

HAZARD MITIGATION: AN ALTERNATIVE APPROACH TO REACTIONARY  
FEDERAL DISASTER SPENDING

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## **Abstract**

Prior to 1950, the U.S. federal government rarely provided assistance to states after a disaster occurred. Today however, declaring a Presidential Disaster Declaration (PDD) and providing Federal Emergency Management Agency (FEMA) appropriated Disaster Relief Funds (DRF) is routine. Over 65% of declarations have occurred over the last two decades, even though the program has been around for over 60 years. These declarations have led to the federal government providing over \$173 billion in disaster relief over the last 25 years alone. While the federal government has spent billions on response and recovery efforts, research shows that hazard mitigation spending is a more effective and efficient use of federal funding. Existing hazard mitigation programs note a minimum average of \$4 in benefits for each dollar spent on mitigation efforts. With an increase in frequency and magnitude of disasters proven, continuing to fund disaster relief and recovery in the current structure will prove costly for taxpayers and will complicate already stringent budgets. A policy and political analysis on how to address rising disaster losses and federal spending on disaster relief are included in this paper.

## **Action Forcing Event**

In a highly disputed and politically motivated move, the FEMA released new requirements for State Hazard Mitigation Plans. In order for states to be eligible for specific forms of federal preparedness and mitigation funding, states must include “changing environmental or climate conditions” in their risk assessments.<sup>1</sup> Hazard mitigation efforts which largely effective at reducing future losses are already underfunded and more importantly underutilized in the U.S. Adding mandates surrounding highly political issues, such as climate change, does not help to address the issue of rising disaster costs in the U.S.

## **Problem**

A significant increase in the frequency of disasters, as well as the costs associated with them, has been noted in the U.S. Although the federal government has established programs to assist in mitigating risks associated with disasters, the vast majority of federal disaster spending is reactionary. The use of DRFs and supplemental appropriations to augment state, local, tribal, and territorial (SLTT) government efforts have routinely focused on response efforts, with a recent increase focus on recovery. Although these efforts are critical in reducing loss of life, minimizing economic losses, and rebuilding communities, mitigating the risks associated with disasters is the key to reducing federal expenditures going forward. Given the uncertain fiscal climate that the U.S. continues to face, a focus on response and recovery measures will continue to prove costly for U.S. taxpayers. Investing in hazard mitigation could have a long-term impact on federal disaster spending.

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<sup>1</sup> Boyer, Dave, “FEMA targets climate change skeptic governors, could withhold funding,” *The Washington Times*, March 23, 2015.

During the 1980s, the U.S. experienced an average of two severe weather events that resulted in over \$1 billion in damages annually.<sup>2</sup> Over the last decade however, this number has increased to an average of eight weather events resulting in over \$1 billion in damages annually.<sup>3</sup> This is not a phenomenon only recognized in the U.S., as severe natural disasters have more than doubled worldwide since the mid-1980s.<sup>4</sup> Loss events in the U.S. exceeded \$50 billion five times from 2004 to 2013, something that never occurred in the 1980s and only happened three times from 1990 to 2003.<sup>5</sup> Although every dollar spent on mitigation efforts has been equated to a net benefit of \$4, the U.S. federal government spent only \$10 billion on FEMA-based mitigation efforts from 2011 to 2013.<sup>6 7</sup> This is in comparison to the \$136 billion that was spent on response and recovery efforts through Presidential Disaster Declaration (PDD) and supplemental appropriations in the same period.<sup>8</sup> Although federal resources for response and recovery efforts are necessary, funding in these areas is growing at an unsustainable rate given the stringent budget the federal government faces. Attempts to reduce federal spending on disaster relief must be investigated.

The scope of this problem extends from federal to SLTT governments, private sector entities, non-governmental organizations, and community based coalitions.

Federal legislation directly impacts the above-mentioned entities as disaster mitigation,

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<sup>2</sup> Adam B. Smith and Richard W. Katz, "U.S. Billion-Dollar Weather and Climate Disasters: Data Sources, Trends, Accuracy, and Biases," *Natural Hazards* 67, no. 2 (June 2013), 388.

<sup>3</sup> National Oceanic and Atmospheric Administration (NOAA), *Billion -Dollar Weather and Climate Disasters: Summary Stats*, last modified December 31, 2014.

<sup>4</sup> Stephanie Sanok Ostro and Garrett Riba, "Achieving Disaster Resilience in U.S. Communities," *Center for Strategic & International Studies*, November 2014, 4.

<sup>5</sup> Munich Reinsurance Company, "2013 Natural Catastrophe Year in Review," *Geo Risks Research: NatCatSERVICE*, January 7, 2014, 8.

<sup>6</sup> FEMA, "What is Mitigation?," last modified September 22, 2014.

<sup>7</sup> *Rebuilding After the Storm, Hearing before the Committee on Transportation and Infrastructure*, (statement of Craig Fugate, FEMA Administrator).

<sup>8</sup> Daniel Weiss and Jackie Weidman, "Disastrous Spending: Federal Disaster-Relief Expenditures Rise amid More Extreme Weather," *Center for American Progress*, April 29, 2013.

preparedness, response, and recovery relies on a whole community approach. Decision on federal disaster relief spending directly impact how SLTT governments prepare for disasters. State and local level efforts must find the balance between reducing risks, while promoting economic interests.<sup>9</sup> Although all levels of government are responsible for reducing the risks to their citizens', this does not leave taxpayers free of responsibility. Taxpayers foot the bill for utilization of federal disaster spending. The previously mentioned \$136 billion from 2011 to 2013 equated to roughly \$400 per household annually.<sup>10</sup> While federal spending can assist taxpayers in recuperating the roughly 80% of losses from natural disasters that are not covered by insurance, the fact that disasters are increasing in frequency and magnitude make this problematic.<sup>11</sup> The scope of this problem will continue to grow as federal efforts focus on response and recovery, with limited resources being spent on hazard mitigation.

## **History**

After nearly 175 years, the federal government passed legislation that formalized the federal disaster assistance process. With no overarching federal legislation, the government funded disaster relief on a case-by-case basis and passed 128 separate bills from 1803 to 1950.<sup>12</sup> While the history surrounding the government's role in emergency management is extensive, their involvement in hazard mitigation has been limited. This has largely been an item left to SLTT governments, whose efforts often have fallen short

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<sup>9</sup> U.S. Government Accountability Office (GAO), *Disaster Resilience: Actions are Underway, but Federal Fiscal Exposure Highlight the Need for Continued Attention to Longstanding Challenges*, GAO-14-603T, May 14, 2014, 10.

<sup>10</sup> Weiss and Weidman, "Disastrous Spending: Federal Disaster – Relief Expenditures Rise."

<sup>11</sup> Christopher Barton and Stuart Nishenko, "*Natural Disasters – Forecasting Economic and Life Losses*," U.S. Department of Interior, U.S. Geological Survey.

