Committee on Transportation and Infrastructure
U.S. House of Representatives
Washington, DC 20515

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Chair

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March 15, 2021

SUMMARY OF SUBJECT MATTER

TO: Members, Subcommittee on Economic Development, Public Buildings, and Emergency Management

FROM: Staff, Subcommittee on Economic Development, Public Buildings, and Emergency Management

RE: Subcommittee Hearing on "Building Smarter: The Benefits of Investing in Resilience and Mitigation"

PURPOSE

The Subcommittee on Economic Development, Public Buildings, and Emergency Management will meet on Thursday, March 18, 2021, at 2:00 p.m. in 2167 Rayburn House Office Building and via Cisco Webex, to receive testimony on "Building Smarter: The Benefits of Investing in Resilience and Mitigation." At the hearing, Members will receive testimony from witnesses with expertise in emergency management, mitigation and resilience, insurance, and construction. The Subcommittee will hear from the National Emergency Management Association, the Insurance Institute for Business and Home Safety, the Pew Charitable Trusts' Flood Prepared Communities program, Zurich North America, and the National Association of Home Builders.

BACKGROUND

For the last several years, the United States has experienced an increasing and unprecedented number of significant hazard events—hurricanes, tornados, floods, derechos, wildfires, abnormal heatwaves, and freezes—that have impacted tens of millions of Americans and taken varying tolls on countless communities.[1]

[1] See *Disaster Preparedness: DRRA Implementation and FEMA Readiness.* Hearing before the Subcommittee on Economic Development, Public Buildings, and Emergency Management. 116th Congress, May 22, 2019. See also *Building a 21st Century Infrastructure for America: Mitigating Damage and Recovering Quickly from Disasters*. 115th Congress, April 27, 2017.

Decades of regular federal data collection and scientific research and analysis, as well as private sector research indicates that these types of events are increasing.[2] A review of requests for Federal emergency assistance and/or disaster relief from the Federal Emergency Management Agency (FEMA) is accordingly on the rise as state, tribal, territorial, and local governments' capacity to respond to and recover from these events is quickly exceeded given the scale and associated losses.[3]

In 2012, Munich Re, the world's largest reinsurance company, reported that between 1980 and 2011, North America suffered $1.06 trillion in total losses, including $510 billion in insured losses, and an increase in weather-related events five-fold over the previous three decades.[4] In 2005, it was reported that since 1952, the cost of natural disasters to the federal government more than tripled, as a function of gross domestic product.[5] These statistics have only grown in the intervening years.

For several congresses, this Subcommittee has examined increasing costs of emergency assistance and disaster relief, and has worked to enact reforms and enhancements to the *Robert T. Stafford Disaster Relief and Emergency Assistance Act* (Stafford Act, P.L. 93-288 as amended) to bolster federal assistance via FEMA to state, local, tribal, and territorial governments to invest in mitigation and resilience, including investments in natural infrastructure.[6] Most recently, in 2018 the *Disaster Recovery Reform Act* (DRRA, P.L. 115-254, Division D) provided additional assistance and eligibility for both pre- and post-disaster mitigation from all hazards.

There are numerous causes that may be driving these rising disaster costs, including population growth and increased density in disaster-prone areas, changes in weather and fire events, and changes in disaster relief programs. In a 2013 report to Congress —responding to a provision of the *Sandy Recovery Improvement Act* (P.L. 113-2, Sec. 1111) —FEMA acknowledged the increase in the number of extreme disaster events and increased vulnerabilities throughout the United States due to shifting demographics, aging infrastructure, land use, and construction practices.[7] Further, the Congressional Research Service (CRS) analyzed data from over 1,300 major disasters since 1989, and adjusting for inflation, found that FEMA obligated more than $178 billion for these disasters.[8]

In November 2020, FEMA released the "Building Codes Save: A Nationwide Study," a nearly decade-long assessment of losses avoided through the adoption of hazard-resistant

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[2] National Oceanic and Atmospheric Administration (NOAA), "Billion-Dollar Weather and Climate Disasters: Events". Available at: https://www.ncdc.noaa.gov/billions/events.

