



**Committee on Transportation and Infrastructure**  
**U.S. House of Representatives**

Washington, DC 20515

**Bill Shuster**  
Chairman

**Peter A. DeFazio**  
Ranking Member

Christopher P. Bertram, Staff Director

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May 27, 2015

**BACKGROUND MEMO**

**TO:** Members, Subcommittee on Economic Development, Public Buildings and  
Emergency Management  
**FROM:** Staff, Subcommittee on Economic Development, Public Buildings and  
Emergency Management  
**RE:** Roundtable Policy Discussion on “The State of Pennsylvania and FEMA Region  
III are Leaders in Mitigating Disaster Costs and Losses”

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**PURPOSE**

On Thursday, May 28, 2015, at 10:00 a.m., at the Federal Emergency Management Agency (FEMA) Region III Offices located at 615 Chestnut Street, in Philadelphia, Pennsylvania, Members of the Subcommittee on Economic Development, Public Buildings and Emergency Management will participate in a roundtable discussion entitled “The State of Pennsylvania and FEMA Region III are Leaders in Mitigating Disaster Costs and Losses.” The purpose of the roundtable is to examine disaster costs and losses, focus on hazards impacting Pennsylvania and the region, and identify best practices for mitigating and avoiding disaster impacts. Participants will include representatives from FEMA, the State of Pennsylvania, the University of Pennsylvania, and city and county officials.

**BACKGROUND**

On January 27, 2015, the Subcommittee held a congressional hearing where Chairman Barletta announced that the Subcommittee would be launching a comprehensive analysis and discussion about trends in disaster costs across the government and private sectors, the drivers of the trends being observed, and what policy changes should be considered to bend the cost curve on disasters. On March 18, 2015, Chairman Barletta, Ranking Member Carson, and other Subcommittee Members held the first Subcommittee roundtable to focus on available statistics, data and information on disaster costs and losses and committed to continuing a national conversation.

## **The Rising Costs of Disasters**

According to numerous studies, disaster losses and federal disaster spending have increased significantly over the last 50 years. In 2012, Munich Re, the world's largest reinsurance company, reported that between 1980 and 2011, North America suffered \$1.06 trillion in total losses, including \$510 billion in insured losses, and an increase in weather-related events five-fold over the previous three decades.<sup>1</sup> In 2005, it was reported that since 1952, the cost of natural disasters to the federal government more than tripled, as a function of gross domestic product.<sup>2</sup>

There are numerous causes that may be driving these costs, including population growth and increased density in disaster-prone areas, changes in weather and fire events, and changes in disaster relief programs. In a recent report, FEMA acknowledged the increase in the number of extreme disaster events and increased vulnerabilities throughout the United States due to shifting demographics, aging infrastructure, land use, and construction practices.<sup>3</sup>

## **Few Disasters Account for Most Costs**

CRS analyzed data from over 1,300 major disasters since 1989, and adjusting for inflation, found that FEMA obligated more than \$178 billion for these disasters.<sup>4</sup> However, CRS also found that 25 percent of all disasters account for over 92 percent of disaster costs.<sup>5</sup> Therefore, the remaining 75 percent of smaller disasters constitute less than eight percent of FEMA disaster spending.

## **The FEMA Disaster Assistance Reform Act of 2015 Establishes a Study of Disaster Costs**

Given the trends in disaster costs and losses, the Committee has called for a complete assessment of these losses, what is driving these losses, what federal disaster assistance is available to individuals and the public and private sectors, the appropriate roles of each of those parties, and what public policy changes would result in fewer disaster losses and thus lower disaster-related costs.

On April 15, 2015, the Committee ordered H.R. 1471, The FEMA Disaster Assistance Reform Act of 2015 to be reported. This bipartisan legislation establishes a comprehensive study to assess disaster costs and develop recommendations for reducing those costs; improves our Nation's emergency management capabilities and federal disaster programs; modernizes and strengthens critical components of our preparedness and response system; and supports emergency response personnel. Specifically, the legislation requires the National Advisory

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<sup>1</sup> Munich Re (2012). *Severe weather in North America – Perils Risk Insurance*. Munich, Germany: Muchener Ruckversicherungs-Gesellschaft.