<sup>12</sup> FEMA, "Overview of Federal Disaster Assistance: Citizen's Guide to Disaster Assistance," September 2003, 3-2.

of what is actually needed.<sup>13</sup> Although mitigation priorities have been previously mentioned, the first federal legislation that emphasized disaster planning and hazard mitigation was not passed until 2000.<sup>14</sup> In order to understand the federal government's role in hazard mitigation, a review on the federal government's method of disaster response is necessary.

History shows that flooding along the Mississippi River dates back to the mid-1500s with limited impacts.<sup>15</sup> A 1927 flood however, inundated homes and farms that were occupying land near the Mississippi River when the river grew to roughly 60 miles in width at some points.<sup>16</sup> President Coolidge, working within the confines of existing laws, orchestrated what was at the time the largest federal response to a disaster in U.S. history due to the several hundred fatalities and nearly \$5 billion (2014) in damages from the flooding.<sup>17</sup> While this incident reached a magnitude of such that federal assistance was provided, this was far from the norm. Prior to this, and up to the 1950s, SLTT entities handled disaster response. Members of the private sector and voluntary agencies provided disaster relief, not the federal government. Although federal assistance was available, it took an act of Congress and was only provided in extreme situations. The mindset of emergency management in the federal government during this time was reactionary. Planning efforts were limited and mitigation measures were nonexistent.

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<sup>13</sup> *Role of Mitigation in Reducing Federal Expenditures for Disaster Response, Hearing before the Committee on Homeland Security and Governmental Affairs, U.S. Senate, 113<sup>th</sup> Congress (2014)* (statement of Chad Berginnis, Executive Director of the Association of Floodplain Managers).

<sup>14</sup> Natalie Keegan, "FEMA's Pre-Disaster Mitigation Program: Overview and Issues," Congressional Research Service, July 10, 2009, 5.

<sup>15</sup> Kenneth Foot, "Financing of Catastrophic Risk," *National Bureau of Economic Research*, January 1999, 307.

<sup>16</sup> *Ibid.*, 308.

<sup>17</sup> *Ibid.*, 308-309.

Federal response to disasters changed with passage of the Disaster Relief Act (DRA) of 1950.<sup>18</sup> This legislation established the process for a governor to request federal assistance if SLTT capabilities were unable to adequately respond. The President would determine whether federal assistance would be provided based on recommendations from subject matter experts in the field, preliminary damage assessments, and the availability of SLTT resources. Federal assistance could only be utilized at this time for public facilities, and assistance was not provided to individuals. It was not until 1974 that the government expanded assistance to individuals when it amended the DRA of 1950.<sup>19</sup> The DRA of 1974 created the Individual and Family Grant (IFG) program that provided 75% federal funding for state efforts to supply individuals with clothing, furniture, and essential needs after a disaster occurred.<sup>20</sup> For the first time, the DRA of 1974 noted the need for mitigation efforts, showing a slight shift from a response theory that lawmakers had maintained for years.<sup>21</sup>

In 1988, the Robert T. Stafford Disaster and Emergency Assistance Act (Stafford Act) was passed.<sup>22</sup> The Stafford Act remains the foundation for all federal disaster assistance provided to SLTT governments today. Under the Stafford Act, the President has the ability to issue PDDs once requested by the governor of an impacted state. Assistance is provided through DRFs, which are funded annually, and can be utilized to provide Public Assistance (PA), Individual Assistance (IA), and hazard mitigation

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<sup>18</sup> FEMA, “History of Disaster Legislation,” September 2008, 1.

<sup>19</sup> Ibid., 1.

<sup>20</sup> Bruce Lindsay and Justin Murray, “Disaster Relief Funding and Emergency Supplemental Appropriations,” Congressional Research Service, April 12, 2011, 4.

<sup>21</sup> Ibid., 4.

<sup>22</sup> Robert T. Stafford Disaster Relief and Emergency Assistance Act, as Amended 42 U.S.C. § 5121 et seq (2013).

assistance.<sup>23</sup> Although the governor may request any, or all of these forms of assistance, hazard mitigation assistance cannot be provided individually.<sup>24</sup> FEMA defines PA as “aid to public (and certain private non-profit) entities for certain emergency services and the repair or replacement of disaster damaged public facilities.”<sup>25</sup> IA, on the other hand, is any aid that is provided to individuals or households, which includes, for example, temporary housing, funds to rebuild or replace homes, small business loans, disaster related unemployment assistance, and crisis counseling.<sup>26</sup> The varying amounts of use for these forms of assistance will be discussed in the *Background* section.

The Stafford Act also created the Hazard Mitigation Grant Program (HMGP), which provides hazard mitigation assistance after a disaster.<sup>27</sup> This form of assistance focuses on reducing or eliminating long-term risks associated with disasters. The HMGP is authorized through *Section 404* of the Stafford Act and establishes a 75-25% federal-state cost share, and is limited to 15% of FEMA’s estimated total disaster costs for PA and IA combined, minus administrative costs.<sup>28</sup> Unlike PA and IA, HMGP funds can be used throughout an entire state, and not just in the impacted communities.<sup>29</sup> HMGP funds can be used for diverse actions such as acquiring and relocating properties, raising structures in flood prone areas, protecting buildings from wildfires, and also developing state or local mitigation plans.<sup>30</sup> Under the HMGP the state is provided funding with which it selects mitigation projects for assistance, based on multiple factors including but

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<sup>23</sup> Ibid., 4.

<sup>24</sup> FEMA, “A Guide to the Disaster Declaration Process and Federal Disaster Assistance,” July 21, 2014, 2.

<sup>25</sup> Ibid., 2-4.

<sup>26</sup> Ibid., 2-4.

<sup>27</sup> FEMA, “Overview of Federal Disaster Assistance,” 3.

<sup>28</sup> Ibid., 27.

<sup>29</sup> FEMA. “A Guide to the Disaster Declaration Process and Federal Disaster Assistance,” 4.

<sup>30</sup> Ibid., 5.



not limited to: level of risk noted in the area where project will be implemented, expected results, and cost-benefit of the project.

While post-disaster mitigation efforts were being addressed, FEMA identified a shortfall in pre-disaster mitigation efforts in the mid-1990s and proposed a pilot program called “Project Impact.”<sup>31</sup> This program, which was later defined as the Pre-Disaster Mitigation (PDM) program, provides funding for a vast array of mitigation projects prior to a disaster occurring. The need for pre-disaster mitigation efforts was critical and the FEMA Administrator described the original pilot program as an attempt to get “consumer buy-in,” as he felt that while post-disaster mitigation was necessary, the federal government needed local emergency managers to discuss ways to mitigate risks in their own communities prior to an incident occurring.<sup>32</sup> Although funding for the program was initially limited, the Disaster Mitigation Act of 2000 (DMA) authorized the PDM program as a section of the Stafford Act.<sup>33</sup>

The DMA is an important piece of legislation as it enhanced hazard mitigation and planning efforts at the SLTT levels. It also paved the way for additional guidance from FEMA on how SLTT entities can prepare for, and mitigate risks from, disasters. The DMA established requirements of eligibility for HMGP funds after a PDD was issued. State and local governments were required to produce a mitigation plan that described actions to mitigate hazards, risks, and vulnerabilities, as well as provide specific plans to implement those actions.<sup>34</sup> The DMA also authorized an additional 5% of total disaster spending, to states that had a FEMA approved enhanced mitigation plan,

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<sup>31</sup> Francis McCarthy and Natalie Keegan, “FEMA’s Pre-disaster Mitigation Program: Overview and Issues,” Congressional Research Service, July 10, 200, 1.