[3] Congressional Research Service. *Stafford Act Declarations 1953-2016: Trends, Analyses, and Implications for Congress (R42702)*. August 28, 2017. See also FEMA, *Declared Disasters*. Available at https://www.fema.gov/disasters/disaster-declarations

[4] Munich Re (2012). *Severe weather in North America – Perils Risk Insurance*. Munich, Germany: Muchener Ruckversicherungs-Gesellschaft.

[5] The Princeton University Geoscience 499 Class, *The Increasing Costs of U.S. Natural Disasters*. Geotimes, November 2005.

[6] Federal Emergency Management Agency (FEMA), *Building Community Resilience with Nature-Based Solutions: A Guide for Local Communities*. August 2020. Available at https://www.fema.gov/sites/default/files/2020-08/fema_riskmap_nature-based-solutions-guide_2020.pdf.

[7] FEMA, *National Strategy Recommendations: Future Disaster Preparedness*. September 6, 2013. Available at http://www.fema.gov/media-library-data/bd125e67fb2bd37f8d609cbd71b835ae/FEMA+National+Strategy+Recommendations+(V4).pdf.

[8] CRS Memo *Data Analysis for House Transportation and Infrastructure Committee,* January 14, 2015.

consensus-based building codes and standards.[9] The study found that 65 percent of U.S. counties, cities, and towns had not yet adopted modern building codes—defined as codes developed since 2000.[10] Analysis of the data shows savings in multiple hundreds of millions of dollars for disaster response and recovery costs across disaster-impacted areas with modern codes.[11]

Disaster Recovery Reform Act of 2018 (DRRA)

The DRRA was initially crafted to address the rising costs of disasters in the United States and was intended to reform federal disaster programs to ensure communities are better prepared for future hurricanes, flooding, earthquakes, wildfires, and other disasters.[12] It incentivizes states to invest in stronger mitigation measures and resilient rebuilding—which will reduce the future loss of life and the rising costs of disasters—to ensure that communities are well-equipped to better prepare for and withstand disasters of all kinds.[13] The DRRA strengthened and established a consistent funding stream for pre-disaster mitigation. A section of the DRRA as originally reported by the Committee (later enacted as Section 20606 of the *Bipartisan Budget Act of 2018*, P.L. 115-123) also directed FEMA to incentivize mitigation by increasing the federal cost share. That section has not been implemented.

The National Institute for Building Sciences (NIBS) has found significant cost savings in mitigation projects and the adoption of consensus-based building codes and standards. In examining code aspects related to riverine flood, wind, and earthquake, the NIBS concluded:

- There is a benefit of $11 for every $1 spent by designing buildings to meet modern consensus-based codes and standards such as those developed by the International Code Council (ICC), versus the prior generation of codes represented by 1990-era design and National Flood Insurance Program (NFIP) requirements.[14]
- Hazard mitigation projects funded with federal grants provided by FEMA, the U.S. Economic Development Administration (EDA), and the U.S. Department of Housing and Urban Development (HUD) can save the country $6 in future disaster response and recovery costs for every $1 spent, according to more than two decades worth of data on these grants.[15]
- Generally, investing in certain mitigation measures above and beyond select requirements of the 2015 International Codes (I-Codes) – the model building codes developed by the ICC – can save an additional $4 for every $1 spent for certain hazards.[16]

Mitigation Assistance Available From FEMA

FEMA administers mitigation assistance via three main Hazard Mitigation Assistance (HMA) programs: *Stafford Act* Sec. 203 Predisaster Mitigation Assistance (PDM, 42 U.S.C. 5133);

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[9] FEMA, *Building Codes Save: A Nationwide Study*. November 2020. Available at https://www.fema.gov/emergency-managers/risk-management/building-science/building-codes-save-study.
[10] Id.
[11] Id.
[12] H. Rept. 115-1098. Available at https://www.congress.gov/115/crpt/hrpt1098/CRPT-115hrpt1098.pdf
[13] Id.
[14] National Institute of Building Sciences "Natural Hazard Mitigation Saves Study." Available at https://www.nibs.org/page/mitigationsaves.
[15] Id.

