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FEMA Hazard Mitigation: A First Step Towards Climate Adaptation

December 15, 2021

Congressional Research Service
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R46989

CRS REPORT
Prepared for Members and
Committees of Congress

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SUMMARY

R46989

December 15, 2021

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FEMA Hazard Mitigation: A First Step Towards Climate Adaptation

With the increasing severity and frequency of natural disasters, attributed at least in part to climate change, policymakers often view mitigation funding as a way to control disaster-related spending. The importance of federal mitigation funding is illustrated by a recent study that looked at the impacts of 23 years of federal mitigation grants and found that for every $1 invested by federal grant programs, society as a whole saved $6 due to reduced future losses.

FEMA has a lead role in guiding nationwide mitigation of extreme weather events, including those resulting from the impacts of climate change. In particular, FEMA administers the federal government's most significant grant programs for pre-and post-disaster mitigation. FEMA has identified hazard mitigation as one of the main ways in which the agency will enhance resilience to the effects of climate change and lead federal climate change adaptation efforts.

FEMA funds mitigation measures through a number of programs:

- the Hazard Mitigation Grant Program (HMGP);
- the Building Resilient Infrastructure and Communities grant program (BRIC);
- the Flood Mitigation Assistance grant program (FMA);
- the STORM Act State Revolving Loan Program for Hazard Mitigation;
- Public Assistance (PA); and
- Individual Assistance (IA).

Three of these programs are available after a disaster (HMGP, PA, and IA), while the other three (BRIC, FMA, STORM Act) provide pre-disaster mitigation funding for use before an event occurs or in anticipation of an incident. Historically, post-disaster mitigation has received significantly more funding than pre-disaster mitigation. Between 1996 and 2019, approximately $1.86 billion was awarded for FMA grants, $1.92 billion was awarded for PDM grants (the predecessor to BRIC), and $22.4 billion was awarded in HMGP funding. Funding for pre-disaster mitigation has increased recently through the Disaster Recovery Reform Act of 2018 (P.L. 115-24) and the Infrastructure Investment and Jobs Act (P.L. 117-58). Increased funding for pre-disaster mitigation is more essential in the context of climate change, as many projected climate impacts have yet to occur.

This report gives an overview of FEMA funding for mitigation, including issues related to equity, and suggests considerations for Congress that may enhance FEMA's support for hazard mitigation and climate adaptation.

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Introduction

Communities across the country are already experiencing the impacts of climate change. Additionally, many extreme weather and climate-related events are expected to become more frequent and more intense under climate change.[1] The impacts of such events are estimated to have already cost more than $1.0 trillion (in 2021 dollars) since 1980.[2]

Catastrophic events pose a financial threat both to society as a whole and to the federal government, which has allocated increasing resources to disaster relief and recovery.[3] In the United States, as in many countries, this can be attributed to a combination of factors: rapid expansion of population into areas that are susceptible to natural disasters, rising property values in hazardous areas, and climatological and environmental changes. Nearly one-third of the U.S. housing stock (about 35 million homes) is considered to be at high risk of a natural disaster,[4] and most homes in the United States have some risk of climate change-induced hazard events.[5] For example, in 2019, the Congressional Budget Office (CBO) estimated residential property losses from hurricane and tropical storm-related flooding to be approximately $20 billion per year (in 2017 dollars).[6]

The Government Accountability Office (GAO) has found that the rising number of natural disasters and increasing reliance on the federal government for response and recovery assistance is a key source of federal fiscal exposure.[7] GAO has suggested in several reports that two related sets of actions—climate adaptation and pre-disaster mitigation—can enhance climate resilience by reducing risk.[8] GAO has also suggested that enhancing resilience to climate change could reduce future damages from climate-related events, and recommended adjustments to natural or human systems in response to actual and expected climate change, and through hazard mitigation actions before a disaster.[9]

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[1] D.R. Reidmiller, et al., *Impacts, Risks, and Adaptation in the United States: Fourth National Climate Assessment*, U.S. Global Change Research Program, Volume II, Washington, DC, November 23, 2018, pp. 1-47, https://nca2018.globalchange.gov/ (hereinafter *Fourth National Climate Assessment*).

[2] The Public and Affordable Housing Research Corporation and the National Low Income Housing Coalition, *Taking Stock: Natural Hazards and Federally Assisted Housing*, June 29, 2021, p. 4, https://preservationdatabase.org/wp-content/uploads/2021/06/Taking-Stock.pdf.

[3] See, for example, U.S. Government Accountability Office, *Federal Disaster Assistance: Federal Departments and Agencies Obligated At Least $277.6 Billion During Fiscal Years 2005 Through 2014*, GAO-16-797, September 22, 2016, https://www.gao.gov/assets/gao-16-797.pdf; and CRS Report R45484, *The Disaster Relief Fund: Overview and Issues*, by William L. Painter.

[4] CoreLogic, "Risk Redefined: CoreLogic Climate Change Catastrophe Report Emphasizes Need to Address Increasing Frequency of Hazard Events," January 27, 2021, https://www.corelogic.com/press-releases/risk-redefined-corelogic-climate-change-catastrophe-report-emphasizes-need-to-address-increasing-frequency-of-hazard-events/.

[5] Saumi Shokraee et al., *2020 Climate Change Catastrophe Report*, CoreLogic, January 28, 2021, https://www.corelogic.com/downloadable-docs/2020-climate-change-catastrophe-report-17-ctr-0121-00.pdf.

[6] Congressional Budget Office, *Expected Costs of Damage From Hurricane Winds and Storm-Related Flooding*, CBO Publication 55019, Washington, DC, April 2019, p. 3, https://www.cbo.gov/system/files/2019-04/55019-ExpectedCostsFromWindStorm.pdf.

[7] GAO, *Climate Change: A Climate Migration Pilot Program Could Enhance the Nation's Resilience and Reduce Federal Fiscal Exposure*, GAO-20-488, July 6, 2020, pp. 1-2, https://www.gao.gov/assets/gao-20-488.pdf.

[8] Ibid., and GAO, *Climate Change: Selected Governments Have Approached Adaptation Through Laws and Long-Term Plans*, GAO-16-454, May 12, 2016, p. 4, https://www.gao.gov/assets/gao-16-454.pdf.

[9] See, for example, GAO, *High-Risk Series: An Update*, GAO-15-290, February 11, 2015, pp. 67-70, https://www.gao.gov/assets/gao-15-290.pdf; and GAO, *Climate Change: Selected Governments Have Approached Adaptation Through Laws and Long-Term Plans*, GAO-16-454, May 12, 2016, p. 4, https://www.gao.gov/assets/gao-

FEMA administers several of the federal government's primary hazard mitigation programs, making the agency a central part of the nation's climate change adaptation strategy. While the agency lacks a statutory mission to combat change directly, many of FEMA's mitigation activities are intended to reduce the impact of natural disasters, including those that may be exacerbated by climate change.[10] FEMA has identified hazard mitigation as one of the main ways that the agency will address climate change.[11] According to the FEMA Administrator, "Climate change is the crisis of this generation. Combating it requires mitigating future risks and reducing impacts."[12]

Adaptation, Mitigation, and Resilience

As a relatively new policy area, definitive terminology has yet to be established and definitions are not used uniformly across federal agencies. For example, FEMA's use of the term *mitigation*, or *hazard mitigation*, differs from the terminology used by the U.S. Global Change Research Program (USGCRP).[13] In general, the term *adaptation* is used by climate change professionals and *hazard mitigation* is used by the emergency management community.[14] Hazard mitigation has traditionally relied on analysis of historical events to characterize risk, whereas climate adaptation employs predictions of future conditions, usually derived from global climate models, to characterize risk.

Adaptation: adjustment in natural or human systems to a new or changing environment.

Resilience: the capacity to anticipate, prepare for, respond to, and recover from significant multi-hazard threats with minimum damage to social well-being, health, the economy, and the environment.

Mitigation (USGCRP): measures to reduce the amount and speed of future climate change by reducing emissions of heat-trapping gases or removing carbon dioxide from the atmosphere. This is also referred to as greenhouse gas mitigation.

Mitigation (FEMA): any sustained action to reduce or eliminate long-term risk to people and property from natural hazards and their effects.[15]

Mitigation measures can be funded by several programs: (1) any of the FEMA Hazard Mitigation Assistance grant programs: the Hazard Mitigation Grant Program (HMGP), the Building Resilient Infrastructure and Communities grant program (BRIC), the Flood Mitigation Assistance grant program (FMA), and the State Revolving Loan Program for Hazard Mitigation; (2) FEMA Public Assistance (PA) funding under Stafford Act Section 406; and (3) FEMA Individual Assistance (IA) funding under Stafford Act Section 408 (see **Table 1**).

Although all mitigation activities are essentially preparation for the next disaster, FEMA distinguishes between post-disaster mitigation funding, which is awarded after a specific incident, and pre-disaster mitigation funding, which is awarded in order to reduce future damage from an anticipated event. PA, IA, and HMGP are post-disaster funding, and require a form of disaster declaration: an emergency declaration, a major disaster declaration[16] from the President, or a Fire

16-454.pdf.

[10] Congressional Budget Office, *Budgetary Effects of Climate Change and of Potential Legislative Responses to It*, Report 57175, April 2021, p. 1, https://www.cbo.gov/publication/57175.

[11] FEMA, "5 Ways FEMA Is Tackling the Climate Crisis," November 9, 2021, https://www.fema.gov/blog/5-ways-fema-tackling-climate-crisis.

[12] FEMA, *FEMA Announces Initial Initiatives to Advance Climate Change Resilience*, October 28, 2021, https://www.fema.gov/press-release/20211028/fema-announces-initial-initiatives-advance-climate-change-resilience.

[13] U.S. Global Change Research Program, *Glossary*, https://www.globalchange.gov/climate-change/glossary.

[14] GAO, *Climate Resilience: A Strategic Investment Approach for High-Priority Projects Could Help Target Federal Resources*, GAO-20-127, October 23, 2019, p. 2, https://www.gao.gov/assets/710/702236.pdf.

[15] FEMA, *Hazard Mitigation Assistance Guidance*, Washington, DC, February 27, 2015, p. 1, https://www.fema.gov/sites/default/files/2020-07/fy15_HMA_Guidance.pdf.

[16] For more information about disaster declarations, see FEMA, *How a Disaster Gets Declared*, https://www.fema.gov/

Management Assistance Grant (FMAG) declaration.[17] BRIC, FMA, and STORM Act funding represent pre-disaster mitigation funding. Applicants can request funding from these programs to reduce future risks without waiting for a disaster to occur.

The Department of Housing and Urban Development (HUD) Community Development Block Grant Disaster Recovery authorities for disaster recovery (CDBG-DR) and its mitigation variant (CDBG-MIT)[18] and the Small Business Administration (SBA) Disaster Loan Program[19] can also fund mitigation activities. These programs may work cooperatively with FEMA programs, but are outside the scope of this report.

FEMA Hazard Mitigation Assistance

Climate impacts include events that present immediate, acute, physical danger, such as major storms and wildfires, or those causing incremental physical impacts over extended periods of time, such as extreme heat, drought, and sea level rise (and associated coastal flooding.) Many places are subject to more than one climate-related impact, such as extreme rainfall combined with coastal flooding, or extreme heat coupled with drought and wildfire. A growing body of evidence shows that the increasing frequency and intensity of weather-related disasters compound one another.[20] The compounding effects of these impacts may result in increased risks.