<sup>32</sup> Ibid., 5.

<sup>33</sup> Disaster Mitigation Act of 2000, Pub. L. No. 106-390, 114 Stat. 1552-1578 (2000).

<sup>34</sup> Ibid.

raising the amount of HMGP funds available to 20%.<sup>35</sup> States can utilize PDM funds to further develop their mitigation plans with the goal of having enhanced mitigation plans on file with FEMA in the event that a disaster was to occur. The Stafford Act and DMA have provided the foundation for FEMA to produce requirements and doctrines for mitigation planning through the Code of Federal Regulations, as well as a “how-to” guide for SLTT governments to develop their plans.

Another significant hazard mitigation action occurred in 2011 when President Barack Obama released the Presidential Policy Directive 8 (PPD8) on National Preparedness.<sup>36</sup> The PPD8 directed the establishment of a national preparedness system that includes prevention, protection, mitigation, response, and recovery as critical planning frameworks requiring documentation.<sup>37</sup> The heads of all executive departments and agencies that had a role in emergency management took part in developing the frameworks. PPD8 led to the creation of the National Mitigation Framework in 2013, which included the establishment of the Mitigation Framework Leadership Group, a group of coordinators for national mitigation efforts.<sup>38</sup>

While the above-mentioned efforts are some of the most important and critical components of hazard mitigation in the U.S. today, there have been numerous unsuccessful attempts to bolster mitigation efforts. For example, the Safe Building Code Incentive Act of 2011 and 2013 has been read on multiple occasions and was sent to the Senate Committee on Homeland Security and Governmental Affairs in 2013, but has yet

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<sup>35</sup> McCarthy and Keegan, “FEMA’s Pre-disaster Mitigation Program: Overview and Issues,” 43.

<sup>36</sup> White House, *Presidential Policy Directive 8: National Preparedness*, March 30, 2011.

<sup>37</sup> Ibid.

<sup>38</sup> *Role of Mitigation in Reducing Federal Expenditures for Disaster Response, Hearing before the Committee on Homeland Security and Governmental Affairs, U.S. Senate, 113<sup>th</sup> Congress* (2014 (statement of David Miller, Associate Administrator of the Federal Insurance and Mitigation Administration)).

to be fully supported.<sup>39</sup> This legislation would provide states that rebuild impacted communities utilizing state approved building codes with an opportunity to receive an increased maximum total of federal contributions by 4%.<sup>40</sup> This nationally recognized model-building code would have to be the minimum standard in the state and have been in place within six years of updated national codes. Another legislative initiative that has been unsuccessful is the Disaster Savings Account Act of 2013 and 2014.<sup>41</sup> These bills have been introduced, but have not received any further consideration. This legislation would provide a \$5,000 tax deduction to individuals that deposit money into a savings account with the goal of offsetting mitigation costs.<sup>42</sup> The Disaster Savings and Resilient Construction Act of 2012 and 2013, which has failed to gain traction, would provide tax credits to contractors and homeowners that took part in building or building homes using “modern business science.”<sup>43</sup> These are merely a few attempts to further promote hazard mitigation, but have unfortunately been unsuccessful at this point.

While a slight shift in focus at the federal level has opened the doors for hazard mitigation opportunities, more can be done. Federal involvement in disaster related assistance has evolved over the years, and recent legislation has shown that this responsibility will not end in the near future. Hazard mitigation efforts may be an effective way to reduce the costs associated with future disasters. Federal legislation has recently begun to identify ways to not only promote, but also require mitigation efforts at the SLTT levels. FEMA has been essential in this evolution, as they provide valuable guidance and doctrine to SLTT entities to assist them in preparing for and mitigating

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<sup>39</sup> SafeBuilding Code Incentive Act of 2013, S.905, 113<sup>th</sup> Cong. (2013).

<sup>40</sup> Ibid.

<sup>41</sup> Disaster Savings Accounts Act of 2013, H.R. 3298, 113<sup>th</sup> Cong. (2013).

<sup>42</sup> Ibid.

<sup>43</sup> Disaster Savings and Resilient Construction Act of 2012, H.R. 5839, 112<sup>th</sup> Cong. (2012).

risks of disasters. Although this progress is welcomed and undoubtedly has had a positive effect on future disaster spending, the federal government has an opportunity to further invest in hazard mitigation and greatly reduce future costs associated with disasters.

## **Background**

The federal government's role in disaster relief has greatly expanded since 1950. Prior to this, federal assistance was an anomaly, whereas today, it is routine. Federal spending associated with disaster response and recovery has skyrocketed, with \$136 billion spent between 2011 and 2013 alone.<sup>44</sup> While some of these expenditures came through the FEMA based DRF, additional supplemental appropriations have been passed to provide assistance. With disasters increasing in frequency and magnitude, continuing down this reactionary path will prove costly for taxpayers. While the benefit of investing in hazard mitigation has been well documented, the federal government has historically underfunded these efforts. Evidence to support that this problem exists hinges on the fact that the frequency and magnitude of disasters are increasing, losses associated with disasters are on the rise, federal response and recovery funding continues to increase, and hazard mitigation efforts are underfunded.

### **Key Point 1: Research shows disasters are increasing in frequency and magnitude**

In 2013, the U.S. Global Change Research Program released the National Climate Assessment that found severe weather events in the U.S. had increased in recent decades, with once considered "rare" events becoming more common.<sup>45</sup> During the 1980s, the U.S. experienced an average of two severe weather events that resulted in over \$1 billion

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<sup>44</sup> Weiss and Weidman, "Disastrous Spending: Federal Disaster-Relief Expenditures Rise."

<sup>45</sup> Weiss and Weidman, "Disastrous Spending: Federal Disaster-Relief Expenditures Rise."

in damages annually.<sup>46</sup> This number has since increased to an average of eight severe weather events annually over the last decade, demonstrating an increase in frequency and magnitude of weather related disasters.<sup>47</sup> The National Oceanic and Atmospheric Administration (NOAA) argues that in 2011 and 2012 the U.S. experienced some of the most extreme weather and climate conditions ever recorded in U.S. history. Sixty percent of U.S. counties and 40 plus states were affected by extreme weather that resulted in roughly \$190 billion in economic loss.<sup>48</sup> The 16 disasters that resulted in more than \$1 billion in losses were the most ever recorded in U.S. history in 2011.<sup>49</sup> In addition to weather related disasters, manmade and technological disasters are similarly increasing. While debates exist over changes in magnitude of these incidents, frequency of manmade events have nearly tripled in occurrence since the 1970s.<sup>50</sup>

Key Point 2: Losses associated with disasters are on the rise

The number of loss events in the U.S. has been steadily on the rise over the last 30 years. From 1995 to 2004, the U.S. averaged 96 loss events annually.<sup>51</sup> Over the last decade, this number has increased to an average of 155 loss events annually, an increase of roughly 280% in comparison to the averaged 55 annually from 1985 to 1994.<sup>52</sup> The majority of these losses were due to weather related events, such as hurricanes, tropical storms, and storm surge.<sup>53</sup> Nearly half of weather related disasters that resulted in over

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<sup>46</sup> Smith and Katz, "U.S. Billion-Dollar Weather and Climate Disasters," 388.