Stafford Act Sec. 404 Hazard Mitigation (HMGP, 42 U.S.C. 5170c); and the *National Flood Insurance Act*, as amended, Sec. 1366 Flood Mitigation Assistance (FMA, 42 U.S.C. 4104c).

Additionally, Public Assistance (PA) provided for infrastructure repair or replacement and Individual Assistance (IA) provided to individuals and households for residential repair or temporary forms of housing is subject to statutory, regulatory, and policy requirements to bring facilities up to the most recent consensus-based codes and standards. The goal of these various forms of assistance is to ensure that our nation's citizens and communities are resilient to various hazards.[17]

PDM (BRIC)

DRRA Sec. 1234 established of a steady stream of funding for a nationally competitive predisaster mitigation program. FEMA undertook a complete redesign of its previous iteration of *Stafford* Sec. 203 assistance and developed the *Building Resilient Infrastructure and Communities* (BRIC) program. As amended, the *Stafford Act* now allows the President to set aside from the Disaster Relief Fund (DRF) an amount equal to six percent of the estimated aggregate amount of assistance provided pursuant to Sections 403, 406, 407, 408, 410, 416, and 428 for major disasters.

The application window for the first grant cycle of BRIC closed at the end of January 2021. Grants are provided at 100 percent federal cost share and are capped at a maximum of $50 million.[18] Of the states, 49 of 50 submitted applications totaling $3.6 billion for the $500 million available for the cycle; application review is currently underway, with awards expected in summer 2021.[19] Under BRIC "mitigation projects must, at a minimum, be in conformance with the latest published editions (meaning either of the two most recently published editions) of relevant consensus-based codes, specifications, and standards that incorporate the latest hazard-resistant designs."[20] Additionally, FEMA may fund the development, adoption, evaluation, and enhancement of building codes and standards with BRIC awards.[21] In October 2020, the Trump administration set aside $500 million of the eligible $3.7 billion from the COVID-19 disaster declarations for the PDM/BRIC set-aside in the DRF.[22] Chairs DeFazio and Titus and Ranking Members Graves and Katko sent a letter urging then FEMA Administrator Peter Gaynor and then OMB Director Russell Vought to reconsider the decision, and fully fund the set-aside to ensure a robust BRIC program in the coming years.[23]

HMGP

Stafford Sec. 404 provides a regular stream of post-disaster mitigation funding to states, tribes, and territories. For disasters under $2 billion in overall Stafford assistance, the HMGP grant is 15

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[17] FEMA. *Hazard Mitigation Assistance Guidance*. Available at https://www.fema.gov/grants/mitigation/hazard-mitigation-assistance-guidance

[18] FEMA. *Fiscal Year 2020 Notices of Funding Opportunities for Hazard Mitigation Assistance Grants.* Available at https://www.fema.gov/grants/mitigation/fy2020-nofo

[19] FEMA BRIC program staff briefing call with Committee staff. February 24, 2021.

[2020] FY 2020 Building Resilient Infrastructure and Communities, Notice of Funding Opportunity (NOFO). Available at https://www.fema.gov/sites/default/files/2020-08/fema_fy20-bric-notice-of-funding-opportunity_federal-register_August-2020.pdf

[21] Stafford Sec. 203(g)(10).

