



National Pre-Disaster Mitigation Fund

September 1, 2017

Fiscal Year 2017 Report to Congress



Homeland
Security

Federal Emergency Management Agency

Message from the Administrator

September 1, 2017

I am pleased to present the following report, “National Pre-Disaster Mitigation Fund,” prepared by the Federal Emergency Management Agency (FEMA).

This report was compiled pursuant to language in Senate Report 114-264 accompanying the Fiscal Year 2017 Department of Homeland Security Appropriations Act (P.L. 115-31).

Pursuant to congressional requirements, this report is being provided to the following Members of Congress:

The Honorable John R. Carter
Chairman, House Appropriations Subcommittee on
Homeland Security

The Honorable Lucille Roybal-Allard
Ranking Member, House Appropriations Subcommittee on Homeland Security

The Honorable John Boozman
Chairman, Senate Appropriations Subcommittee on Homeland Security

The Honorable Jon Tester
Ranking Member, Senate Appropriations Subcommittee on Homeland Security

Inquiries relating to this report may be directed to me at (202) 646-3900 or to the Department’s Chief Financial Officer (Acting), Stacy Marcott, at (202) 447-5751.

Sincerely,



Brock Long
Administrator



Executive Summary

Pursuant to Senate Report 114-264, this report provides information to Congress on FEMA's Pre-Disaster Mitigation Grant Program.

Section I contains the legislative language from the Senate Report.

Section II covers the background of the Pre-Disaster Mitigation Grant Program.

Section III provides a discussion of the Pre-Disaster Mitigation Grant Program.

Section IV provides a list of abbreviations used in this report.



National Pre-Disaster Mitigation Fund

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I. Legislative Language

This document has been compiled in response to language in Senate Report 114-264 accompanying the Fiscal Year (FY) 2017 Department of Homeland Security Appropriations Act (P.L. 115-31). Senate Report 114-264 states:

The Committee is interested in increasing transparency and better articulating the cost-benefits of mitigation grants administered by FEMA. The Committee directs FEMA to develop an annual report summarizing the end-users for these grants, how funding is utilized, and the cost-benefit analysis completed demonstrating the larger impact of these grants.

II. Background

This report has been developed in response to direction in Senate Report 114-264, which directed the Federal Emergency Management Agency (FEMA) to develop a report summarizing the end users of the Pre-Disaster Mitigation (PDM) program, explaining how funding is utilized, and providing a completed cost-benefit analysis to demonstrate the larger impact of these grants.

PDM is authorized by Section 203 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act (Stafford Act). PDM is designed to assist states, U.S. territories, federally recognized tribes, and local communities to implement a sustained pre-disaster natural hazard mitigation program to reduce future hazard risk to the population and structures, while also reducing reliance on federal funding in future disasters. The grantees and subgrantees of the PDM grants can be the states, U.S. territories, federally recognized tribes, or local communities.

The PDM grant program is a nationally competitive grant program. However, Section 203(f) of the Stafford Act directs the allocation of funds to states in the amount of the lesser of 1 percent of appropriated funding, or \$575,000. FEMA sets aside 10 percent of the appropriation for federally recognized tribes. The allocations and tribal set-aside, as well as the competitively selected PDM grants, are awarded for mitigation projects, mitigation plan development, and associated management costs.

FEMA sets priorities annually for the competitive PDM funding, with priority given to applications from applicants that have little or no disaster funding available through the Hazard Mitigation Grant Program (HMGP), and to project applications for nonflood hazard mitigation activities, such as wildfire, drought, and seismic and wind mitigation, which cannot be funded through the Flood Mitigation Assistance program. These priorities are stated in the Notice of Funding Opportunity (NOFO) announcement posted annually on www.Grants.gov prior to the application period.

Examples of mitigation projects funded by the PDM program include:

- Projects that increase the resilience of municipal power systems to include: improving substations; strengthening overhead electric transmission and distribution lines; and elevating key system components to ensure that all components of the system are more resilient and provide uninterrupted service to metropolitan areas.
- Projects that increase the resilience of medical facilities and campuses from multiple hazards (flood, wind, seismic) through the installation of dry and wet floodproofing and other mitigation measures. Additional interior protection measures include: elevation of critical building systems, electrical supply, and emergency generators; and installation of check valves, backflow preventers, sump pumps, and mechanical systems.
- Projects that mitigate threats to transportation systems to include bridges, airports, subways, train terminals, and transportation arteries.
- Projects that mitigate threats to water and wastewater treatment plants through flood protection systems to ensure the continuous operation of critical systems and equipment.