<sup>47</sup> NOAA, "*Billion-Dollar Weather and Climate Disasters: Summary States.*"

<sup>48</sup> Weiss and Weidman, "Disastrous Spending: Federal Disaster-Relief Expenditures Rise."

<sup>49</sup> NOAA, "*Billion-Dollar Weather and Climate Disasters: Summary States.*"

<sup>50</sup> Swiss Re, "Natural Catastrophes and Man-Made Disasters in 2013," *Sigma* 1, 2014, 45.

<sup>51</sup> *Rebuilding After the Storm-Lessening Impacts and Speeding Recovery, Hearing before the Committee on Transportation and Infrastructure, U.S. House of Representatives, 114<sup>th</sup> Congress* (2015) (statement of Robert Paulison, former Director of FEMA).

<sup>52</sup> Ibid.

<sup>53</sup> Ibid.

\$1 billion in losses since 1980 have occurred in the last ten years.<sup>54</sup> Since 2008, the number of extreme weather events that exceed \$1 billion in losses hit double digits three times, something that only happened once from 1980 to 2007.<sup>55</sup> Loss events in the U.S. exceeded \$50 billion five times from 2004 to 2013, something that never occurred in the 1980s, and only happened three times from 1990 to 2003.<sup>56</sup> The Natural Resources Defense Council found that in 2012 alone there was \$139 billion in damages associated with droughts, super storms, hurricanes, blizzards, heat waves, and wildfires.<sup>57</sup> This is not a trend only noticed in the U.S., as Munich Re, a German reinsurance company, found that real-dollar economic losses from natural disasters has increased from \$528 billion (1981 to 1990), to \$1.19 trillion (1991 to 2000), and to \$1.23 trillion (2001 to 2010) worldwide over the last three decades.<sup>58</sup>

*Key Point 3: Federal response and recovery expenditures continue to increase*

With an increase in frequency, magnitude, and losses in mind, federal disaster expenditures are too on an upswing. As previously discussed, PDDs provide federal funding to be provided to SLTT governments to assist in disaster response and recovery efforts. Federal disaster declarations have substantially grown since the 1970s, when roughly 45 disasters were declared annually.<sup>59</sup> This number increased to an average of 74 annually from 1990 to 1999, 127 from 2000 to 2008, and 128 since 2010.<sup>60</sup> Over 65% of all disaster declarations have occurred in the last two decades, although the program

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<sup>54</sup> NOAA, “Billion-Dollar Weather and Climate Disasters: Summary Stats.”

<sup>55</sup> Ibid.

<sup>56</sup> Munich Reinsurance Company, “2013 Natural Catastrophe Year in Review,” 8.

<sup>57</sup> NOAA, *Billion-Dollar Weather and Climate Disasters: Table of Events*, last modified December 31, 2014.

<sup>58</sup> Howard Kunreuther, Erwan Michel-Kerjan, and Mar Pauly, “Making America More Resilient Toward Natural Disasters: A Call for Action,” *Environment Magazine*, July-August 2013, 15-23.

<sup>59</sup> FEMA, “Disaster Declarations by Year,” last modified March 25, 2013.

<sup>60</sup> Ibid.

has been around for over 60 years.<sup>61</sup> With the federal cost share for PDDs a minimum of 75%, FEMA spending is on a similar upward trend. On average, FEMA's annual spending was roughly \$700 million in the 1980s, \$2.8 billion in the 1990s, and has remained around \$13 billion since the 2000s.<sup>62</sup>

Since 1989, FEMA has obligated more than \$175 billion through PDDs.<sup>63</sup> Due to disaster related expenses increasing a provision was included in the Budget Control Act of 2011 that required a review, and analysis, of federal disaster spending over the last decade.<sup>64</sup> The Office of Management and Budget (OMB) performed the review and found that, from 2001 to 2011, the U.S. government spent an average of \$11.5 billion on disaster relief annually, after excluding the highest and lowest years of spending.<sup>65</sup> This amount has been disputed by the Center for American Progress (CAP), which argues that this amount is grossly underestimated as OMB only included expenditures from 26 agencies and 11 federal departments.<sup>66</sup> CAP found that 96 agencies or programs in 19 federal departments provide some form of disaster response and recovery support, totaling roughly \$21 billion spent on disaster relief and recovery in 2011 alone, a grave difference in comparison to the OMB estimate of \$2.5 billion.<sup>67</sup> Upon review of data from 2011 to 2013, CAP found that the federal government spent \$136 billion on disaster relief, a tax responsibility of roughly \$400 per household, per year.<sup>68</sup> The CAP believes

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<sup>61</sup> FEMA, "Disaster Declarations by Year."

<sup>62</sup> Chris Edwards, "The Federal Emergency Management Agency: Floods, Failures, and Federalism," *CATO Institute*, November 18, 2014, 2.

<sup>63</sup> Ledyard King, "FEMA head: Rebuild Wisely After Disasters," *Tallahassee Democrat*, January 27, 2015.

<sup>64</sup> Office of Management and Budgets (OMB), *Report on Disaster to the Committees on Appropriations and the Budget of the U.S. House of Representatives and the Senate*, September 1, 2011, 1.

<sup>65</sup> *Ibid.*, 4.

<sup>66</sup> *Ibid.*, 5.

<sup>67</sup> Weiss and Weidman, "Disastrous Spending: Federal Disaster-Relief Expenditures Rise."

<sup>68</sup> *Ibid.*

that this could very well be the beginning of a “costly future as climate related extreme weather multiples.”<sup>69</sup>

*Key Point 4: Hazard mitigation efforts are minimally funded*

While conversations on the need to mitigate risks of future disasters continues, the World Bank found that mitigation efforts have long been underfunded and insignificant when compared to other disaster spending.<sup>70</sup> Worldwide, roughly 20% of humanitarian aid is now spent responding to disasters while less than 1% is spent on mitigation.<sup>71</sup> Hazard mitigation funding has routinely been overlooked and continues to be underfunded by the U.S. federal government even though the National Institute of Buildings Science’s Multi Hazard Mitigation Council (NIBS-MMC) estimates that, for every dollar invested in hazard mitigation, a benefit of \$4 is achieved.<sup>72</sup> In recent years, 50% of DRFs have been allocated to PA, which assist in rebuilding damaged infrastructure and debris removal, 29% to IA, and the remaining 21% to other costs, which include hazard mitigation, administrative costs, and mission assignments.<sup>73</sup> Recent GAO reported that FEMA spent more money on administrative costs than hazard mitigation and mission assignments combined from 2004 to 2013.<sup>74</sup>

Although a Hurricane Sandy supplemental appropriation totaled roughly \$50 billion, only \$349 million was appropriated to the FEMA HMGP.<sup>75</sup> Additionally,

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<sup>69</sup> Ibid.