<sup>2</sup> The Princeton University Geoscience 499 Class, *The Increasing Costs of U.S. Natural Disasters*. Geotimes, November 2005.

<sup>3</sup> Federal Emergency Management Agency, *National Strategy Recommendations: Future Disaster Preparedness*. September 6, 2013. Available at [http://www.fema.gov/media-library-data/bd125e67fb2bd37f8d609cbd71b835ae/FEMA+National+Strategy+Recommendations+\(V4\).pdf](http://www.fema.gov/media-library-data/bd125e67fb2bd37f8d609cbd71b835ae/FEMA+National+Strategy+Recommendations+(V4).pdf).

<sup>4</sup> CRS Memo *Data Analysis for House Transportation and Infrastructure Committee*, January 14, 2015.

<sup>5</sup> *Id.*

Council to conduct the comprehensive study and include policy recommendations to help reduce future losses.

### **FEMA Region III's Role in Disaster Preparedness, Mitigation, Response, and Recovery**

FEMA was established in 1979 as the centralized location for federal disaster assistance and coordination of the federal government's disaster activities. FEMA is the federal government's lead agency for preparing for, mitigating, responding to, and recovering from disasters and emergencies related to all hazards – whether natural or man-made. When federal and local resources are overwhelmed and the “disaster is of such severity and magnitude that effective response is beyond the capabilities of the state and the affected local governments,”<sup>6</sup> the Governor of the affected state may request that the President declare a major disaster.

FEMA has 10 regional offices, each headed by a Regional Administrator. The regional field structures are FEMA's permanent presence for communities and states across the Nation. The staffs at these offices support the development of all-hazards operational plans and generally help states and communities become better prepared. These regional offices mobilize federal assets and evaluation teams to work with state and local agencies. Other federal departments and agencies have regional or field offices that may participate with state, tribal, and local governments in planning for incidents under their jurisdiction and provide initial response assets to the incident.

Each of FEMA's regional offices maintains a 24/7 coordination center that can expand to become an interagency facility in anticipation of a serious incident in the FEMA region or immediately following an incident. Operating under the direction of the FEMA Regional Administrator, the regional coordination centers coordinate federal regional response efforts and maintain connectivity with state emergency operations centers, state fusion centers, federal executive boards, and other federal and state operations and coordination centers that have potential to contribute to the development of situational awareness.

FEMA Region III offices are located in Philadelphia, and this region works closely with the emergency management agencies of the District of Columbia, Delaware, Maryland, Pennsylvania, Virginia, and West Virginia to prepare for, protect against, respond to, recover from, and mitigate all hazards. To help accomplish its mission, Region III maintains strong partnerships through its councils – the Regional Advisory Council and the Regional Emergency Communications Coordination Working Group.

The region has experienced disaster declarations for hurricanes, tornadoes, flooding, wildfires, winter storms, and earthquakes.