[22] CRS. FEMA Pre-Disaster Mitigation: The Building Resilient Infrastructure and Communities (BRIC) Program (IN11515). December 28, 2020. Available at https://www.crs.gov/Reports/IN11515

[23] Letter from Ch. DeFazio, RM Graves, Chair Titus, and Chair Katko to FEMA Admin. Gaynor and OMB Dir. Vought. October 15, 2020.

percent of the aggregate assistance. This percentage decreases as disaster costs grow; 10 percent for disasters more than $2 billion and less than $10 billion, and 7.5 percent for disasters more than $10 billion and less than $35.333 billion. The federal cost share for HMGP grants is 75 percent.[24]

HMGP grants are managed by states, tribes, and territories, and are available for use broadly, beyond declared disaster areas for multiple types of hazards. Additionally, HMGP funds may fund the development, adoption, evaluation, and enhancement of building codes and standards.[25] The period of performance for these grants is exhausted seven years from the date of declaration and following an opportunity for extension.[26]

HMGP encourages the use of building codes and standards—such as the American Society of Civil Engineers/Structural Engineering Institute (ASCE/SEI) 24-14, Flood Resistant Design and Construction—wherever possible, and sub-applicants to states, tribes, and territories must document that their project is feasible and effective at mitigating risks of hazards.[27]

FMA

Flood Mitigation Assistance is not under the jurisdiction of the Committee on Transportation and Infrastructure, as it is authorized by the Committee on Financial Services as part of the National Flood Insurance Program (NFIP). FMA is a competitive grant program that provides funding to state, tribal, territorial and local governments for projects that reduce or eliminate the risk of repetitive flood damage to buildings insured by the NFIP.

In the fiscal year 2020 grant cycle, which closed in January 2021, $200 million was available for FMA. Up to $4 million is available for project scoping (max grant award per applicant is $600,000), up to $70 million is available for community flood mitigation projects (max amount of assistance available to any NFIP-participating community is $30 million), and $126 million will be awarded for technical assistance, flood hazard mitigation planning, and individual flood mitigation projects.[28] The federal cost share for FMA grants is typically 75 percent, although mitigation projects for repetitive loss properties can adjust to 90 percent, and severe repetitive loss properties up to 100 percent federal cost share.[29]

Public Assistance (PA)

FEMA provides PA to restore facilities based on pre-disaster design and function. However, conformity with the latest published editions of relevant consensus-based codes and standards, incorporating the latest hazard-resistant designs is required. Additionally, establishing minimum acceptable criteria for the design, construction, and maintenance of residential structures and

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[24] *Stafford Act*, Sec. 404(a).
[25] *Stafford Act*, Sec. 404(f) and (g).
[26] FEMA. *Hazard Mitigation Grant Program*. Available at: https://www.fema.gov/grants/mitigation/hazard-mitigation
[27] 44 CFR §206.434(c). See also, FEMA *2015 Hazard Mitigation Assistance Guidance* and *Addendum,* available at https://www.fema.gov/grants/mitigation/hazard-mitigation-assistance-guidance.
[28] FEMA. *Fiscal Year 2020 Notices of Funding Opportunities for Hazard Mitigation Assistance Grants.* Available at: https://www.fema.gov/grants/mitigation/fy2020-nofo.
[29] Id.

facilities may be eligible for assistance for the purposes of protecting the health, safety, and general welfare of the facility's users against disasters.[30]

Individual Assistance (IA)