<sup>70</sup> Alejandro de la Fuente, “Government Expenditures in Pre and Post-Disaster Risk Management,” *The World Bank*.

<sup>71</sup> “Counting the Cost of Calamities,” *The Economist*, January 14, 2012.

<sup>72</sup> *Role of Mitigation in Reducing Federal Expenditures for Disaster Response, Hearing before the Committee on Homeland Security and Governmental Affairs, U.S. Senate, 113<sup>th</sup> Congress (2014)* (statement of BuildStrong Coalition).

<sup>73</sup> Chris Edwards, “The Federal Emergency Management Agency: Floods, Failure, and Federalism,” 2.

<sup>74</sup> U.S. GAO, *FEMA: Opportunities Exist to Strengthen Oversight*.

<sup>75</sup> *Disaster Resilience, Hearing before the Committee on Homeland Security and Governmental Affairs*, (statement of Chris Currie).



appropriations from the DRF in response to Hurricane Sandy have exceeded over \$10.5 billion, but only \$214 million, roughly 2%, were allocated to mitigation efforts.<sup>76</sup> Estimates indicate that mitigation allocations could reach nearly \$1 billion by the end of 2015, which would result in 6% of total DRFs for Sandy to be mitigation based.<sup>77</sup> As of May 2014, there had been roughly \$8.5 billion invested through the HMGP since its creation, equating to approximately 5% of all DRFs spent in the same period.<sup>78</sup>

In regards to the PDM program, the President committed \$400 million to the program as part of the Opportunity, Growth, and Security Initiative in 2015. This is a significant increase for the program, as from 2005 to 2013 the program awarded roughly \$600 million in PDM funds to SLTT governments.<sup>79</sup> Annual funding has varied for the PDM program from \$100 million in 2007, to \$24 million in 2013, to \$63 million in 2014.<sup>80 81 82</sup> Recent reports also found that while roughly \$22 billion was spent on pre-disaster mitigation and resiliency efforts from 2011 to 2013, only \$10 billion was on FEMA based mitigation efforts, with the additional \$12 billion set-aside for agricultural efforts.<sup>83</sup> While the government's role in disaster relief and recovery is necessary, federal government efforts on hazard mitigation could be a significant step in establishing a long-term strategy focused on reducing losses and costs associated with future disasters.

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<sup>76</sup> FEMA, *Disaster Relief Fund Monthly Report: February 2015*, March 5, 2015.

<sup>77</sup> Ibid.

<sup>78</sup> *Role of Mitigation in Reducing Federal Expenditures, Hearing before the Committee on Homeland Security and Governmental Affairs* (statement of David Miller).

<sup>79</sup> FEMA, "Federal Insurance and Mitigation Administration Fact Sheet: Hazard Mitigation Grant Program (HMPG), Pre-Disaster Mitigation Grants (PDM), and Safe Rooms," May 25, 2013.

<sup>80</sup> McCarthy and Keegan, "FEMA's Pre-disaster Mitigation Program: Overview and Issues," 43.

<sup>81</sup> FEMA, "FY 2014 Pre-Disaster Mitigation (PDM) Grant Program," 4.

<sup>82</sup> FEMA, "Federal Insurance and Mitigation Administration Fact Sheet."

<sup>83</sup> *Rebuilding After the Storm, Hearing before the Committee on Transportation and Infrastructure*, (statement of Robert Paulison).

Federal spending cannot continue in its current fashion with the threat of disasters increasing in frequency and magnitude. SLTT bear the responsibility to protect their citizens. This includes preparing for, mitigating the risks of, responding to, and recovering from disasters. The federal government must be prepared to augment those efforts, not lead them. The current approach has led to the federal government providing nearly \$178 billion in DRFs since 1989, and OMB found that on average, the federal government spent \$11.5 billion on disaster relief from 2001 to 2011.<sup>84 85</sup> Mitigation efforts, although proven to be effective in reducing future costs, have only accounted for roughly 5% of DRFs since 1988.<sup>86</sup> The \$400 million appropriation in 2015 for the PDM program is merely 30% shy of the total funds issued from 2005 to 2013.<sup>87</sup> The evolution of the PDM program is ongoing, and while these funds are welcomed, in order to curtail costs of future disasters the federal government must further invest in hazard mitigation measures.

#### *Principals and Primary Constituents*

When it comes to discussing disaster spending and investing in hazard mitigation, the views of elected officials, the FEMA Administrator, private sector partners, and taxpayers, vary greatly. Representative Barletta, your role as the Chairman of the Subcommittee on Economic Development, Public Buildings, and Emergency Management has provided valuable dialogue on this subject and documented your commitment to further investigating disaster spending by the federal government, as well as a need for greater hazard mitigation measures. The recent “Rebuilding After the

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<sup>84</sup> King, “FEMA head: Rebuild Wisely After Disasters.”

<sup>85</sup> OMB, *Report on Disaster to the Committees on Appropriations and the Budget*, 4.

<sup>86</sup> *Role of Mitigation in Reducing Federal Expenditures*, Hearing before the Committee on Homeland Security and Governmental Affairs (statement of David Miller).

<sup>87</sup> FEMA, “Federal Insurance and Mitigation Administration Fact Sheet.”

Storm: Lessening Impacts and Speeding Recovery” hearing that you chaired provided a forum for subject matter experts to provide critical information on the evolution of disasters in the U.S. and strategies to reduce future spending. The Subcommittee is in the position to make significant strides to reduce future spending, and provide resources for hazard mitigation efforts. This is an investment you are surely familiar with, given the number of hazard mitigation projects you have supported in your own District in Pennsylvania.<sup>88 89</sup> While your commitment to “ease the post-storm suffering on a large scale simply by taking precautionary measures,” is welcomed, it has been difficult to accomplish given varying views on hazard mitigation, as you are aware.<sup>90</sup> Other elected officials, through varying legislation that was previously discussed in the *History* section, have echoed the support that you have provided for hazard mitigation measures.

While there is not widespread dissent from any individual or group when it comes to mitigation efforts, the fiscal climate has provided opportunities for Congressional leaders to take a stance against disaster funding overall. For example, Jim Inhofe (R-OK), John McCain (R-AZ), and former Congressman Tom Coburn (R-OK) all voted against the Hurricane Sandy relief due to varying reasons.<sup>91</sup> The opposition to this legislation was not based on disapproval of hazard mitigation, but instead intended to oppose the lack of an offset in other areas of the budget and argued the bill contained unnecessary spending. Congressman Inhofe deemed the bill as a “slush fund” and that

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<sup>88</sup> “Rep. Barletta Announces FEMA Buyout in Benton Township,” press release, Office of Congressman Lou Barletta, November 16, 2011.