Given the increasing severity and frequency of natural disasters, as well as their potential to increase cost and casualties, some policymakers have encouraged the use of mitigation funding in order to reduce disaster-related spending. The majority of federal funding for both pre- and post-disaster mitigation comes from FEMA through three programs: HMGP, BRIC, and FMA. Together, these programs are collectively referred to as Hazard Mitigation Assistance (HMA). Eligible applicants include state and local governments and federally recognized tribes. Individuals and businesses may not apply for HMA funding, but they may benefit from a community application. Eligible activities differ for the three programs.[21] Applicants must have a FEMA-approved hazard mitigation plan at the time that HMA funding is obligated.[22]

The importance of federal mitigation funding is illustrated by a recent study that looked at the impacts of 23 years of federal mitigation grants provided by FEMA, the Economic Development Administration (EDA), and HUD, and found that for every $1 invested by federal grant programs, society as a whole saved $6 due to reduced future losses. This is an average across four natural hazards: riverine flooding (7:1), hurricane winds (5:1), earthquakes (3:1), and fires at the

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disaster/how-declared; and CRS Report R43784, *FEMA's Disaster Declaration Process: A Primer*, by Bruce R. Lindsay.

[17] For more information on FMAG declarations, see FEMA, *Fire Mitigation Assistance Grants*, https://www.fema.gov/assistance/public/fire-management-assistance; and CRS Report R43738, *Fire Management Assistance Grants: Frequently Asked Questions*, by Diane P. Horn, Katie Hoover, and Bruce R. Lindsay.

[18] For more information on CDBG-DR and CDBG-MIT, see CRS Report R46475, *The Community Development Block Grant's Disaster Recovery (CDBG-DR) Component: Background and Issues*, by Joseph V. Jaroscak.

[19] For more information on SBA disaster loans, see CRS Report R41309, *The SBA Disaster Loan Program: Overview and Possible Issues for Congress*, by Bruce R. Lindsay.

[20] Colin Raymond et al., "Understanding and Managing Connected Extreme Events," *Nature Climate Change*, vol. 10, no. 7 (June 2020), pp. 611-621.

[21] Ibid., pp. 32-33.

[22] Ibid., pp. 45-47. See also FEMA, *Hazard Mitigation Planning*, https://www.fema.gov/emergency-managers/risk-management/hazard-mitigation-planning.

wildland-urban interface (WUI)[23] (3:1).[24] The study also estimated that the federal government spends an annual average of $10 billion on disasters through PA, IA, and other costs.[25]

Table 1. FEMA Hazard Mitigation Programs

Type	Program	Legislation	Funding
Post-disaster	HMGP	Stafford Act Section 404	Disaster Relief Fund (DRF)
Post-disaster	IA	Stafford Act Section 408	DRF
Post-disaster	PA	Stafford Act Section 406	DRF
Pre-disaster	BRIC	DRRA Section 1234, Stafford Act Section 203	6% set-aside from DRF
Pre-disaster	FMA	National Flood Insurance Act	NFIP policyholders, additional appropriation from IIJA FY2022-FY2026
Pre-disaster	State Hazard Mitigation Revolving Loan Program	STORM Act, Stafford Act Section 205	Appropriation from IIJA FY2022-FY2026

Source:

a. Disaster Recovery Reform Act of 2018 (DRRA), P.L. 115-254.

b. Infrastructure Investment and Jobs Act (IIJA), P.L. 117-58.

c. Safeguarding Tomorrow through Ongoing Risk Mitigation (STORM) Act of 2020, P.L. 116-284.

Post-Disaster Mitigation

Hazard Mitigation Grant Program (HMGP)

The Hazard Mitigation Grant Program is authorized by the Robert T. Stafford Disaster Relief and Emergency Assistance Act (hereinafter the Stafford Act)[26] Section 404—Hazard Mitigation[27] and is funded through the Disaster Relief Fund (DRF).[28] HMGP's key purpose is to ensure that the opportunity to take critical mitigation measures is not lost during the reconstruction process following a disaster. HMGP funding is available to all areas of a state, territory, or tribal lands where it is requested by a governor or tribal chief executive following a major disaster declaration or an FMAG declaration.

[23] The wildland-urban interface (WUI) is the zone where structures and other human development meet or intermingle with undeveloped wildland or vegetative fuels. See U.S. Fire Administration, "Wildland Urban Interface (WUI)," https://www.usfa.fema.gov/wui/.

[24] National Institute of Building Sciences, *Natural Hazard Mitigation Saves: 2019 Report*, Washington, DC, 2019, p. 37, https://www.nibs.org/files/pdfs/NIBS_MMC_MitigationSaves_2019.pdf.

[25] Multi-hazard Mitigation Council, National Institute of Building Sciences, *Natural Hazard Mitigation Saves*, 2019 Report, Washington, DC, pp. 1-3, https://www.nibs.org/projects/natural-hazard-mitigation-saves-2019-report.

[26] 42 U.S.C. §§5121 et seq.

[27] 42 U.S.C. §5170c.

[28] For more information on the Disaster Relief Fund (DRF), see CRS Report R45484, *The Disaster Relief Fund: Overview and Issues*, by William L. Painter.

The level of HMGP funding available for a given disaster is based on a percentage of the estimated total federal assistance under the Stafford Act for the declaration, awarded on a sliding scale as a percentage of the estimated amount of total federal assistance for the disaster:

- up to 15% of the first $2 billion of estimated aggregate amounts of disaster assistance;
- up to 10% of amounts between $2 billion and $10 billion;
- up to 7.5% of amounts between $10 billion and $35.333 billion; and
- 20% for any state with an approved Enhanced State Mitigation Plan[29] in effect before the disaster.[30]

HMGP funding initially goes to a state. States can use HMGP funds for any eligible activity for any type of hazard and are not limited to the hazard or area for which the grant was awarded. For example, funding allocated for flooding in one county could be used for wildfire mitigation in a different county, as long as the activity is eligible. The decision is made by the state where the funding can best be used, and decisions about allocating HMGP funds to subapplicants are made by the state.[31]

HMGP Funding for COVID-19 Disaster Declarations

FEMA announced in August 2021 that HMGP funding will be available to all states, territories, and tribes that received a major disaster declaration for the COVID-19 pandemic for 4% of eligible relief costs (see **Figure 1**).[32] This funding is not restricted to pandemic-related mitigation. Four percent is a lower percentage than is usually awarded for HMPG, but the total funding of $3.46 billion represents the largest amount of HMGP funding in a single fiscal year. (The largest amount previously was $2.29 billion in FY2005.)

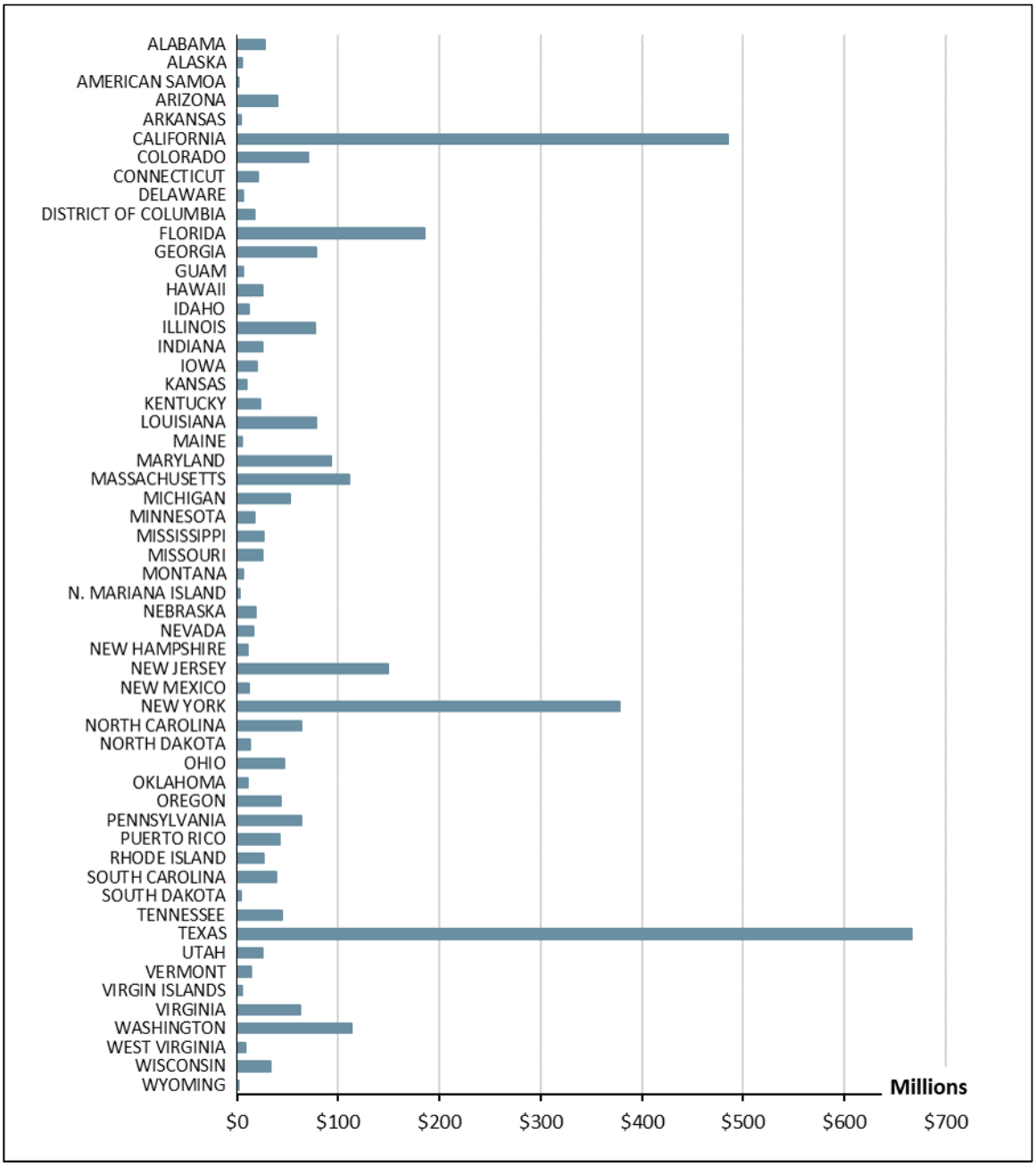
[29] 44 C.F.R. §201.5.

[30] 42 U.S.C. §5170c(a) and 44 C.F.R. §206.432(b).

[31] Eligible subapplicants include state, territorial and local governments, federally recognized tribes or tribal organizations, and certain nonprofit organizations. Additionally, certain nonprofit organizations may apply for HMGP funding. State agencies and federally recognized tribes applying for HMGP funding must have a FEMA-approved State or Tribal Mitigation Plan at the time of the presidential major disaster declaration and at the time the HMGP funding is obligated. All subapplicants for HMGP must have a FEMA-approved Local or Tribal Mitigation Plan at the time of obligation of grant funds.

[32] FEMA, *COVID-19 Disaster Declarations*, August 20, 2021, https://www.fema.gov/disaster/coronavirus/disaster-declarations.

Figure 1. Hazard Mitigation Grant Program Funding for Major Disaster Declarations Related to the COVID-19 Pandemic



Source: FEMA, *Hazard Mitigation Grant Program Allocations for COVID-19 Declarations*, August 20, 2021.