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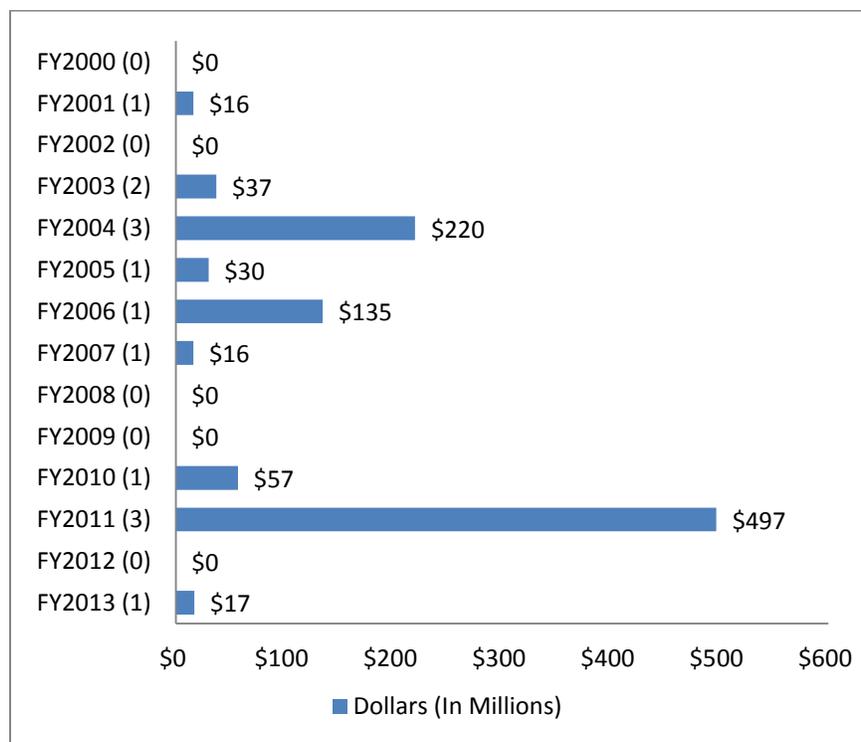
<sup>6</sup> 42 U.S.C. § 5170.

## Disasters in Pennsylvania

Since 1955, Pennsylvania alone has received 49 Presidential major disaster declarations and nine emergency declarations for hurricanes, tropical storms, severe storms, flooding, tornadoes, winter storms, and snowstorms.<sup>7</sup>

A total of 14 Presidential major disaster declarations were made in Pennsylvania between 2000 and 2013.<sup>8</sup> The approved declarations led to over \$1.0 billion in federal obligations from the Disaster Relief Fund.<sup>9</sup> This funding does not include the assistance that was provided directly by the state, either as a cost-share for federal assistance, or through the state's own authorities and programs. The table below illustrates the total funding obligated to Pennsylvania each year.

**Obligations for Declared Major Disasters in Pennsylvania, by Fiscal Year**



Since 2000, the most significant incident in Pennsylvania was Tropical Storm Lee, which occurred in 2011 and led to nearly \$374 million in federal funding from FEMA's Disaster Relief Fund. Other major incidents include Tropical Depression Ivan in 2004, severe storms in 2006, and Hurricane Irene in 2011. Pennsylvania also received assistance as a result of Hurricane Sandy in 2013. According to research conducted by the Congressional Research Service, since 2000, 67 localities in Pennsylvania have received aid under a major disaster declaration, with

<sup>7</sup> Available at [https://www.fema.gov/disasters/grid/state-tribal-government/44?field\\_disaster\\_type\\_term\\_tid\\_1=All](https://www.fema.gov/disasters/grid/state-tribal-government/44?field_disaster_type_term_tid_1=All).

<sup>8</sup> Id.

<sup>9</sup> Congressional Research Service, "FEMA DRF Major Disaster Assistance: Pennsylvania," January 28, 2015.

Wyoming County receiving assistance for major disasters 10 times across this period, which is the highest number in the state.<sup>10</sup>

## **Efforts to Reduce Disaster Impacts**

### *Disaster Mitigation*

Disaster mitigation includes actions taken to reduce loss of life and property by lessening the impact of disasters. Effective mitigation acts to minimize the potential loss from a disaster based on identifying and understanding the risks in a given area or community. Mitigation can encompass a wide variety of activities, including preparation and planning, elevating or moving structures prone to flooding, hardening structures to mitigate effects of hurricanes or earthquakes, and establishing building codes and zoning ordinances.