<sup>89</sup> Ibid.

<sup>90</sup> “U.S. Rep. Lou Barletta: Let’s Brae for Natural Disasters with Better Building Strategies,” press release, Office of Congressman Lou Barletta, May 06, 2014.

<sup>91</sup> GovTrack, “H.R. 41: Hurricane Sandy Vote Totals.”

people were “exporting the tragedy” to areas outside heavily impacted NJ.<sup>92</sup> In the end, opposition to any disaster spending has involved varying beliefs on fiscal matters and the construction of the legislation, rather than a lack of support for hazard mitigation.

Within the White House there has been varying views on hazard mitigation and disaster relief. A study performed by the White House during the Nixon administration found that federal assistance “was so generous that individuals, businesses, and communities have little incentive to take initiative to reduce personal and local hazards.”<sup>93</sup> Vice President Al Gore later noted during his initiative to reinvent government during the 1990s that the federal disaster relief system “encourages state and local elected officials to ask for maximum federal assistance,” and, given that funds were available, it “may actually contribute to the disasters losses by reducing incentives for hazard mitigation and preparedness.”<sup>94</sup> While these brief quotes do not define the stance of the Administrations’ views on hazard mitigation, it does however demonstrate how long this topic has been discussed in the White House. While historical policy initiatives have already been discussed, it must be noted that the White House is a key principal when discussing hazard mitigation. This was recently shown when President Obama allocated roughly \$400 million for mitigation efforts as part of the Opportunity, Growth, and Security Initiatives in 2015. The current commitment could be used to promote additional mitigation efforts.

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<sup>92</sup> Christina Wilkie, “Oklahoma Senators Jim Inhofe, Tim Coburn, Face Difficult Options on Disaster Relief,” *The Huffington Post*, May 20, 2013.

<sup>93</sup> James F. Miskel, *Disaster Response and Homeland Security: What Works, What Doesn't* (Westport, CT: Praeger Security International, 2006), 127.

<sup>94</sup> Rutherford H. Platt, *Disasters and Democracy: The Politics of Extreme Natural Events* (Washington, D.C.: Island Press, 1999), 89.

The FEMA Administrator is also in a critical position to influence discussions pertaining to disaster spending and hazard mitigation. While law dictates the breakdown of funds, the FEMA Administrator is viewed as the subject matter expert for all matters involving disasters and must be included in this category. It should be noted that the White House appoints the FEMA Administrator and the Senate then confirms the individual, which may impact the individual's stance on issues. Administrator Fugate, the former Director of the Florida Division of Emergency Management from 2001 to 2009, rose to his position based on principles of preparing for and mitigating risks of disasters in the state.<sup>95</sup> His views on mitigation are clear and he recently emphasized a need to be "better stewards of taxpayer dollars," and to ensure focus is placed on making areas impacted by disasters less vulnerable to future incidents.<sup>96</sup> This is a similar view of the previous Administrator, Robert Paulison, who, during the same hearing, stated, "not enough resources are being allocated to pre-storm mitigation."<sup>97</sup>

Although the private sector is heavily impacted by disasters, its role in promoting hazard mitigation has been limited. While the National Federation of Independent Businesses found that almost 40% of small businesses do not reopen after a PDD is issued, limited conversations have occurred to mitigate risks at this level.<sup>98</sup> The majority of conversations have come from larger organizations, especially insurance providers as insured catastrophic losses from 1993 to 2012 averaged nearly \$20 billion annually.<sup>99</sup> Hurricane Sandy alone resulted in insured losses of nearly \$19 billion in 15 states and the

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<sup>95</sup> Jennifer Steinhauer and Michael S. Schmidt, "Man Behind FEMA's Makeover Built Philosophy on Preparation," *The New York Times*, November 03, 2012.

<sup>96</sup> King, "FEMA head: Rebuild Wisely After Disasters."

<sup>97</sup> *Rebuilding After the Storm, Hearing before the Committee on Transportation and Infrastructure*, (statement of Robert Paulison).

<sup>98</sup> "Protecting Your Businesses," FEMA, April 22, 2015.

<sup>99</sup> *Role of Mitigation in Reducing Federal Expenditures for Disaster Response*, (statement of BuildStrong Coalition), 9.

District of Columbia.<sup>100</sup> With mitigation in mind, multiple insurance companies have joined the BuildStrong Coalition. This partnership of over 35 businesses, consumer organizations, and various companies is promoting the need for model building codes as a way to mitigate hazards with the goal of having the Safe Building Code Act enacted into law.<sup>101</sup> Members of this coalition include, for example, the American Society of Civil Engineers, Congressional Fire Services Institute, Florida Emergency Preparedness Association, MetLife, Liberty Mutual, Nationwide Insurance, and State Farm, National Fire Protection Association.<sup>102</sup>

While the parties listed above all have a vested interest or role in this topic, voters can make the largest impact. A notable trend that has been noted is that the general public is unable to properly assess the level of risk or vulnerability of their home or community. GAO research found that residents in hazard prone areas often treat the likelihood of a disaster occurring in their community low, ignoring the potential consequences of a disaster ever taking place.<sup>103</sup> Although this report was from 1980, little has changed as a 2007 GAO report found that individuals often have a misperception that hazard events will not occur in their community.<sup>104</sup> More recently, in 2012, the National Research Council found that people might not only underestimate, but also be unaware of the hazards they face.<sup>105</sup> While some do recognize the need for mitigation efforts, they do not always see it through. A study of roughly 800 New York residents during Hurricane Irene found that only half of the individuals that had

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<sup>100</sup> Ibid.

<sup>101</sup> BuildStrong Coalition, "About Us," January 22, 2015.

<sup>102</sup> Ibid.

<sup>103</sup> *Disaster Resilience, Hearing before the Committee on Homeland Security and Governmental Affairs*, (statement of Chris Currie), 6.

<sup>104</sup> Ibid.

<sup>105</sup> National Research Council, *Disaster Resilience: A National Imperative*, (Washington, D.C.: The National Academies Press, 2012).

purchased storm shutters had actually installed them for the hurricane.<sup>106</sup> Additionally, research shows that individuals have historically been unable to accurately assess expected costs and benefits.<sup>107</sup> Although individuals can usually expect to have less than 20% of their losses from natural disasters covered by insurance coverage, they still fail to recognize the potential benefit in investing in mitigation.<sup>108</sup>

## **Policy Proposal**

With disasters increasing in frequency and magnitude, the federal government must seek ways to reduce losses and costs associated with future disasters. Based on forthcoming policy analysis, these proposals can be treated as stand-alone bills or joint legislation. The recommendation is for proposed amendments to be brought through the House Subcommittee on Economic Development, Public Buildings, and Emergency Management that you Chair.