FEMA Public Assistance and Individual Assistance

Public Assistance

FEMA Public Assistance (PA) provides financial and direct assistance to subfederal governments and eligible nonprofits when authorized following a Stafford Act emergency or major disaster

declaration.[33] PA may provide assistance for urgent emergency response activities (emergency work) as well as long-term reconstruction (permanent work). On average, PA accounts for the single greatest source of expenditures from the DRF, which supports the administration and funding of Stafford Act assistance.[34] Mitigation projects account for a fraction of these historical obligations.[35]

Under current authorities, FEMA may provide PA for post-disaster mitigation measures on the disaster-damaged components of eligible facilities, or when eligible, on the full extent of replacement facilities (including alternate or improved projects that may significantly differ from the original facility).[36] In general, PA for mitigation can only fund measures affecting the damaged components of facilities, which may result in partial funding for projects like whole-facility elevation. Per federal regulations and agency policy, FEMA will only approve mitigation measures determined to be cost effective.[37]

Additionally, FEMA may provide PA for subfederal governments to rebuild eligible facilities in accordance with applicable building codes. The Disaster Recovery Reform Act of 2018 (DRRA)[38] enhanced these authorities by authorizing FEMA to provide PA for the costs of reconstruction or replacement in accordance with "the latest published editions of relevant consensus-based codes, specifications, and standards that incorporate the latest hazard-resistant designs."[39]

Individual Assistance—Individuals and Households Program

After a Stafford Act declaration, the President may authorize FEMA to provide various forms of assistance, including assistance through the Individuals and Households Program (IHP), a form of Individual Assistance (IA).[40] The IHP is authorized under Stafford Act Section 408—Federal Assistance to Individuals and Households.[41] If approved, IHP assistance may provide financial and/or direct assistance to eligible individuals and households. However, the IHP cannot compensate disaster survivors for all losses and it is not intended to make disaster survivors whole again.[42]

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[33] See CRS Infographic IG10021, *How FEMA Public Assistance Works*, by Erica A. Lee.

[34] For more information on PA, see CRS Report R46749, *FEMA's Public Assistance Program: A Primer and Considerations for Congress*, by Erica A. Lee.

[35] Ibid., p. 23.

[36] See CRS Report R46749, *FEMA's Public Assistance Program: A Primer and Considerations for Congress*, by Erica A. Lee. Definitions of alternate and improved facilities may be found at FEMA, Public Assistance Program and Policy Guide Version 4.0 (PAPPG 2020), June 1, 2020, p. 163, https://www.fema.gov/sites/default/files/documents/ fema_pappg-v4-updated-links_policy_6-1-2020.pdf.

[37] 44 C.F.R. §206.226(e); FEMA, *PAPPG 2020*, pp. 154-155, 242-246; FEMA, "Benefit-Cost Analysis," https://www.fema.gov/grants/ guidance-tools/benefit-cost-analysis; and CRS Report R46749, *FEMA's Public Assistance Program: A Primer and Considerations for Congress*, by Erica A. Lee.

[38] Division D of P.L. 115-254.

[39] Section 1235(b) of DRRA, Division D of P.L. 115-254, as it amends §406(e)(1)(A) of the Stafford Act, P.L. 93-288, as amended, 42 U.S.C. §5172(e)(1)(A); and CRS Report R45819, *The Disaster Recovery Reform Act of 2018 (DRRA): A Summary of Selected Statutory Provisions*, coordinated by Elizabeth M. Webster and Bruce R. Lindsay, pp. 14-16.

[40] 42 U.S.C. §5174. See also 44 C.F.R. §206.110(a); and FEMA, *Individual Assistance Program and Policy Guide (IAPPG)*, v. 1.1, FP 104-009-03, May 2021, pp. 6, 41, https://www.fema.gov/sites/default/files/documents/fema_iappg-1.1.pdf (hereinafter FEMA, *IAPPG*). For additional information on FEMA's Individual Assistance (IA) program, see CRS In Focus IF11298, *A Brief Overview of FEMA's Individual Assistance Program*, by Elizabeth M. Webster.

[41] 42 U.S.C. §5174.

[42] 42 U.S.C. §5174; 44 C.F.R. §§206.110-206.120; and FEMA, *IAPPG*, p. 41.

Home Repair Assistance[43] is one component of IHP assistance. The objective of Home Repair Assistance is to make the disaster survivors' home "safe, sanitary, or functional," not to return the home to its pre-disaster condition or to improve it.[44] However, repairs may include hazard mitigation measures that make the housing more resilient.[45] Specifically, reasonable hazard mitigation measures may be permitted, even if they improve upon a component's pre-disaster condition.[46]

FEMA's regulations and guidance impose limitations on the mitigation assistance that may be provided, including that it may only be awarded for disaster-damaged real property components that existed and were functional prior to the declared disaster.[47] Further, the amount of financial assistance for housing—including mitigation measures—is capped in statute.[48] Assistance for housing-related needs may not exceed $37,900 (FY2022; adjusted annually),[49] and the approved mitigation measures are subject to this cap.

On June 10, 2021, FEMA announced an expansion of the mitigation assistance provided under the IHP Home Repair Assistance program for disasters declared on or after May 26, 2021, to "allow eligible homeowners ... [to] repair or rebuild stronger, more durable homes." Per the agency's announcement, FEMA's IHP Home Repair Assistance will fund the following specific mitigation measures: (1) roof repair to withstand higher winds and help prevent water infiltration; (2) elevating a water heater or furnace to avoid future flood damage; and (3) elevating or moving an electrical panel to avoid future flood damage.[50]

Additionally, although hazard mitigation measures are intended to "reduce the likelihood of future damage," this assistance is not available until after a disaster has occurred and received a presidential Stafford Act declaration.[51]

Pre-Disaster Mitigation

Funding for pre-disaster mitigation is a relatively new practice. Before 1997, federal hazard mitigation funding was only available after a disaster, through HMGP and PA, and was intended to ensure that the reconstruction process following a disaster addressed opportunities to include mitigation measures. Congress first appropriated funding for FEMA *pre*-disaster mitigation in 1997, and FEMA used this funding to establish a pilot project called Project Impact.[52] The

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[43] FEMA, *Assistance for Housing and Other Needs*, September 2, 2021, https://www.fema.gov/assistance/individual/housing.

[44] FEMA, *IAPPG*, p. 85.

[45] FEMA, *IAPPG*, p. 86.

[46] FEMA, *IAPPG*, p. 88.

[47] 44 C.F.R. §§206.111 and 206.117(a), (b)(2)(i), (b)(2)(iii), and (b)(2)(iv); and FEMA, *IAPPG*, p. 87.

[48] 42 U.S.C. §5174(h)(1); and FEMA, *IAPPG*, pp. 42, 85. For FY2022, the maximum amount of financial assistance for housing is $37,900 and the maximum amount of financial assistance for other needs is $37,900 (DHS/FEMA, "Notice of Maximum Amount of Assistance Under the Individuals and Households Program," 86 *Federal Register* 63046, November 15, 2021, https://www.govinfo.gov/content/pkg/FR-2021-11-15/pdf/2021-24755.pdf (hereinafter FEMA, "Notice of Maximum Amount of IHP Assistance"). It is adjusted annually to reflect changes in the Consumer Price Index for All Urban Consumers published by the Department of Labor (42 U.S.C. §5174(h)(3)).

[49] 42 U.S.C. §5174(h)(1); FEMA, "Notice of Maximum Amount of IHP Assistance."

[50] FEMA, *Hazard Mitigation Under the Individuals and Households Program*, June 10, 2021, https://www.fema.gov/fact-sheet/hazard-mitigation-under-individuals-and-households-program.

[51] FEMA, *IAPPG*, pp. 85-86.

[52] FEMA, *Building a Disaster Resistant Community*, Project Impact Guidebook, 1997, https://training.fema.gov/hiedu/

Disaster Mitigation Act of 2000[53] placed pre-disaster mitigation in the Stafford Act and created the Pre-Disaster Mitigation Grant Program (PDM).[54] In 2003, Congress further defined the PDM program to explicitly require competitive grant awards, which represented the first time that mitigation funding was awarded competitively.[55]

From FY1997 to FY2018, the funding available for pre-disaster mitigation was appropriated on an annual basis. The amount of funding requested in grant applications exceeded the amount of appropriated funds each year. For example, between 2003 and 2016, a total of $1.1 billion in PDM funds was appropriated, while applicants requested a total of $3.2 billion.[56]

Funding for pre-disaster mitigation changed significantly with the passage of DRRA. Section 1234 of DRRA authorized a new source of funding for pre-disaster mitigation, the National Public Infrastructure Pre-Disaster Mitigation Fund (NPIPDMF), which allows the President to set aside from the DRF an amount equal to 6% of the estimated aggregate amount of funding awarded under seven sections of the Stafford Act.[57] The amount set aside in the NPIPDMF shall not reduce the amounts otherwise available for the relevant sections of the Stafford Act.[58]

In FY2019, the PDM program was funded through the DRF as part of the transition to the new funding model, and the BRIC program began in FY2020. **Table 2** and **Figure 2** show funding levels for pre-disaster mitigation from FY1997 to FY2021.

Table 2. Pre-Disaster Mitigation Funding, FY1997-FY2021

Fiscal Year	Amount Appropriated (in millions)	Program
1997	$2	Project Impact
1998	$30	Project Impact
1999	$25	Project Impact
2000	$25	Project Impact
2001	$25	Project Impact
2002	$25	Project Impact
2003	$150	PDM
2004	$150	PDM
2005	$100	PDM
2006	$50	PDM
2007	$100	PDM

docs/hazriskmanage/hazards%20risk%20mgmt%20-%20session%204%20-%20project%20impact%20guidebook.pdf.

[53] P.L. 106-390.

[54] 42 U.S.C. §5133.

[55] GAO, *The Status of FEMA's FY03 Pre-Disaster Mitigation Program*, GAO-04-717r, April 25, 2004, p. 6, https://www.gao.gov/assets/gao-04-727r.pdf.

[56] *PDM Fiscal Year 2017 Report to Congress*, p. 4.

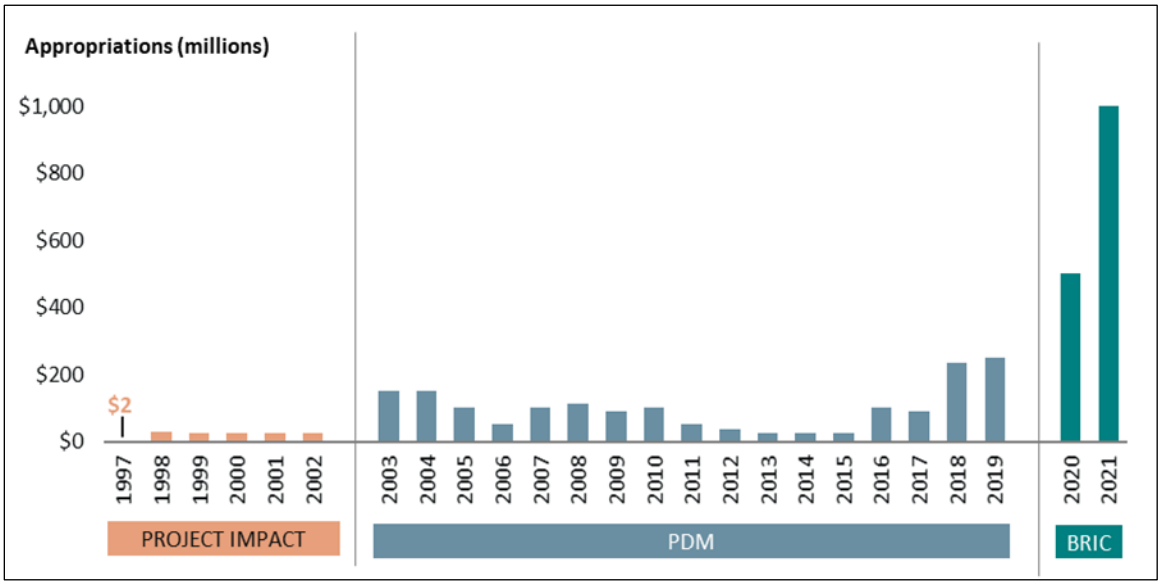
[57] Stafford Act Sections 403 (essential assistance), 406 (repair, restoration and replacement of damaged facilities), 407 (debris removal), 408 (federal assistance to individuals and households), 410 (unemployment assistance), 416 (crisis counseling assistance and training), and 428 (public assistance program alternative program procedures). See CRS Report R45819, *The Disaster Recovery Reform Act of 2018 (DRRA): A Summary of Selected Statutory Provisions*, for further details.

