during, and after disasters.