### *Policy Proposal 1: Increase PDM Funding*

The PDM program is authorized through *Section 203 (42 U.S.C. § 5133)* of the Stafford Act (*42 U.S.C. § 5121*).<sup>109</sup> This proposal seeks to specifically amend *Section 203(m) (42 U.S.C. § 5133)* to reauthorize the PDM program from 2016 to 2020.<sup>110</sup> For each of the first three years (2016 to 2018), authorized appropriations to PDM will total 15% of the average DRFs expended over the five previous years, with 10% authorized appropriations for each of the subsequent years (2019 and 2020). The forthcoming policy analysis will be based on providing \$1 billion in PDM funds in 2016, 2017, and 2018,

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<sup>106</sup> Howard Kunreuther, Erwan Michel-Kerjan, and Mar Pauly, “Making America More Resilient Toward Natural Disasters: A Call for Action,” *Environment Magazine*, July-August 2013, 15-23.

<sup>107</sup> *Ibid.*, 17.

<sup>108</sup> Howard Kunreuther, Erwan Michel-Kerjan, and Mar Pauly, “Making America More Resilient Toward Natural Disasters: A Call for Action,” *Environment Magazine*, July-August 2013, 15-23.

<sup>109</sup> Robert T. Stafford Disaster Relief and Emergency Assistance Act, as Amended 42 U.S.C. § 5121 et seq (2013).

<sup>110</sup> *Ibid.*

and \$690 million in 2019 and 2020 respectively. This allocation is based on the DRF being funded at an average \$6.9 billion over the last 25 years.

*Policy Implementation Tool:*

The purpose of the current PDM program is to “reduce loss of life and property, human suffering, economic disruptions, and disaster assistance costs resulting from natural disasters.”<sup>111</sup> If passed, this legislation would provide over \$4.2 billion to SLTT entities to invest in hazard mitigation measures through the federally appropriated PDM grant program. There will be no changes to the actual implementation process of this grant program. FEMA will continue to allocate PDM funds to applicants as outlined in the FEMA Hazard Mitigation Assistance Guidance.<sup>112</sup>

*Policy Proposal 2: Reduce Federal Cost Share After Five-Year PDM Investment Period*

As outlined in the Stafford Act, the federal cost share for assistance provided after a disaster occurs is no less than 75%.<sup>113</sup> While the federal share can be increased in extreme situations, as was the case for Hurricanes Katrina, Ike, and Sandy, it has routinely been provided at the 75% level.<sup>114 115</sup> This proposal seeks to amend the federal cost share outlined in the Stafford Act from no less than 75%, to no less than 50% or 65%, effective 2021.<sup>116</sup> The recommendation on what level to move forward with will be decided based on the forthcoming policy analysis.

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<sup>111</sup> Disaster Mitigation Act of 2000, Pub. I. No. 106-390, 114 Stat. 1552-1578 (2000).

<sup>112</sup> FEMA, *Hazard Mitigation Assistance Guidance: Hazard Mitigation Grant Program, Pre-Disaster Mitigation Program, and Flood Mitigation Assistance Program*, February 27, 2015.

<sup>113</sup> Robert T. Stafford Disaster Relief and Emergency Assistance Act, as Amended 42 U.S.C. § 5121 et seq (2013).

<sup>114</sup> Bruce Lindsay, “FEMA’s Disaster Relief Fund: Overview and Selected Issues,” Congressional Research Service, May 7, 2014, 20.

<sup>115</sup> Francis McCarthy, “FEMA Disaster Cost-Shares: Evolution and Analysis,” *Congressional Research Service*, March 09, 2010.

<sup>116</sup> Robert T. Stafford Disaster Relief and Emergency Assistance Act, as Amended 42 U.S.C. § 5121 et seq (2013).



### *Policy Implementation Tool:*

In order to accomplish this change, an amendment to the Stafford Act will be required. This proposal will change the federal and state cost share for all DRFs that are issued to SLTT entities after a disaster has occurred effective 2021. There would be no changes to the requirements or thresholds that must be met to be eligible for federal assistance as this is merely a reduction in the cost share ratio. The legislation would specifically outline that implementation will occur five years after being signed into law. This grace period will provide states the opportunity to prepare for this reduction in available fiscal assistance. In support of SLTT entities, the FEMA Administrator, as directed by the President, shall provide materials and guidance to assist states in preparation for this change within 120 days of the legislation being signed into law.

### **Policy Analysis**

The forthcoming policy analysis will describe the benefits and costs of the policy proposals that have been provided. With disasters increasing in frequency and magnitude, the federal government must investigate ways to lessen impacts and losses from future disasters, as well as decrease federal spending of DRFs going forward.

### *Policy Proposal 1: Increase PDM Funding*

This proposal seeks to fund mitigation efforts prior to a disaster ever occurring, as studies show that pre-disaster mitigation is an effective approach for reducing future losses. Any attempt to reduce future federal spending on disasters should seek to reduce losses at the SLTT levels. While disaster losses do not directly equate to federal spending, they do play a significant role in the decision making process, especially when deciding whether to recommend a PDD or not. A benefit-cost analysis (BCA) performed

by members of the NIBS-MMC estimates that, for every dollar that is invested in hazard mitigation, \$4 in benefits is achieved.<sup>117</sup> This is the most widely utilized and cited hazard mitigation study found today. The NIBS-MMC applied the BCA to a sample of nearly 5,500 FEMA mitigation grants from 1992 to 2003.<sup>118</sup> The grants were provided to perform hazard mitigation activities to reduce impacts from earthquakes, floods, and wind hazards. Overall, the NIBS-MMC found that the nearly 5,500 grants that they analyzed had a net benefit to society of approximately \$14 billion, in comparison to the cost of \$3.5 billion (2004).<sup>119</sup>

In a scenario based BCA, it was found that hazard mitigation investments directed towards reducing impacts from earthquakes and hurricanes were extremely cost effective as well. For example, when discussing a 50-year hurricane event, physical losses prior to performing hurricane mitigation efforts (estimated cost of 5% to 10% of total home value), would have resulted in nearly \$40,000 in physical losses, and over \$55,000 in total losses.<sup>120</sup> Mitigation efforts would result in a 26% benefit from reduced physical losses, and 22% benefit from reduced total losses.<sup>121</sup> The research also found that if a homeowner installed seismic hold-downs on a typical one-story home, it would cost between \$2,000 and \$4,000.<sup>122</sup> The benefit for this investment was a reduction in losses of roughly 47% in a 1,000-year earthquake event, and nearly 35% in a 2,475-year

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<sup>117</sup> *Role of Mitigation in Reducing Federal Expenditures for Disaster Response*, (statement of BuildStrong Coalition), 9.

<sup>118</sup> Adam Rose, Keith Porter, Nicole Dash, Jawhar Bouabid, and Charles Huyck, “Benefit-Cost Analysis of FEMA Hazard Mitigation Grants,” *Natural Hazards Review* 8:4(97), November 2007.