[58] 42 U.S.C. §5133(i)(3).

Fiscal Year	Amount Appropriated (in millions)	Program
2008	$114	PDM
2009	$90	PDM
2010	$100	PDM
2011	$49.9	PDM
2012	$35.5	PDM
2013	$25	PDM
2014	$25	PDM
2015	$25	PDM
2016	$100	PDM
2017	$90	PDM
2018	$235	PDM
2019	$250	PDM
2020	$500	BRIC
2021	$1,000	BRIC

Sources: CRS Report RL34537, *FEMA's Pre-Disaster Mitigation Program: Overview and Issues*; FEMA, National Pre-Disaster Mitigation Fund, Fiscal Year 2017 Report to Congress, September 1, 2017, p. 4, https://www.dhs.gov/sites/default/files/publications/FEMA%20-%20National%20Pre-Disaster%20Mitigation%20Fund.pdf; and FEMA Notices of Funding Opportunity for PDM and BRIC, FY2017 to FY2021.

Figure 2. Funding for Pre-Disaster Mitigation, FY1997-FY2021



Source: CRS Analysis of data in **Table 2**.

FEMA's expectation was that the NPIPDMF would receive $300-500 million per year on average, based on historical disaster expenditures.[59] The disaster assistance associated with the COVID-19 major disaster declarations,[60] however, has resulted in significant additional funding for pre-disaster mitigation. As of October 31, 2021, $1.629 billion was set aside in the DRF for pre-disaster mitigation.[61] FEMA has not provided information on whether they will use all of the 6% set-aside funds each year or keep some back for years with fewer disasters and thus less funding.

Building Resilient Infrastructure and Communities (BRIC)

FEMA introduced a new program, Building Resilient Infrastructure and Communities (BRIC),[62] in FY2020 to replace the PDM program and award funding from the NPIPDMF. DRRA did not require the creation of a new program. DRRA changed the funding mechanism for pre-disaster mitigation; however, the statutory changes introduced in DRRA could have been incorporated in the PDM program. The Association of State Floodplain Managers (ASFPM) adopted a resolution about BRIC in which they noted that FEMA created a program with a significantly different focus and priorities from the PDM program, despite the fact that Congress did not establish new priorities for funding in DRRA.[63]

Any state that has had a major disaster declaration under the Stafford Act in the seven years prior to the application start date is eligible to apply for BRIC funding. Any federally recognized tribe that has had a major disaster declaration or is entirely or partially located in a state or territory that has had a major disaster declaration in the seven years prior to the application start date is also eligible. All states, territories, and recognized tribal governments are eligible for BRIC at least through FY2026 due to the COVID-19 pandemic disaster declarations.[64]

BRIC FY2020

FY2020 was the first year of operation for BRIC. A total of $500 million was available in FY2020 in three categories: (1) state/territory allocation: $33.6 million; (2) tribal set-aside: $20 million; and (3) national competition: $446.4 million. Applicants in FY2020 were able to submit an unlimited number of mitigation project applications in category (3), each valued up to $50 million. The $50 million cap for an individual mitigation project in BRIC represents a significant increase in pre-disaster mitigation funding; the largest amount available to an individual for PDM

[59] U.S. Congress, House Committee on Transportation and Infrastructure, Subcommittee on Economic Development, Public Buildings, and Emergency Management, *Disaster Preparedness: DRRA Implementation and FEMA Readiness*, Serial No. 116-17 (House Hearing), 116th Cong., 1st sess., May 22, 2019, p. 90, https://www.congress.gov/116/chrg/CHRG-116hhrg40590/CHRG-116hhrg40590.pdf.

[60] FEMA, "COVID-19 Disaster Declarations," https://www.fema.gov/disasters/coronavirus/disaster-declarations.

[61] FEMA, *Disaster Relief Fund: Monthly Report as of October 31, 2021*, Fiscal Year 2021 Report to Congress, Washington DC, November 10, 2021, p. 24, https://www.fema.gov/sites/default/files/documents/fema_disaster-relief-fund-report_112021.pdf.

[62] FEMA, *Building Resilient Infrastructure and Communities (BRIC)*, https://www.fema.gov/grants/mitigation/building-resilient-infrastructure-communities.

[63] Association of State Floodplain Managers, *Resolution Regarding the FEMA Building Resilient Communities and Infrastructure (BRIC) Grant Program and Recommended Changes*, December 1, 2021, p. 3, https://asfpm-library.s3.us-west-2.amazonaws.com/ASFPM_Pubs/ASFPM_BRIC_Resolution.pdf (hereinafter *ASFPM BRIC Resolution*).

[64] Eligible applicants for BRIC funding include states, the District of Columbia, U.S. territories, and federally recognized Indian tribal governments. Local governments and federally recognized Indian tribal governments are eligible subapplicants.

activities in FY2019 was $10 million. Since the PDM program was established, two projects have been awarded more than $4 million, and 280 projects (approximately 7%) have been awarded more than $1 million.[65]

FEMA has discretion to set priorities annually for pre-disaster mitigation funding. The priorities for FY2020 aimed to incentivize public infrastructure projects; projects that mitigate risk to one or more lifelines;[66] projects that incorporate nature-based solutions;[67] and projects that encourage the adoption and enforcement of the latest published editions of building codes.[68]

The most heavily weighted technical criteria in FY2020 related to building code activities, reflecting FEMA's emphasis on disaster resilience through strong building codes.[69] Applications that included mandatory building code adoption requirements were scored more favorably. BRIC priorities also included a focus on future conditions, with applications evaluated on how the project would anticipate future conditions, such as population and demographic changes, climate change, and sea level rise. BRIC's project evaluation criteria also included a number of measures to support underserved communities.[70]

A new form of assistance introduced in BRIC is the provision of non-financial Direct Technical Assistance[71] for communities to build capacity and develop applications to support underserved populations.[72] FEMA has suggested that Direct Technical Assistance is especially important to disadvantaged communities,[73] and may help small jurisdictions in particular.[74] In FY2020, FEMA selected eight communities to receive non-financial Direct Technical Assistance, of which six are small and impoverished communities and three are tribes.[75]

FEMA received 991 applications for BRIC in FY2020, the highest number received to date for pre-disaster mitigation (see **Figure 3**). Fifty-three states and territories requested over $3.6 billion, from the $500 million available. Tribes submitted 62 subapplications requesting $20.2 million in funding. Five states submitted projects with over $200 million federal share each:

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[65] CRS analysis of OpenFEMA data set on Hazard Mitigation Assistance Projects—v2, https://www.fema.gov/openfema-data-page/hazard-mitigation-assistance-projects-v2. Accessed November 21, 2021.

[66] Lifelines are the most fundamental services in a community that enable all other aspects of society to function. They include safety and security; food, water, and shelter; health and medical; energy; communications; transportation; and hazardous material. See FEMA, "Community Lifelines," https://www.fema.gov/emergency-managers/practitioners/lifelines.

[67] FEMA, *Building Community Resilience with Nature-Based Solutions*, May 2021, https://www.fema.gov/sites/default/files/documents/fema_riskmap_nature-based-solutions-guide_2020.pdf.

[68] FEMA, *BRIC Building Code Activities*, https://www.fema.gov/sites/default/files/documents/fema_fy21-bric-building-code-activities-psm.pdf.

[69] See FEMA, *2018-2022 Strategic Plan*, Washington DC, March 15, 2018, p. 14, https://www.fema.gov/sites/default/files/2020-03/fema-strategic-plan_2018-2022.pdf.

[70] DHS, *Environmental Justice Annual Implementation Report FY2020*, Washington DC, pp. 11-12, https://www.dhs.gov/sites/default/files/publications/dhs_fy20_ej_progress_report.pdf.

[71] FEMA, *FEMA Program Support Material: BRIC Direct Technical Assistance*, https://www.fema.gov/sites/default/files/documents/fema_fy21-bric-direct-technical-assistance-psm.pdf.

[72] Department of Homeland Security (DHS), *Environmental Justice Annual Implementation Report FY2020*, Washington DC, pp. 11-12, https://www.dhs.gov/sites/default/files/publications/dhs_fy20_ej_progress_report.pdf.

[73] FEMA, *BRIC Direct Technical Assistance*, https://www.fema.gov/sites/default/files/documents/fema_fy21-bric-direct-technical-assistance-psm.pdf.

[74] Leslie Kaufman, "Q&A: New Director Criswell Prepares FEMA for a Hot, Chaotic Future," *Insurance Journal*, September 24, 2021, https://www.insurancejournal.com/news/national/2021/09/24/633682.htm.

[75] FEMA, "Building Resilient Infrastructure and Communities FY 2020 Subapplication Status," https://www.fema.gov/grants/mitigation/building-resilient-infrastructure-communities/fy2020-subapplication-status.

California, New Jersey, New York, Texas, and Virginia; and 25 states submitted projects with $50 million or more federal share each.[76]

FEMA has not yet announced the funding awards for BRIC FY2020 but has selected 406 subapplications for further review,[77] with 22 projects from 10 states selected for further review in the national competition (see **Table 3**). Fifty-seven percent of the funding under review is in three states: California (25.27%), Washington (16.16%) and New Jersey (15.49%).

Of the 991 subapplications received for BRIC, 98 (9.89%) were from small and impoverished communities.[78] Projects submitted by 46 small and impoverished communities were selected for further review, amounting to $39.2 million in total project costs,[79] about 7.84% of the overall BRIC funding available. However, the majority of the projects submitted by small and impoverished communities that FEMA selected were from the state and tribal allocations (36 from the tribal set-aside and eight from the state allocations), where funding was virtually guaranteed for eligible projects. Only two projects from small impoverished communities were selected for further review for competitively-awarded funding. This suggests that the small and impoverished communities that submitted subapplications were less successful than the total number would suggest, particularly in the competitive awards.

ASFPM analyzed the projects that were selected for further review for BRIC FY2020 funding and concluded that more dollars and projects were selected for wealthier, greater-resourced communities than for less wealthy communities with fewer resources. They also found an award bias toward coastal communities vs. inland communities, with $474.6 million of projects selected for coastal communities and $27.3 million for non-coastal projects. They noted that only one competitive project was selected from a non-coastal state, and no competitive applications were selected from FEMA regions 5, 6, 7, or 8.[80]

[76] FEMA, *Hazard Mitigation Assistance (HMA) Annual Grant Cycle Submissions Summary*, March 17, 2021, https://www.fema.gov/fact-sheet/hazard-mitigation-assistance-hma-annual-grant-cycle-submissions-summary.