- Projects that increase community resilience by reducing risk through green and natural infrastructure or natural defenses, including building coastal wetlands to absorb destructive forces from wave action and to protect the shoreline from erosion; creating natural buffers, such as a living shoreline, ecosystem restoration, and aquifer recharge; and relocating/acquiring large tracks of land and properties to create coastal wetlands, marshes, a buffer zone, or a natural recreation area.

All applicants and subapplicants for PDM must have a FEMA-approved mitigation plan by the application deadline to apply for project grants, in addition to having an approved plan at the time of a project award, in accordance with FEMA's mitigation planning regulations (44 Code of Federal Regulations (CFR) Part 201). The PDM grant program provides an opportunity to fund those mitigation plans before a disaster to ensure eligibility for future disaster funding.

The PDM program reduces community vulnerability to disasters and their effects, and promotes individual and community safety and resilience. Furthermore, PDM reduces response and recovery resource requirements in the wake of a disaster or incident, which results in a safer community that is less reliant on external financial assistance.

III. Discussion

Congressional appropriations provide the funding for PDM. The total amount of funds distributed for PDM is determined once the appropriation is provided for a given fiscal year. Table 1 shows the amount of PDM funds appropriated to FEMA from 2003 through 2016 as well as the amount of funding that was requested in submitted grant applications.

Annual appropriations have fluctuated from a high of \$150 million in 2003 and 2004, to a low of \$25 million from 2013 through 2015. The amount of funding requested far exceeds the amount of appropriated funds each year. Between 2003 and 2016, a total of \$1.1 billion in PDM funds was appropriated, while a total of \$3.2 billion worth of PDM applications was submitted, 2.9 times the available funding. Since 2013, FEMA has self-limited the number of subapplications that can be submitted because of limited appropriations. If FEMA had continued to allow applicants to submit an infinite number of subapplications, the amount of funding requested would have been much higher, as shown for previous years.

Table 1: Pre-Disaster Mitigation Appropriations v. Applications

Program Fiscal Year	PDM Appropriations (in millions)	Competitive Applications (in millions)
2003	\$150	\$344
2004	\$150	\$517
2005	\$100	
2006	\$50	\$141
2007	\$100	\$302
2008	\$114	\$315
2009	\$90	\$297
2010	\$100	\$258
2011	\$49.9	\$273
2012	\$35.5	\$287
2013	\$25	\$93*
2014	\$25	\$78*
2015	\$25	\$83.6*
2016	\$100	\$240*

*FEMA limited the number of subapplications that could be submitted in FYs 2013–2016.

NOTE: FEMA combined the 2004 and 2005 appropriations into one PDM application cycle in 2005.

Mitigation Planning

Mitigation plans are the foundation of effective hazard mitigation. The mitigation planning process includes hazard identification and a risk and vulnerability assessment leading to the

development of a comprehensive mitigation strategy for reducing risks to life and property. A mitigation plan is a demonstration of the commitment to reduce risks from natural hazards and serves as a strategic guide for decision makers as they commit resources. Linking the existing mitigation plan to project identification and prioritization can support the applicant and subapplicant in selecting the most appropriate mitigation activity that best addresses the identified hazards, while taking into account community priorities. This coordination leads to better projects and ensures effective use of FEMA grant funds.

Mitigation planning has matured since the publication of the regulations, and all states currently have mitigation plans. However, those plans must be updated to ensure continued eligibility for FEMA project mitigation grant funding.

The percentage of PDM appropriations spent on planning increased in 2015. The 2016 PDM NOFO stated that the majority of funds would be directed toward project activities rather than planning activities. FEMA will award 23 percent of 2016 PDM funds for mitigation planning activities and 77 percent for project activities. Table 2 shows the planning and project applications selected for funding by number and by dollars from 2013 through 2016. This requirement already is incorporated into the 2017 NOFO and will continue in 2018 and beyond.

Table 2: PDM Selections: Planning vs. Projects (2013–2016)

FY	Planning Selected		% Total #	% Total \$	Projects Selected		% Total #	% Total \$	Total Selected	
	# of Applications	\$			# of Applications	\$			#	\$
2013	73	\$ 7,916,265.86	68%	36%	35	\$ 13,910,085.53	32%	64%	108	\$ 21,826,351.39
2014	179	\$12,987,536.84	77%	21%	52	\$ 48,505,362.94	23%	79%	231	\$ 61,492,899.78
2015	208	\$ 13,841,920.91	84%	50%	40	\$13,692,108.57	16%	50%	248	\$ 27,534,029.48
2016	209	\$ 19,025,384.19	72%	23%	82	\$ 63,258,950.41	28%	77%	291	\$ 82,284,334.60

In addition, in 2016 FEMA reduced the caps on PDM planning funds in half from previous years. The maximum federal share for the development of new plans is \$400,000; \$300,000 for state/territory and multijurisdictional local/tribal plan updates; and \$150,000 for single jurisdiction local/tribal plan updates. These changes already are incorporated into the 2017 application cycle.