Mitigation not only saves lives but has been shown to also reduce disaster costs by minimizing damage from a disaster. For example, pursuant to a requirement of the Disaster Mitigation Act of 2000, the Congressional Budget Office (CBO) completed an analysis of the reduction in federal disaster assistance as a result of mitigation efforts.<sup>11</sup> That study examined mitigation projects funded from 2004 to mid-2007. CBO found that of the nearly \$500 million invested through Pre-Disaster Mitigation (PDM) grants, future losses were reduced by \$1.6 billion for an overall ratio of 3 to 1. In essence, for every dollar invested in mitigation, \$3 was saved. CBO's analysis reaffirmed a prior study commissioned by FEMA and conducted by the Multihazard Mitigation Council of the National Institute of Building Sciences that concluded, in 2005, each dollar spent on mitigation saves \$4 in future losses due to disasters.<sup>12</sup>

Federal programs such as FEMA's Hazard Mitigation Grant Program (HMGP) and PDM help provide some of the investment needed to help communities in disaster mitigation. HMGP provides grants to state and local governments to rebuild after a disaster in ways that are cost-effective and reduce the risk of future damage, hardship, and loss from all hazards. FEMA also provides grants under HMGP to assist families in reducing the risk to their homes from future disasters, through such steps as elevating the home or purchasing the home to remove it from the floodplain.

On January 29, 2013, the Sandy Recovery Improvement Act (SRIA) was signed into law. That Act, drafted by the Committee, incorporated significant reforms to reduce overall costs of disasters and expedite funding for mitigation activities to ensure communities devastated by disasters could rebuild faster and smarter. Specifically, SRIA authorized FEMA to advance up to 25 percent of HMGP funds to communities impacted by major disasters. The purpose is to ensure communities have the resources needed upfront to incorporate mitigation as they rebuild.

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<sup>10</sup> Id.

<sup>11</sup> "Potential Cost Savings from the Pre-Disaster Mitigation Program," Congressional Budget Office, September 2007.

<sup>12</sup> "Natural Hazard Mitigation Saves: An Independent Study to Assess the Future Savings from Mitigation Activities," Multihazard Mitigation Council, National Institute of Building Sciences, 2005.

While HMGP provides funding post-disaster, the PDM program provides funds to states, territories, Indian tribal governments, communities, and universities for hazard mitigation planning and the implementation of mitigation projects prior to a disaster event. Funding these plans and projects reduces overall risks to the population and structures, while also reducing reliance on funding from actual disaster declarations. On February 11, 2015, Ranking Member Carson introduced H.R. 830 to reauthorize the PDM program through fiscal year 2018.

*The Wharton Risk Management and Decision Processes Center*

Established in 1984, the Wharton Risk Management and Decision Processes Center develops and promotes effective corporate and public policies for dealing with catastrophic events. The Risk Center research team – 70 faculty, fellows, and doctoral students – investigate how individuals and organizations make choices under conditions of risk and uncertainty under various regulatory and market conditions, and the effectiveness of strategies such as alternative risk financing, incentive systems, insurance, regulation, and public-private collaborations at a national and international scale. The Center actively engages multiple viewpoints, including top representatives from industry, government, international organizations, interest groups, and academia.

Building on the disciplines of economics, finance, insurance, marketing, psychology, and decision sciences, the Center's research program focuses on how individuals and organizations interact and make decisions regarding the management of risk and then conducts analysis to propose ways that individuals and organizations, both private and governmental, can make better decisions regarding risk.

## **Participants**

Ms. MaryAnn E. Tierney  
Regional Administrator for Region III  
Federal Emergency Management Agency

Dr. Howard Kunreuther  
Risk Management and Decision Processes Center  
The Wharton School of the University of Pennsylvania

Fire Commissioner Derrick J. V. Sawyer  
Philadelphia Fire Department

Mr. Richard D. Flinn, Jr.  
Director  
Pennsylvania Emergency Management Agency

The Honorable George P. Hartwick, III  
Commissioner  
Dauphin County Board of Commissioners