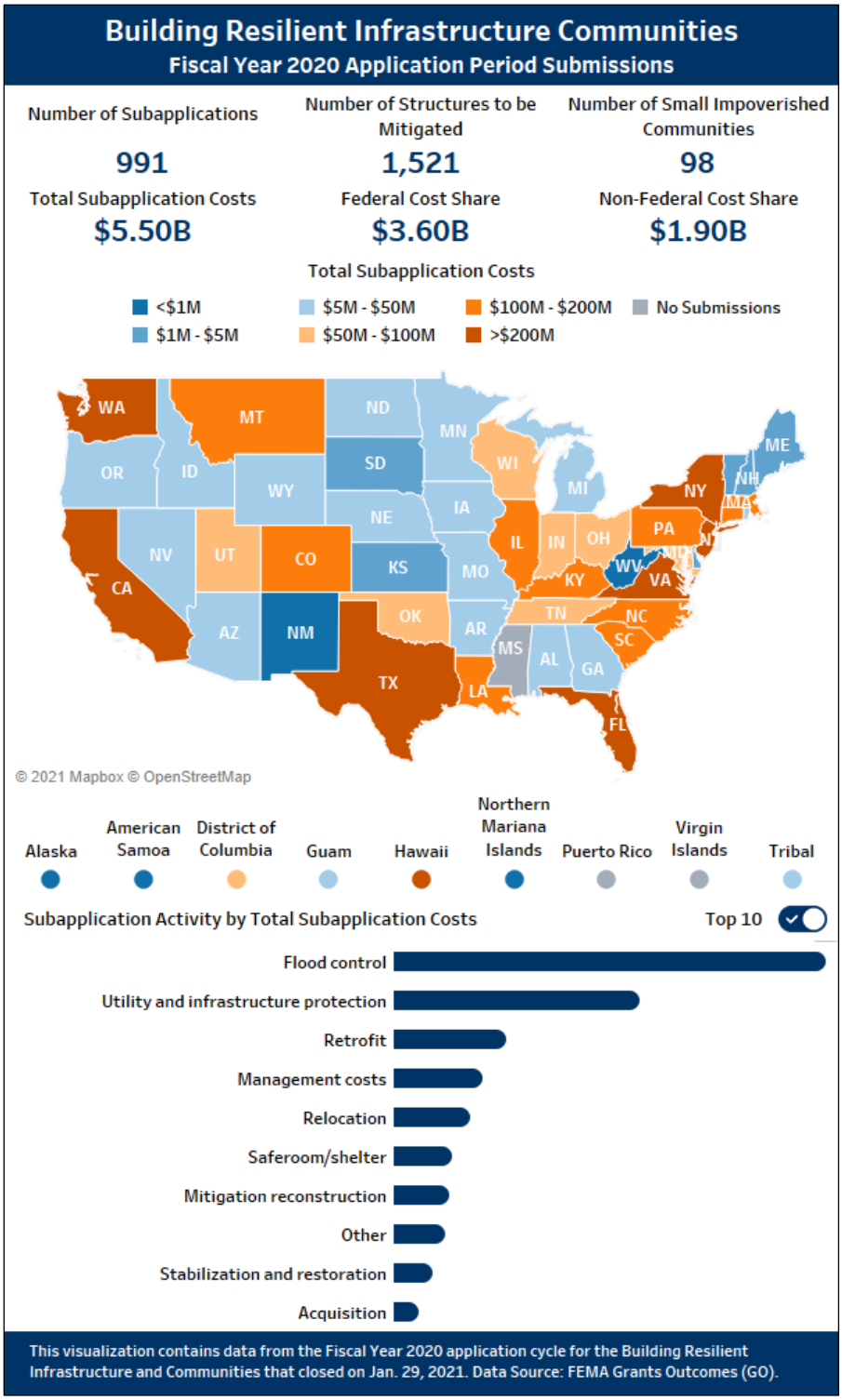
[77] An application which is listed as "identified for further review" is not a notification of award. This means that a subapplication has met the requirements specified in the NOFO and the HMA Unified Guidance. At this time, the applicants are required to work with a FEMA Regional Office to complete the pre-award activities for subapplications. Regional Offices will also complete the Environmental and Historic Preservation (EHP) compliance review for projects prior to award. See FEMA, *Subapplication Status Descriptions*, https://www.fema.gov/grants/mitigation/subapplication-status-descriptions.

[78] Note that from 2005 to 2019, small impoverished communities represented an average of about 6% of sub-applications each year, so this constitutes a slight increase. See FEMA, "Hazard Mitigation Assistance (HMA) Annual Grant Cycle Submissions Summary," release, March 12, 2021, https://www.fema.gov/fact-sheet/hazard-mitigation-assistance-hma-annual-grant-cycle-submissions-summary.

[79] FEMA, *Hazard Mitigation Assistance (HMA) Annual Grant Cycle Submissions Summary*, March 17, 2021, https://www.fema.gov/fact-sheet/hazard-mitigation-assistance-hma-annual-grant-cycle-submissions-summary.

[80] FEMA Region 5 includes Illinois, Indiana, Michigan, Minnesota, Ohio, and Wisconsin. FEMA Region 6 includes Arkansas, Louisiana, New Mexico, Oklahoma, and Texas. FEMA Region 7 includes Iowa, Kansas, Missouri, and Nebraska. FEMA Region 8 includes Colorado, Montana, North Dakota, South Dakota, Utah, and Wyoming. See FEMA, "Regions," https://www.fema.gov/about/organization/regions.

Figure 3. BRIC FY2020 Applications



Source: FEMA, *Hazard Mitigation Assistance (HMA) Annual Grant Cycle Submissions Summary*, March 17, 2021, https://www.fema.gov/fact-sheet/hazard-mitigation-assistance-hma-annual-grant-cycle-submissions-summary.

BRIC FY2021

A total of $1 billion is available for BRIC in FY2021 in three categories: (1) state/territory allocation: $56 million; (2) tribal set-aside: $25 million; and (3) national competition: $919 million. Each state, territory, and tribe is eligible for at least $1 million in categories (1) or (2). Applicants are again able to submit an unlimited number of mitigation project applications in category (3), each valued up to $50 million.[81] BRIC priorities for FY2021 are: (1) natural hazard risk reduction activities that mitigate risk to public infrastructure and disadvantaged communities; (2) projects that mitigate risk to one or more lifelines; (3) projects that incorporate nature-based solutions; (4) projects that enhance climate resilience; and (5) projects proposed by applicants who adopt and enforce mandatory tribal, territorial, or state-wide building codes based on the latest published editions of building codes.[82]

Infrastructure Funding for BRIC

The Infrastructure Investment and Jobs Act (IIJA)[83] appropriated $1 billion for BRIC, with $200 million for each of FY2022 to FY2026. This funding is in addition to the 6% set-aside.

[81] DHS, *Notice of Funding Opportunity (NOFO), Fiscal Year 2021 Building Resilient Infrastructure and Communities*, pp. 6-7, https://www.fema.gov/sites/default/files/documents/fema_nofo-fiscal-year-2021-building-resilient-infrastructure.pdf.

[82] *BRIC FY2021,* p. 6.

[83] P.L. 117-58.

Table 3. BRIC FY2020 Applications Selected for Further Review

National Competition

Applicant State	Federal Share	Percentage of Total Federal Share	Number of Subapplications Selected for Further Review	Type of Project
California	$95,448,982.38	25.27%	4	3 flood control, 1 wildfire mitigation
Washington	$61,041,509.98	16.16%	3	1 flood control, 1 saferoom/shelter, 1 relocation
New Jersey	$58,517,000.00	15.49%	2	2 flood control
District of Columbia	$38,560,817.00	10.21%	2	1 flood control, 1 utility and infrastructure protection
South Carolina	$32,635,783.95	8.64%	1	utility and infrastructure protection
Maryland	$31,924,193.00	8.45%	1	flood control
North Carolina	$23,692,990.54	6.27%	5	1 flood control, 1 floodproofing, 1 elevation, 1 relocation, 1 utility and infrastructure protection
New York	$20,872,058.06	5.53%	2	2 flood control
Kentucky	$10,543,961.38	2.79%	1	flood control
Massachusetts	$4,484,673.00	1.19%	1	utility and infrastructure protection
Total	**$377,721,964.29**	100.00%	22	

Sources: CRS analysis of data provided by FEMA to CRS, July 28, 2021; and FEMA, *Building Resilient Infrastructure and Communities FY 2020 Subapplication Status*, https://www.fema.gov/grants/mitigation/building-resilient-infrastructure-communities/fy2020-subapplication-status.

Notes: The type of project was identified from websites for individual projects.

Flood Mitigation Assistance Grant Program (FMA)

The Flood Mitigation Assistance (FMA) grant program is another pre-disaster mitigation funding program operated by FEMA. The FMA program is funded entirely through revenue collected by the NFIP.[84] The FMA program awards grants for a number of purposes, including state and local mitigation planning; the elevation, relocation, demolition, or flood proofing of structures; the acquisition of properties; and other activities.[85] FMA grants are only available to communities which participate in the NFIP, to assist in efforts to reduce or eliminate flood damage to buildings and structures insurable under the NFIP, particularly repetitive loss[86] and severe repetitive loss[87] properties. Eligible applicants for FMA funding include states, the District of Columbia, U.S. territories, and federally recognized Indian tribal governments. Local governments and federally recognized Indian tribal governments are eligible subapplicants for FMA grants.

A database of FMA grants that is available from FEMA indicates that approximately $1.86 billion in projects was approved between 1996 and 2019.[88] Demand for FMA grants has consistently exceeded available funds. For example, $200 million was available for FMA in FY2020. FEMA received 236 applications from 30 states and territories, the highest number received to date. FEMA received requests with total proposed project costs exceeding $393 million (see **Figure 4**).[89] The FMA program has $160 million available for FY2021. FEMA plans to select applications up to the available funding amount of $160 million in the following order: (1) project scoping; (2) community mitigation projects; (3) technical assistance; (4) flood hazard mitigation planning; and (5) individual flood mitigation projects.[90]

Infrastructure Funding for FMA

The IIJA appropriated $3.5 billion for the FMA program, with $700 million for each of FY2022 to FY2026. This represents a significant increase in the amount of funding available for flood mitigation, and the first time that funding has been appropriated for the FMA program.

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[84] 42 U.S.C. §4104c.

[85] For additional information on the FMA Program, see 44 C.F.R. Part 78; FEMA's website at https://www.fema.gov/grants/mitigation/floods; and CRS Report R44593, *Introduction to the National Flood Insurance Program (NFIP)*, by Diane P. Horn and Baird Webel.

[86] 42 U.S.C. §4121(a)(7) defines repetitive loss structure as

> a structure covered by a contract for flood insurance that—
> (A) has incurred flood-related damage on 2 occasions, in which the cost of repair, on the average, equaled or exceeded 25 percent of the value of the structure at the time of each such flood event; and
> (B) at the time of the second incidence of flood-related damage, the contract for flood insurance contains increased cost of compliance coverage.