PDM Funding Awarded to Date

Hazard mitigation is the only phase of emergency management specifically dedicated to breaking the cycle of damage, reconstruction, and repeated damage. In support of making the Nation more resilient, FEMA has awarded nearly 3,000 PDM grants since its inception. FEMA typically has funded projects under \$3 million to spread small amounts of funding throughout the Nation, but increased the maximum to \$4 million in 2016. A wide range of project types have been funded by the PDM program to date. Figure 1 shows the types of activities awarded by the PDM program by percentage of total funds awarded as of June 2017. Table 3 shows the number of each activity type that the PDM program has funded as of June 2017.

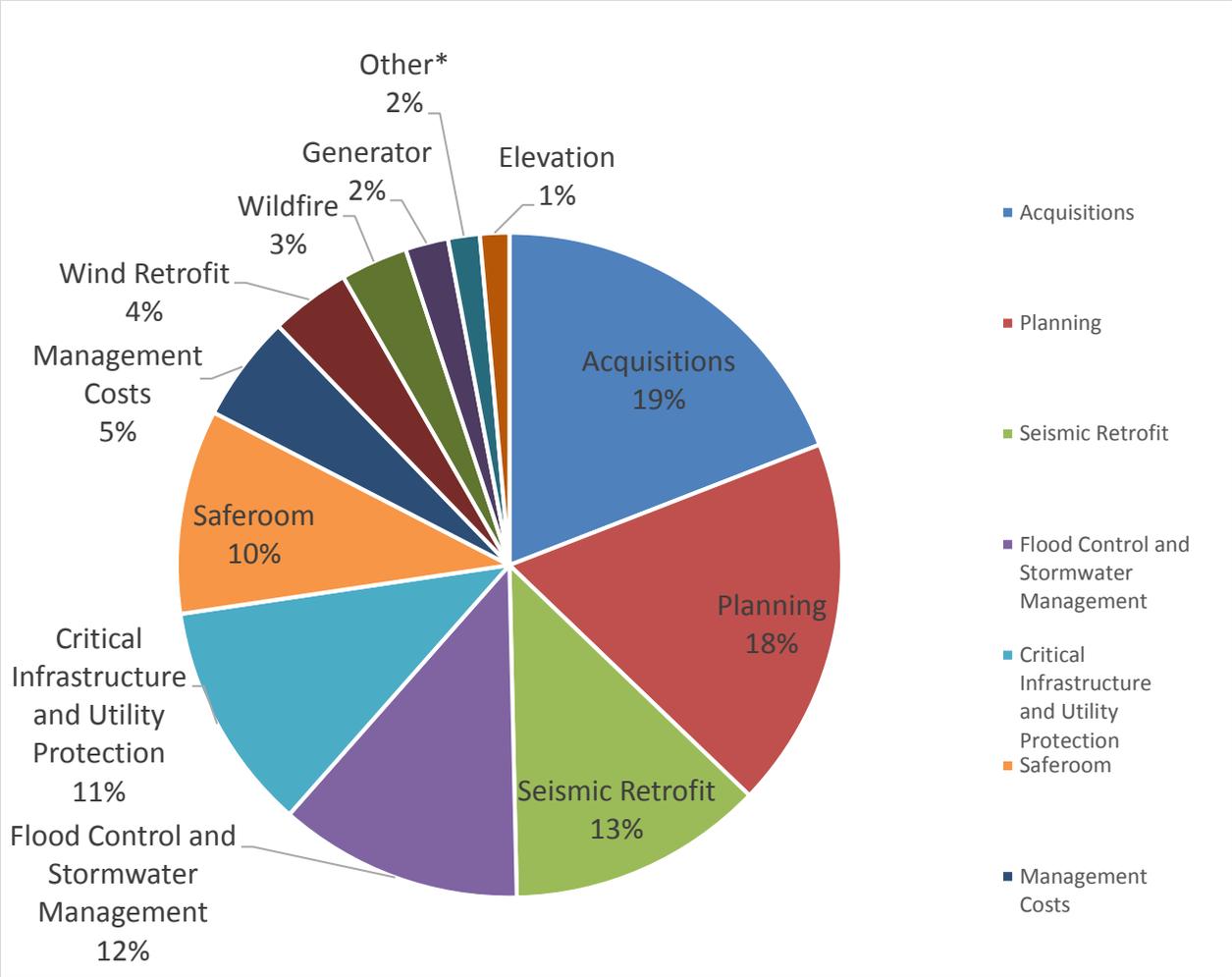


Figure 1. Percent of Total PDM Funds Obligated by Activity Type -- for Program Years 2004 to 2016