In providing IA, FEMA adheres to all applicable codes and standards for the multiple types of assistance that may be available for disaster survivors, pursuant to *Stafford* Sec. 408(c)(2)(i) and 44 C.F.R. Part 206, Subpart D (*Federal Assistance to Individuals and Households*). When applicable, forms of IA also comply with the *National Environmental Policy Act* (NEPA); accessibility-related standards found in the *Architectural Barriers Act of 1968* and the *Americans with Disabilities Act* and associated ADA Accessibility Guidelines and HUD's Design Details for Accessible Disaster Relief Housing; 24 C.F.R. 3280, Subpart A (*Manufactured Home Construction and Safety Standards*); 44 C.F.R. Part 9, Subpart A (*Floodplain Management and Protection of Wetlands*); 24 C.F.R. 982.401 (*Housing Quality Standards (HQS), Subpart 1 Dwelling Unit: Housing Quality Standards, Subsidy Standards, Inspection and Maintenance*); 44 C.F.R. 206.117(b)(4) (*Permanent and Semi-permanent Housing Construction*); Recreation Vehicle Industry Association and California Air Resources Board (CARB) standards and/or the Toxic Substances Control Act Title VI requirements for formaldehyde emissions from composite wood products found in recreational vehicles; and Uniform Federal Accessibility Standards (UFAS).[31]

Mitigation Framework Leadership Group (MitFLG)

In the wake of the federal response to Hurricane Katrina, several reform efforts were authorized by the *Post-Katrina Emergency Management Reform Act* (P.L. 109-295, Title VI), including the establishment of the National Mitigation Framework, which included the creation of the Mitigation Framework Leadership Group (MitFLG). FEMA chairs the MitFLG, which is responsible for organizing mitigation efforts across the federal government, in cooperation and coordination with state, local, tribal, and territorial public-sector representatives. Additionally, the MitFLG assesses the effectiveness of these capabilities across the United States.[32]

The second edition of the National Mitigation Framework was released in June 2016. It focuses on a whole of community approach to mitigation and resilience, with a penultimate goal of nurturing a national culture of preparedness and reducing the impacts of disaster and the resultant loss of life and property.[33] In August 2019, the MitFLG released the National Investment Mitigation Strategy report (NIMS), which seeks to identify and measure the effectiveness of mitigation investments, and inform decisions on when and where to make investments using the whole of community approach that has been leveraged in other phases of emergency management. The NIMS encourages investment in both pre- and post-disaster mitigation—across the whole of community—with three shared goals: 1) showing how mitigation investments reduce risk, 2)

[30] 44 CFR § 206.226(d)(1)-(5). See also 44 CFR § 206.226(f)(2), Public Assistance Program and Policy Guide (PAPPG) (2020), and FEMA Recovery Interim Policy FP 104-009-11.
[31] FEMA. Response to Committee RFI on applicable codes and standards for IA. Provided March 10, 2021.
[32] FEMA. *Mitigation Framework Leadership Group (MitFLG)*. Available at: https://www.fema.gov/emergency-managers/national-preparedness/frameworks/mitigation/mitflg
[33] FEMA. *National Mitigation Framework (June 2016)*. Available at: https://www.fema.gov/sites/default/files/2020-04/National_Mitigation_Framework2nd_june2016.pdf

coordination of mitigation investments to reduce risk, and 3) making mitigation investment standard practice.[34]

CONCLUSION

The Government Accountability Office (GAO) has long acknowledged that "limiting the Federal Government's Fiscal Exposure by Better Managing Climate Change Risks" is a high risk area.[35] FEMA, and the federal disaster relief and mitigation assistance it provides, combined with the efforts of the MitFLG, can and should play a significant role in reducing this exposure—ultimately ensuring that taxpayer resources are being invested in projects that are buying down future risk.

The hearing will highlight best practices across FEMA's efforts in encouraging and growing resilience and mitigation across the nation, as well as identify additional opportunities for continued enhancement, whether expanding eligible activities to mitigate against additional vulnerabilities to growing hazards, or better alignment between FEMA's pre- and post- disaster assistance programs.

[34] FEMA/MitFLG. *National Mitigation Investment Strategy*. Available at: https://www.fema.gov/sites/default/files/2020-10/fema_national-mitigation-investment-strategy.pdf.

[35] Government Accountability Office. *Limiting the Federal Government's Fiscal Exposure by Better Managing Climate Change Risks*. Available at: https://www.gao.gov/highrisk/limiting-federal-governments-fiscal-exposure-better-managing-climate-change-risks.

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