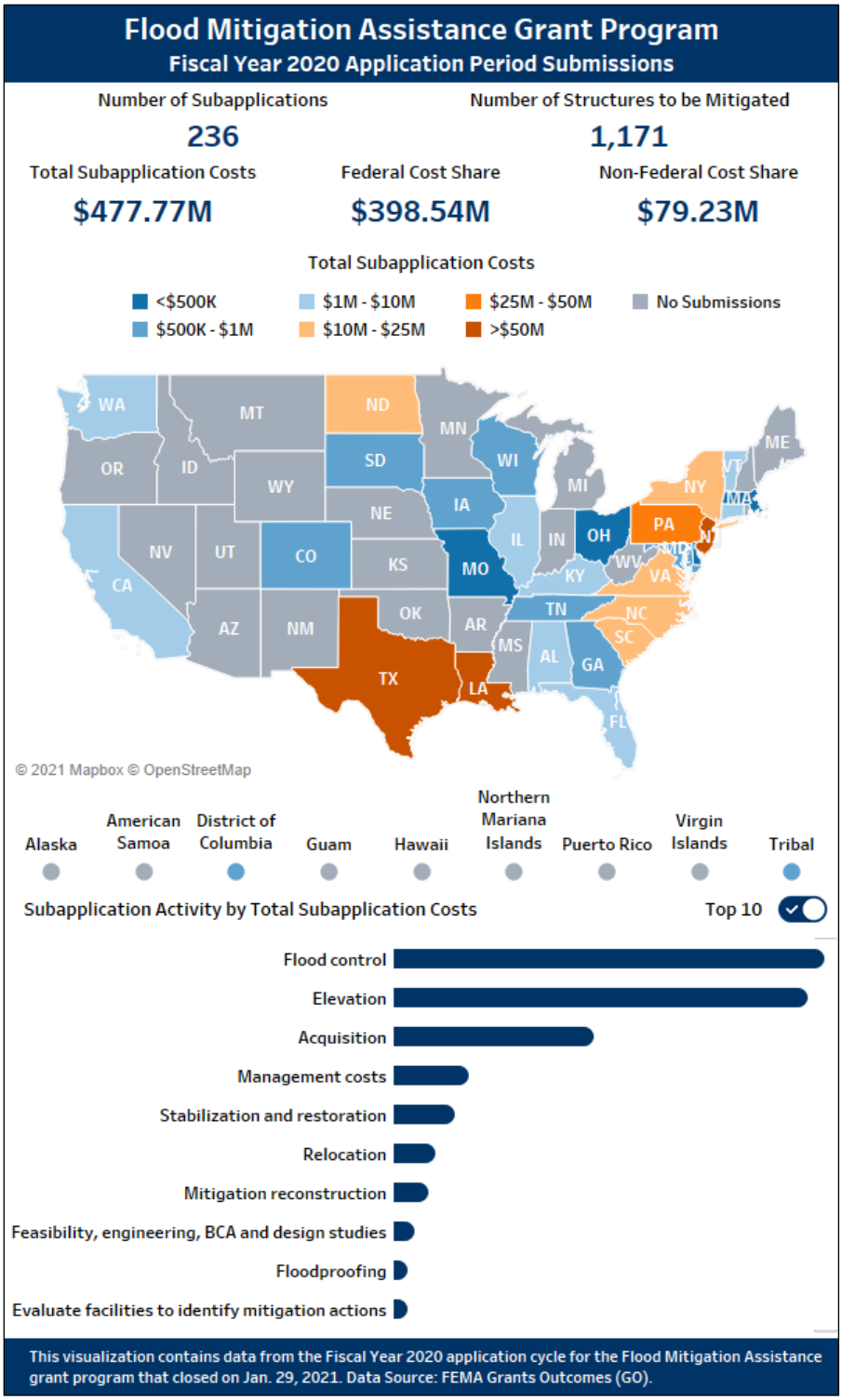
[87] Severe repetitive loss properties are those that have incurred four or more claim payments exceeding $5,000 each, with a cumulative amount of such payments over $20,000; or at least two claims with a cumulative total exceeding the value of the property. See 42 U.S.C. §4014(h) and 44 C.F.R. §79.2(h).

[88] This figure represents the total amount of federal assistance, without subtracting the cost share, for the three flood mitigation programs that existed during this time: the Severe Repetitive Loss (SRL) grant program, the Repetitive Flood Claim (RFC) grant program, and the FMA grant program. See FEMA, OpenFEMA Data Sets, https://www.fema.gov/openfema-data-page/hazard-mitigation-assistance-projects-v2, accessed November 1, 2021.

[89] FEMA, *Hazard Mitigation Assistance (HMA) Annual Grant Cycle Submissions Summary*, March 17, 2021, https://www.fema.gov/fact-sheet/hazard-mitigation-assistance-hma-annual-grant-cycle-submissions-summary.

[90] See FEMA, *Notice of Funding Opportunity (NOFO) Fiscal Year 2021 Flood Mitigation Assistance*, https://www.fema.gov/sites/default/files/documents/fema_nofo-fiscal-year-2021-flood-mitigation-assistance-grants.pdf.

Figure 4. FMA FY2020 Applications



Source: FEMA, *Hazard Mitigation Assistance (HMA) Annual Grant Cycle Submissions Summary*, March 17, 2021, https://www.fema.gov/fact-sheet/hazard-mitigation-assistance-hma-annual-grant-cycle-submissions-summary.

STORM Act State Hazard Mitigation Revolving Loan Program

A new source of hazard mitigation funding will be available in FY2022, through the Safeguarding Tomorrow through Ongoing Risk Mitigation Act of 2020, or the STORM Act (P.L. 116-284). This law amends the Stafford Act by authorizing FEMA to enter into agreements with eligible entities to establish hazard mitigation revolving loan funds.[91] Funds made available through the STORM Act may be used to assist homeowners, businesses, certain non-profit organizations, and communities to reduce risk in order to decrease the loss of life and property, the cost of flood insurance, and federal disaster payments. The legislation is intended to provide states with funding that will help them carry out their own hazard mitigation projects.[92]

A revolving loan fund (RLF) is a self-replenishing financial mechanism that starts with a base level of capital, often consisting of grants from the federal government or a state, or private investment. RLFs can make loans targeted to specific types of borrowers or for specific types of activities, and are designed to use loan repayments to recapitalize the fund and therefore make additional loans.[93] This may create an ongoing source of funding and potentially reduce the need for annual appropriations. Revolving loan funds for states have been operating for many years through the Clean Water State Revolving Fund, established in 1987, and the Drinking Water State Revolving Fund, established in 1996.[94] However, the STORM Act represents the first time that such a fund has been set up to fund hazard mitigation.

Eligible entities include states, tribal governments that have received a major disaster declaration during a five-year period ending on the date of enactment of the STORM Act (January 1, 2021), and insular areas.[95] All participating entities are required to provide matching funds from nonfederal sources in an amount equal to 10% of the amount that they receive for the revolving fund.[96]

In awarding capitalization grants, the STORM Act directs FEMA to give priority to:

- projects that increase resilience and reduce the risk of harm to natural and built infrastructure;
- projects that involve a partnership between two or more eligible entities to carry out a project or similar projects;
- projects that take into account regional impacts of hazards; and
- projects that increase resilience of major economic sectors or critical national infrastructure, including ports, global commodity supply chain assets, power and

[91] 42 U.S.C. §5135.

[92] Senate Committee on Homeland Security and Governmental Affairs, S.Rept. 116-249, August 10, 2020, p. 3, https://www.congress.gov/congressional-report/116th-congress/senate-report/249.

[93] For additional information on revolving loan funds, see CRS Report R46471, *Federally Supported Projects and Programs for Wastewater, Drinking Water, and Water Supply Infrastructure*, coordinated by Jonathan L. Ramseur; CRS Report R45304, *Drinking Water State Revolving Fund (DWSRF): Overview, Issues, and Legislation*, by Mary Tiemann; and CRS In Focus IF11449, *Economic Development Revolving Loan Funds (ED-RLFs)*, by Julie M. Lawhorn.

[94] For additional information on the Clean Water State Revolving Fund and the Drinking Water State Revolving Fund, see CRS Report R46464, *EPA Water Infrastructure Funding in the American Recovery and Reinvestment Act of 2009*, by Jonathan L. Ramseur and Elena H. Humphreys.

[95] The STORM Act defines the term "insular area" to mean Guam, American Samoa, the Commonwealth of the Northern Mariana Islands, and the United States Virgin Islands. See 42 U.S.C. §5135(m)(5).

[96] If the deposit from the entity is less than 10% of the amount of the capitalization grant, FEMA is required to reduce the amount of the capitalization grant proportionately.

water production and distribution centers, and bridges and waterways essential to interstate commerce.[97]

Interest rates on the loans cannot exceed 1%. Annual principal and interest payments must start no later than one year after the completion of projects for which the loan was made and must be fully paid within 20 years, except for loans provided to projects in low-income geographic areas,[98] which must be paid off not later than 30 years after the date on which the project is completed and not longer than the expected design life of the project. A participating entity may not provide an amount equal to or more than $5 million to a single hazard mitigation project.

Infrastructure Funding for the STORM Act

The STORM Act authorized the appropriation of $100 million annually for FY2022 and FY2023 to make grants to capitalize new revolving funds to be administered by states or insular areas. The IIJA appropriated $500 million for the revolving loan program, with $100 million for each of FY2022 to FY2026.

Implementation of STORM Act State Hazard Mitigation Revolving Loan Program

Following the appropriation of funding in the IJJA, FEMA is working on implementation of the STORM Act State Hazard Mitigation Revolving Loan Program, beginning with program design and options for stakeholder engagement. FEMA expects that it will take 18-24 months to stand up and implement the program, with the first Notice of Funding Opportunity (NOFO) in FY2023.[99]

Considerations for Congress

Pre-Disaster vs. Post-Disaster Mitigation Funding

Historically post-disaster mitigation has received significantly more funding than pre-disaster mitigation. For example, GAO found that most of the hazard mitigation funding obligated by FEMA from FY2010 though FY2018 was for post-disaster mitigation. Of the approximately $11.3 billion obligated during that period, 88% was for post-disaster grants through HMGP and PA ($10 billion). FEMA's competitive pre-disaster grant programs, FMA and BRIC's predecessor, the Pre-Disaster Mitigation Grant Program (PDM), accounted for about 12% of the total ($1.3 billion).[100] GAO argued that this emphasis on the post-disaster environment can create a reactionary approach where disasters determine where and for what purpose the federal government invests in disaster resilience, which may limit states' ability to plan and prioritize for maximum risk reduction. Post-disaster funding, such as IA, PA, and HMGP, arrive after the

[97] 42 U.S.C. §5135 (d)(3).

[98] The STORM Act defines the term "low-income geographic area" to mean an area described in paragraph (1) or (2) of section 301(a) of the Public Works and Economic Development Act of 1965 (42 U.S.C. §3161(a)). Paragraph (1) defines a *low per capita income* as when the area has a per capita income of 80% or less of the national average. Paragraph (2) defines an *unemployment rate above national average* as when an area has an unemployment rate that is, for the most recent 24-month period for which data are available, at least 1% greater than the national average unemployment rate. See https://www.govinfo.gov/content/pkg/COMPS-331/pdf/COMPS-331.pdf.

[99] FEMA briefing for House and Senate Committee staff and CRS, November 22, 2021.

[100] GAO, *Disaster Resilience: FEMA Should Take Additional Steps to Streamline Hazard Mitigation Grants and Assess Program Effects*, GAO-21-140, February 2, 2021, pp. 12-13, https://www.gao.gov/products/gao-21-140.

disaster incident and are only available to states that have suffered the impact of a disaster, and cannot be targeted at areas that might have a greater risk of a more costly disaster that has not yet occurred.