Table 3: Number of PDM Awards by Activity Type – for Program Years 2004 to 2016

Activity Type	Number of Awards
Acquisitions	175
Planning	1,673
Seismic Retrofit	94
Flood Control and Stormwater Management	114
Critical Infrastructure and Utility Protection	116
Saferoom	120
Management Costs	434
Wind Retrofit	73
Wildfire	48
Generator	63
Other*	43
Elevation	25
Totals	2,978

*Other includes Floodproofing, Relocation, Warning Systems, and the Miscellaneous project type.

Cost-Effectiveness

Mitigation projects that are submitted to FEMA’s PDM program for funding consideration must demonstrate cost-effectiveness through a FEMA-approved benefit-cost analysis (BCA). FEMA provides the BCA tools needed to complete the analysis and provides training upon request, as well as a BCA helpline to assist applicants in the development of a BCA.

Although the exact BCA inputs and methodology vary depending on the mitigation project type, the primary user-entered inputs in the BCA Toolkit are:

- Project and structure locations
- Hazard data (i.e., information about past or expected events)
- Project cost and useful life
- Structure data relevant to mitigation type
- Number of people that would be displaced or injured if proposed mitigation is not implemented
- Data on public services/facilities (i.e., fire stations, utilities, bridges, etc.) that would be affected if proposed mitigation is not implemented

The most commonly funded project type in PDM, after mitigation plans, is acquisition. For a typical acquisition project BCA, the applicant would input:

- Data on the flood source from the flood insurance study and/or a hydrologic & hydraulic study
- Data on the structures being acquired such as first floor elevation and structure type
- Cost to acquire the structures
- Number of residents in the structures being acquired

- Size of project area and type of space that it will be post-mitigation (i.e., riparian, open space, etc.)

The BCA Toolkit then uses these data, along with the default depth damage function curves embedded in the software, to calculate the project benefit-cost ratio (BCR).

The monetary amount of estimated damages avoided by the implementation of the mitigation project is divided by the project cost resulting in the project BCR. Because acquisition projects remove the structures entirely, there is nothing left to be damaged in future flood events; therefore, the estimated damages after mitigation is always \$0.

Additionally, guidance for performing cost-effectiveness reviews is provided by the Office of Management and Budget in Circular No. A-94, *Guidelines and Discount Rates for Benefit-Cost Analysis of Federal Programs*.

Applicants complete the BCA and submit all of the documentation in the project application. Documentation included with the analysis must come from reputable sources, including but not limited to engineers, technical studies, academia, other government agencies, or professionals that have a clear understanding and technical proficiency of the project, and can reasonably demonstrate the methodology used to estimate the future benefits (avoided damages) provided by the project. The result of the BCA is a BCR. FEMA considers any project with a BCR of a 1.0 or greater as cost-effective. FEMA reviews and validates the BCAs by analyzing the submitted documentation.

PDM has a FEMA-validated BCR of 3.56. This means that for every dollar that FEMA has spent, the PDM program is providing more than a \$3.50 return.

Fundamentally, the PDM program seeks to create a nation less vulnerable to the loss of life and damage to property. FEMA continually seeks to improve the development and management of mitigation plans and projects to realize more effective mitigation strategies. The losses avoided through effective PDM delivery ensure both continuity and growth of the program.

Public-Private Partnerships

FEMA will emphasize public-private partnerships in the selection of competitive awards in the 2017 PDM funding round. FEMA will consider more favorably applications from applicants and subapplicants who are able to attract a larger percentage of private funds to meet the nonfederal cost share for PDM grants. PDM grants have a nonfederal cost-share requirement of 25 percent, with the grant covering the remaining 75 percent. Small, impoverished communities are eligible for up to a 90-percent federal cost share in accordance with the Stafford Act.

IV. Appendix

Abbreviation	Definition
BCA	Benefit-Cost Analysis
BCR	Benefit-Cost Ratio
CFR	Code of Federal Regulations
FEMA	Federal Emergency Management Agency
FY	Fiscal Year
HMGP	Hazard Mitigation Grant Program
NOFO	Notice of Funding Opportunity
PDM	Pre-Disaster Mitigation