Despite the substantial increase in overall funding for pre-disaster mitigation that the 6% BRIC set-aside and the additional funding appropriated in the IIJA represent, the post-disaster mitigation approach embodied in HMGP still receives more resources. FEMA's open data sets show that between 1996 and 2019, approximately $1.86 billion was awarded for FMA grants, $1.92 billion was awarded for PDM grants, and $22.4 billion was awarded in HMGP funding.[101] In addition, according to FEMA, approximately $8.5 billion was obligated for PA mitigation projects from 1999 to August 2020.[102] The total amount of pre-disaster mitigation funding in this period (a total of $3.78 billion, with an annual average of $80.9 million for FMA and an annual average of $88.5 million for PDM) is so much less than post-disaster funding (PA annual average $386.4 million, HMGP annual average $973.9 million) that even the large amounts of funding from DRRA and the IIJA will not end the disparity.

Arguably, increased funding for pre-disaster mitigation is even more impactful in the context of climate change, as many projected climate impacts may not have happened yet, or may occur with a higher magnitude or frequency under a changing climate. Congress could change the balance between pre- and post-disaster funding. For example, Congress could change the amount of funding available for pre-disaster mitigation, or include pre-disaster mitigation in the formula funding available after a disaster declaration, or change the 6% BRIC set-aside.

BRIC

Congress may wish to consider how FEMA should address the uncertainty in BRIC funding from year to year, and the potential variability in funding available following 'large' and 'small' disaster years. FEMA could be directed to consider whether there should be a required minimum level of distribution. FEMA could also be directed to consider whether, if there is a year with a high set-aside for pre-disaster mitigation, all of the funds should be distributed in that year, or whether some funding should be held in reserve for low set-aside years.

In addition, Congress may wish to require FEMA to report on the types of projects funded under BRIC. The ASPFM has identified this as a major area of concern, commenting that

> Although ASFPM was cautiously optimistic that BRIC would routinely fund flood mitigation efforts for buildings, like elevation, buyouts, and small floodproofing projects, after the FY2020 grant winners[103] were announced, it was clear that this would not be the case.[104]

[101] This figure represents the total amount of federal assistance, without subtracting the cost share. See FEMA, OpenFEMA Data Sets, https://www.fema.gov/openfema-data-page/hazard-mitigation-assistance-projects-v2, accessed November 1, 2021.

[102] See CRS Report R46749, *FEMA's Public Assistance Program: A Primer and Considerations for Congress*, by Erica A. Lee, p. 23.

[103] The FY2020 grant winners have not been announced; it appears that the ASFPM was referring here to the projects selected for further review, as in other places the resolution refers to projects selected.

[104] ASFPM, "ASFPM Board Unanimously Approves BRIC Resolution," *News & Views*, vol. 34, no. 6, December 1, 2021, p. 1, https://asfpm-library.s3.us-west-2.amazonaws.com/NewsViews/NewsViews_December2021_FINAL.pdf.

The ASFPM expressed concern that the heavy weighting of infrastructure and lifeline projects greatly reduced the ability of traditional "incremental" flood mitigation projects to compete, despite evidence that such projects are effective in reducing flood risk.[105]

Congress could consider requiring FEMA to develop procedures to ensure that small projects are not at a disadvantage for funding selection, or requiring FEMA to report on the balance of large and small projects selected for funding. Congress could appropriate additional funding for BRIC, or for the older PDM program. BRIC could be used to provide seed funding to attract additional funding for public-private partnerships (an approach used by Project Impact),[106] which could potentially be carried out as part of a time-limited pilot project. FEMA could introduce a new means-tested mitigation program; for example, the Build Back Better Act,[107] as passed by the House on November 19, 2021, would appropriate funding for a means-tested affordability program for the National Flood Insurance Program.

Individual Assistance

Congress may wish to consider whether the mitigation measures now provided for IHP Home Repair Assistance are sufficient, or if FEMA should increase the pace of program implementation and expedite its consideration of other types of mitigation assistance potentially supported under IHP for Home Repair Assistance. In addition, Congress could consider allowing mitigation measures for real property components that did not exist or were not functional prior to the declared disaster.

Currently, there is not a way for individuals to receive pre-disaster mitigation funding through the IHP. Congress may wish to consider whether there is a need to expand eligibility for, or programs that support, pre-disaster mitigation measures in IHP. If so, FEMA will need to determine how to provide grants of pre-disaster mitigation assistance to individuals. One consideration relates to whether an individual could apply directly for funding, as is currently the case with HMA, or if they must have an eligible entity, such as a state, local, tribal, or territorial government, or a private nonprofit organization, apply on their behalf.

Public Assistance

As noted earlier, a fraction of historical PA obligations have supported mitigation projects. If Congress wishes to increase mitigation support through PA, Congress could consider a number of measures.

First, Congress may wish to consider relaxing the restrictions around the use of PA for mitigation; for example, enhancing FEMA's authority under the PA program to provide additional assistance for mitigation and/or building code compliance for entire facilities and/or on non-disaster damaged components. Congress may wish to enhance FEMA's authorities to provide PA to cover the costs of rebuilding in compliance with the highest consensus-based codes for an entire

[105] ASFPM, *ASFPM BRIC Resolution*, pp. 1-3.

[106] See, for example, Eric Holdeman and Ann Patton, "Project Impact Initiative to Create Disaster-Resistant Communities Demonstrates Worth in Kansas Years Later," *Government Technology*, July 9, 2009, https://www.govtech.com/em/safety/project-impact-initiative-to.html; Adam Rose et al., "Benefit-Cost Analysis of FEMA Hazard Mitigation Grants," *Natural Hazards Review*, vol. 8, no. 4, November 1, 2007, p. 99; and U.S. Congress, House Committee on Oversight and Reform, Subcommittee on Environment, *Testimony of James Lee Witt*, 116th Cong., 1st sess., June 25, 2019, https://docs.house.gov/meetings/GO/GO28/20190625/109630/HHRG-116-GO28-Wstate-WittJ-20190625.pdf.

[107] H.R. 5376.

facility—even if only part of a facility is damaged—to ensure that federal funds promote resilient rebuilding whenever possible. Congress may also wish to consider directing FEMA to relax restrictions on cost-effectiveness that PA mitigation projects must meet in order to be approved so as to promote more resilient PA projects,[108] and to re-evaluate how cost effectiveness is measured, in order to make PA mitigation funding criteria more comparable to HMA mitigation funding criteria.

FEMA has recently addressed concerns that communities with fewer resources, including low-income communities, tribal communities, and communities of color, may face barriers to accessing FEMA grant resources.[109] If Congress wishes to improve access to PA for mitigation for applicants with fewer financial and human resources, Congress could consider increasing the federal cost-share for communities with fewer resources for certain PA activities (for example, for mitigation expenses) to acknowledge their reduced financial resources and to ensure that these communities may access mitigation funds.[110] Congress could also increase support for technical assistance or embedded FEMA mitigation teams to ensure that communities facing capacity constraints are able to identify and complete mitigation projects through PA.

STORM Act

The $500 million appropriated by the IIJA to fund the revolving loan funds under the STORM Act is less than the amounts that established other revolving loan funds. For example, when the Drinking Water State Revolving Fund (DWSRF) was established, Congress authorized appropriations at a level of $599 million for FY1994 and $1 billion annually for each of FY1995 through FY2003.[111] Congress may wish to consider whether it should fund the new state revolving loan funds for a longer period of time, and provide more funding, to give the program additional time to become established.

Hazard Mitigation Assistance and Equity

Prioritizing Disadvantaged Communities

The Justice40 Initiative is a whole-of-government initiative to ensure that federal agencies work with states and communities to deliver at least 40% of the overall benefits from federal investments in climate and clean energy to disadvantaged communities.[112] BRIC and FMA have been selected as pilot programs for the Justice40 Initiative.[113] For FY2021, FEMA intends to

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[108] For further information on FEMA cost share requirements for PA, see CRS Report R46749, *FEMA's Public Assistance Program: A Primer and Considerations for Congress*, by Erica A. Lee, p. 23.

[109] See, for example, FEMA, "Equity," September 21, 2021, https://www.fema.gov/emergency-managers/national-preparedness/equity, and National Low Income Housing Coalition, *FEMA Holds Civil Rights Summit on Equity: NLIHC Speaks on Panel of Leaders for Equitable Disaster Recovery*, November 22, 2021, https://nlihc.org/resource/fema-holds-civil-rights-summit-equity-nlihc-speaks-panel-leaders-equitable-disaster.

[110] For discussion of these barriers, see Gavin Smith and Olivia Villa, "A National Evaluation of State and Territory Roles in Hazard Mitigation: Building Local Capacity to Implement FEMA Hazard Mitigation Assistance Grants," *Sustainability* 2020, 12 (23), https://www.mdpi.com/2071-1050/12/23/10013/htm.

[111] See CRS Report R45304, *Drinking Water State Revolving Fund (DWSRF): Overview, Issues, and Legislation*, by Mary Tiemann.

[112] The White House, "The Path to Achieving Justice40," press release, July 20, 2021, https://www.whitehouse.gov/omb/briefing-room/2021/07/20/the-path-to-achieving-justice40/.

[113] Executive Office of the President Office of Management and Budget, *Memorandum for the Heads of Departments and Agencies*, M-21-28, Washington, DC, July 20, 2021, p. 12, https://www.whitehouse.gov/wp-content/uploads/2021/

promote equity in the delivery of funds as referenced in E.O. 14008[114] by prioritizing 40% of the benefits to disadvantaged communities in both BRIC and FMA.[115]

However, FEMA has set different criteria related to disadvantaged communities in the two programs. When scoring applications for FMA funding, FEMA will use the Centers for Disease Control and Prevention (CDC) Social Vulnerability Index (SVI)[116] at the census tract level at a threshold of 0.7501 or greater as a priority scoring criterion.[117] Although the SVI Index was not mentioned in the FMA FY2020 Notice of Funding Opportunity,[118] FEMA used this criterion for FY2020 submissions to measure the social vulnerability of communities. Of the projects selected, the average CDC SVI score was 0.47,[119] which correlates to a low to moderate level of vulnerability. The funding appropriated to FMA under the IIJA will provide a 90% federal cost share[120] for a property that is (1) located in a census tract with a CDC SVI score of not less than 0.5001; or (2) that serves as a primary residence for individuals with a household income of not more than 100% of the applicable area median income.

BRIC does not identify comparable criteria for prioritizing in FY2021, although four of the six BRIC qualitative evaluation criteria for FY2021 subapplications do require explanation of how the project will benefit disadvantaged communities.[121] In addition, FEMA will reduce the nonfederal cost share of BRIC from 25%[122] to 10% for economically disadvantaged rural communities.[123] This suggests that BRIC may prioritize a narrower range of communities than FMA.

07/M-21-28.pdf.

[114] Executive Order 14008, "Tackling the Climate Crisis at Home and Abroad," 86 *Federal Register* 7619-7633, February 1, 2021, https://www.govinfo.gov/content/pkg/FR-2021-02-01/pdf/2021-02177.pdf.

[115] DHS, *Notice of Funding Opportunity (NOFO), Fiscal Year 2021 Building Resilient Infrastructure and Communities*, p. 15, https://www.fema.gov/sites/default/files/documents/fema_nofo-fiscal-year-2021-building-resilient-infrastructure.pdf.

[116] The Centers for Disease Control/Agency for Toxic Substances and Disease Registry (CDC/ATSDR) Social Vulnerability Index (SVI) uses United States Census Data to determine the social vulnerability of every census tract, ranked on 15 social factors. SVI scores range from 0 to 1, with 1 representing the highest level of social vulnerability. For example, a SVI ranking of 0.75 means that 75% of census tracts in the nation are less vulnerable than the tract of interest. See *CDC/ATSDR SVI Fact Sheet*, https://www.atsdr.cdc.gov/placeandhealth/svi/fact_sheet/fact_sheet.html, and *CDC SVI 2018 Documentation*, https://www.atsdr.cdc.gov/placeandhealth/svi/documentation/pdf/SVI2018Documentation-H.pdf.

[117] DHS, *Notice of Funding Opportunity (NOFO), Fiscal Year 2021 Flood Mitigation Assistance*, p. 4, https://www.fema.gov/sites/default/files/documents/fema_nofo-fiscal-year-2021-flood-mitigation-assistance-grants.pdf.

[118] DHS, *Notice of Funding Opportunity (NOFO), Fiscal Year 2020 Flood Mitigation Assistance*, https://www.fema.gov/sites/default/files/2020-08/fema_fy-2020_fma-notice-of-funding-opportunity_0.pdf.

[119] FEMA, *Flood Mitigation Assistance FY2020 Subapplication Status*, https://www.fema.gov/grants/mitigation/floods/fy2020-subapplication-status.

[120] The cost share for FMA funding is generally 75% federal and 25% nonfederal, but FEMA may contribute up to 90% for repetitive loss properties and 100% for severe repetitive loss properties.

[121] FEMA, *BRIC Qualitative Criteria*, https://www.fema.gov/sites/default/files/documents/fema_fy21-bric-qualitative-criteria-psm.pdf.

[122] Generally, BRIC's cost share is 75% federal and 25% nonfederal, but small, impoverished communities are eligible for an increase in cost share up to 90% federal and 10% nonfederal. The Stafford Act defines the term "small impoverished community" to mean a community of 3,000 or fewer individuals that is economically disadvantaged, as determined by the state in which the community is located and based on criteria established by the President" (42 U.S.C. §5133(a)).

[123] FEMA defined economically disadvantaged rural communities as communities of 3,000 or fewer individuals with residents having an average per capita annual income not exceeding 80% of national per capita income. See *DHS Notice of Funding Opportunity (NOFO), Fiscal Year 2021 Building Resilient Infrastructure and Communities*, p. 12,

The ASFPM expressed their concern that FEMA's definition of small and impoverished communities "does not include the disadvantaged communities that need FEMA mitigation grant assistance," concluding that "a review of the grant projects that have been identified for further review demonstrates that FEMA did not prioritize vulnerable communities even though FEMA expressed a desire to do so."[124]

Congress may wish to consider requiring BRIC and FMA to use the same priority criteria for identifying disadvantaged communities, and requiring FEMA to report on the outcomes of the FY2021 funding round in order to compare funding awarded to disadvantaged communities in BRIC and FMA.

Capacity Constraints

In addition, some stakeholders have expressed concern that smaller projects or funding for planning may be less likely to obtain support in BRIC,[125] and that small, impoverished, rural, or historically disadvantaged communities may not have the capacity to apply for and administer the larger amounts which could be funded by BRIC.[126] The increase in funding for pre-disaster mitigation may also lead to challenges for some communities in meeting the nonfederal cost share.

The ASFPM noted that mitigation planning projects and capacity building projects were limited to state set-aside funding only and were excluded from funding under the national competition. They argued that limiting mitigation planning to highly competitive state set-aside funding has negatively impacted mitigation planning efforts, especially in large states with many jurisdictions. They expressed their opposition to FEMA using priorities to limit or give preference to certain types of mitigation projects, arguing that this is contrary to the stated priority of capacity building.[127]

The ASFPM also criticized the BRIC application process, noting that "although FEMA's stated intent is to reduce the complexity of their programs and delivery, their actions in nearly every area are the opposite." They argued that the BRIC program specifically focuses on large, complex infrastructure projects that many underserved and disadvantaged communities do not have the capacity to develop, apply for, manage, and maintain into the future. They also commented on the complexity of the grant management system and the administration of grant management.[128] The ASFPM recommended that as part of streamlining the application and administrative processes, FEMA should clearly define what they mean by disadvantaged communities so that all communities, particularly those with limited resources who are disproportionately affected by flooding and other disasters, can effectively participate.[129]

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https://www.fema.gov/sites/default/files/documents/fema_nofo-fiscal-year-2021-building-resilient-infrastructure.pdf.

[124] ASFPM, *ASFPM BRIC Resolution*, p. 2.

[125] FEMA, *Summary of Stakeholder Feedback, Building Resilient Infrastructure and Communities (BRIC)*, Washington, DC, March 2020, https://www.fema.gov/sites/default/files/2020-06/fema_bric-summary-of-stakeholder-feedback-report.pdf.

[126] See, for example, Thomas Frank, "FEMA Climate Grants Pose Challenge for Poor Communities," *E&E News*, June 1, 2021, https://www.eenews.net/climatewire/stories/1063733777/.

[127] ASFPM, *ASFPM BRIC Resolution*, pp. 1-3.

[128] For example, the ASFPM stated that the administration of grant management costs to state partners, which used to be a relatively simple calculation, now requires a seven-page memo describing multiple subapplications and reporting requirements. See ASFPM, *ASFPM BRIC Resolution*, pp. 3-4.

[129] ASFPM, *ASFPM BRIC Resolution*, p. 4.

The application scores and ranking process FEMA used to decide which projects will receive funding were not made public by FEMA. The ASFPM argued that if communities do not know where they missed points in the scoring process or receive feedback on how applications could be improved for future funding rounds, not only do they get discouraged, but they cannot take actions to correct those deficiencies and ensure that future applications are more competitive.

Congress may wish to consider requiring FEMA to provide feedback to communities that were unsuccessful in order to help them better prepare for future applications. The number of non-financial Direct Technical Assistance awards could be increased, or some form of technical assistance could be made available automatically for all communities without the capacity to apply for, or administer, BRIC funding.

U.S. Territories and Tribal Governments

Another area of equity concern is that states, territories, and communities that are, perhaps, most in need of pre-disaster mitigation funding did not apply for BRIC or FMA funding. Mississippi, Puerto Rico, and the United States Virgin Islands did not apply for BRIC funding in FY2020 and 26 states did not submit FMA applications; no territories applied for FMA funding in FY2020.[130]

U.S. territories may also be at a disadvantage in applications for FMA funding. For example, the CDC does not provide SVI data for any territories other than Puerto Rico because sociodemographic census variables for the other territories[131] are unavailable or are not collected at similar geographic resolutions as those required for the SVI.[132] Congress may wish to direct FEMA to consider how to prioritize disadvantaged communities in the four territories not included in the SVI.

The STORM Act also makes less funding available to these four U.S. territories, as it designates them as insular areas rather than states.[133] FEMA is required to reserve no more than 2.5% of the amount appropriated for FEMA's administrative costs, technical assistance, and grants to insular areas. FEMA may make grants to insular areas from any amount remaining from the reserved 2.5%.[134] As the IIJA appropriates $100 million annually for FY2022 to FY2026, this means that no more than $2.5 million is available each year for FEMA's costs and all grants to five insular areas. In contrast, in FY2021 BRIC makes up to $1 million available for the five U.S. territories. Congress may wish to consider whether additional funds should be made available to the four territories designated as insular areas in the STORM Act.

Also in contrast to BRIC, the STORM Act does not set aside any funding for tribal governments, and Congress may wish to direct FEMA to ensure that funding is prioritized or set aside for tribal governments. FEMA could also be required to develop policies that would encourage and support states, territories, and tribes that have not applied for mitigation funding to do so in future funding rounds.

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[130] FEMA, *Flood Mitigation Assistance FY2020 Subapplication Status*, https://www.fema.gov/fact-sheet/hazard-mitigation-assistance-hma-annual-grant-cycle-submissions-summary#fma.

[131] American Samoa, Guam, the Northern Mariana Islands, and the U.S. Virgin Islands.

[132] Agency for Toxic Substances and Disease Registry, *CDC/ATSDR SVI Frequently Asked Questions*, https://www.atsdr.cdc.gov/placeandhealth/svi/faq_svi.html.

[133] The Stafford Act generally includes insular areas in the definition of a state (42 U.S.C. §5122(4)), while the STORM Act only includes the 50 states, the District of Columbia, and Puerto Rico (42 U.S.C. §5135(m)(10)).

[134] 42 U.S.C. §5135(d)(2)(C).

Funding Allocations

The ASPFM expressed their concern about a proportionately significant reduction in the state set-aside amount when considering the total funding available, and suggested that at least 49% of available funds should allocated to the state and tribal set-aside. They also suggested that FEMA should allow states, communities, tribes, and territories to decide which projects are awarded. Another option would be to turn BRIC entirely into a block grant program.[135]

The original pre-disaster mitigation program, Project Impact, provided funding directly to communities in every state, regardless of whether the state had experienced a disaster recently.[136] BRIC funding could be awarded to every state, either automatically or with a minimal application process. The Stafford Act sets a minimum amount of funding guaranteed to states: the lessor of $575,000 or the amount that is equal to 1% of the total funds appropriated to carry out this section for the fiscal year.[137] This minimum amount could be increased to allow disadvantaged communities to receive funding without the challenges associated with submitting a full application.

Hazard Mitigation and Climate Adaptation

Congress may wish to consider targeting funding to specified communities or types of projects to encourage climate adaptation actions. For example, climate resilience projects or applications from communities which are particularly vulnerable to the impacts of climate change could be awarded a higher federal cost share. Additional funding, or a proportion of the available funding could be targeted at, or directed to, climate-vulnerable communities.

Both BRIC and the STORM Act require applicants to have had a recent major disaster declaration within a set period of time. For BRIC, this is seven years for all applicants; in the STORM Act, this is five years for tribes only. There is no comparable requirement for states. All states, territories, the District of Columbia, and three tribes are currently eligible for BRIC due to the COVID-19 major disaster declarations. However, this will not necessarily continue to be the case in the future, and the majority of tribes will not be able to apply for STORM Act loans. Restricting pre-disaster mitigation funding to communities which have experienced a disaster recently could preclude communities with a clear risk under a changing climate from receiving funding when that risk has not yet eventuated, and may make it more difficult for locations facing major impacts of climate change to plan ahead. For this reason, Congress may wish to consider whether these requirements should be relaxed. Congress could choose to appropriate mitigation funding specifically for communities which are subject to damages from climate impacts, but which do not receive a major disaster declaration.[138]

Congress may also wish to direct FEMA to address climate change by requiring communities receiving mitigation funding to implement higher standards to prepare for climate-change related impacts, or by requiring communities to restrict development in high-risk areas.

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[135] ASFPM, *ASFPM BRIC Resolution*, p. 2.

[136] GAO, *Hazard Mitigation: Proposed Changes to FEMA's Multihazard Mitigation Programs Present Challenges*, GAO-02-1035, September 2002, p. 3, https://www.gao.gov/assets/gao-02-1035.pdf.

[137] 42 U.S.C. §5133(f)(2)(A).

[138] See CRS Insight IN11696, *Climate Change, Slow-Onset Disasters, and the Federal Emergency Management Agency*, by Diane P. Horn, Erica A. Lee, and Elizabeth M. Webster.

Concluding Comments

As disasters become more frequent and more expensive, there is an increasing interest in reducing their impacts. The benefits of hazard mitigation—saving lives, protecting property, and reducing damage from future disasters—are widely accepted. However, GAO has found that federal investments in resilience could be more effective if post-disaster hazard mitigation were balanced with resources for pre-disaster hazard mitigation, as part of a comprehensive resilience investment strategy.[139] The recent increases in funding for pre-disaster mitigation represent a significant step towards changing the balance between and pre- and post-disaster funding.

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[139] GAO, *High-Risk Series*, GAO-21-119SP, March 2, 2021, p. 28, https://www.gao.gov/products/gao-21-119sp.