<sup>119</sup> *Ibid.*

<sup>120</sup> Yue Li, “Assessment of Damage Risks to Residential Buildings and Cost-Benefit of Mitigation Strategies Considering Hurricane and Earthquake Hazards,” *Journal of Performance of Constructed Facilities*, January/February 2012.

<sup>121</sup> *Ibid.*

<sup>122</sup> *Ibid.*

earthquake event.<sup>123</sup> Additionally, upon review of over 20 mitigation investments in developing countries, with few exceptions, similar benefit-cost ratios were found.<sup>124</sup> These mitigation projects included planting mango trees to provide protection from tsunamis, and moving schools from areas determined to be hazardous.<sup>125</sup>

The World Bank and U.S. Geological Survey predicted a \$40 billion investment in prevention, mitigation, and preparedness, could reduce \$400 billion in economic losses by roughly \$280 billion, when discussing disaster losses during the 1990s.<sup>126</sup> This estimate is nearly double the NIBS-MMC estimate, with a benefit of \$7 for every dollar in spending. In 2013, the federal government allocated over \$30 million in funding for the PDM program, which resulted in over \$90 million in losses avoided.<sup>127</sup> Given that the NIBS-MMC analysis found an average benefit of \$4 on the over 5,500 grants analyzed, it is likely that this proposal will meet the goal of maintaining this ratio over the five years of increased funding. Given the total investment of \$4.38 billion in PDM funding, the program would also likely lead to a reduction in disaster losses of over \$10 billion, reaching the second goal of this proposal.

When it comes to efficiency, multiple sources argue that investing in pre-disaster measures, including mitigation and preparedness, is considered to be more cost-effective than post-disaster efforts, such as response and recovery.<sup>128</sup> Current DRF usage fails to efficiently utilize allocated hazard mitigation resources as from 2000 to 2013, roughly

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<sup>123</sup> Ibid.

<sup>124</sup> Howard Kunreuther and Erwann Michel-Kerjan, "Natural Disasters," *Copenhagen Consensus*, April 12, 2012.

<sup>125</sup> Ibid.

<sup>126</sup> C.M. Shreve and I. Kelman, "Does Mitigation Save? Reviewing cost-benefit analyses of disaster risk reduction," *International Journal of Disaster Risk Reduction* 10 (2014).

<sup>127</sup> *Role of Mitigation in Reducing Federal Expenditures for Disaster Response*, (statement of Chad Berginnis).

<sup>128</sup> Nezihi Altay, Sameer Prasad, and Jasmine Tata, "A Dynamic Model for Costing Disaster Mitigation Policies," *Disasters* 37 (3), 2013.

70% (\$88 billion) of all DRF allocations went to only ten states.<sup>129</sup> These ten states accounted for one in three PDDs from 1953 to 2011.<sup>130</sup> Continuing to see the same states requesting assistance is not surprising, as hazard mitigation resources have been underutilized. While the Stafford Act allows for states with approved hazard mitigation plans to receive up to 15% or 20% of the total disaster cost through the HMGP, the program accounted for only 4% of DRF allocations from 2004 to 2011.<sup>131</sup> One potential reason for this is that mitigation efforts post-disaster are often overlooked when community redevelopment is occurring and businesses and residents desire hazard prone areas.<sup>132</sup>

SLTT governments have struggled to find an efficient balance between economic gains and funding for public safety.<sup>133</sup> Currently, there are nearly \$10 trillion in potential insured assets in hurricane prone areas along the coast from Maine to Texas.<sup>134</sup> Although these coastal areas only account for approximately 3% of the U.S. landmass, roughly 15% of the U.S. population resides in these areas.<sup>135</sup> One in six marine jobs in the U.S. and nearly one third of gross national product comes from these coastal regions.<sup>136</sup> They remain at risk as federal funding has inefficiently focused on response and recovery efforts, with limited focus on hazard mitigation, especially prior to a disaster occurring. Current legislation and fiscal appropriations make it difficult for states to receive hazard mitigation funding if a PDD has not been issued for their community.

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<sup>129</sup> Bruce Lindsay and Francis McCarthy, “Stafford Act Declarations 1953-2011: Trends and Analyses, and Implications for Congress,” *Congressional Research Service*, August 31, 2012.

<sup>130</sup> *Ibid.*

<sup>131</sup> Stephanie Sanok Ostro and Garrett Riba, “Achieving Disaster Resilience in U.S. Communities,” 4.

<sup>132</sup> U.S. Government Accountability Office (GAO), “*Disaster Resilience*,” 10.

<sup>133</sup> *Ibid.*

<sup>134</sup> “Counting the Cost of Calamities,” *The Economist*, January 14, 2012.

<sup>135</sup> *Role of Mitigation in Reducing Federal Expenditures for Disaster Response*, (statement of BuildStrong Coalition), 9.

<sup>136</sup> Stephanie Sanok Ostro and Garrett Riba, “Achieving Disaster Resilience in U.S. Communities.”

This proposal also seeks to correct an equity issue surrounding access to hazard mitigation funding, as the vast majority of mitigation expenditures are tied to PDDs. Equity for this specific proposal is defined as the ability for states, regardless of the issuance of a recent PDD, to have access to hazard mitigation funding prior to a disaster occurring. While previously discussed HMGP funding is available to an entire state after a PDD is issued, states that rarely encounter such declarations rely heavily on the PDM program. However, PDM grants have historically received limited funding, leading to significant demand, with applications often exceeding available funds by nearly three times.<sup>137</sup> Providing pre-disaster opportunities could alleviate the lack of equity surrounding the current program, and increase access to those in areas of risk.

While many of the benefits of increasing funding for the PDM program have been outlined in this analysis, there are costs that must be taken into account. The most significant item to discuss is an argument that originated in the late 1960s and is still discussed today: disasters do not have a meaningful impact on a national economy.<sup>138</sup> The argument is that, while disasters impact local economies, they rarely will impact states, and do not impact national level markets. This is due in part to the belief that, regardless of the amount of damage that occurs, the number of people in a national level market to divide those damages by is so large that impacts will be minimal, and often nonexistent.<sup>139</sup> For example, one of the worst pandemics in history occurred from 1918

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<sup>137</sup> *Role of Mitigation in Reducing Federal Expenditures for Disaster Response*, (statement of Chad Berginnis).

<sup>138</sup> Terry Clower, "Economic applications in disaster research, mitigation, and planning," *Center for Economic Develop and Research-University of Texas*.

<sup>139</sup> *Ibid.*, 11.

to 1920. Although between 20 and 50 million people died, and an estimated one in four people around the globe were ill, it had no major effect on the world economy.<sup>140 141</sup>

Although there was approximately \$50 billion in economic losses from Hurricane Sandy, property damage accounted for less than 0.2% of GDP.<sup>142</sup> Property damage from Hurricane Katrina, which some argue was the worst storm in U.S. history, only accounted for 0.9% of GDP.<sup>143</sup> Moody's Analytics found that although there was \$20 billion in lost output and \$30 billion in property damage after Hurricane Katrina, the impact to real GDP was very small and did not alter their GDP outlook for the U.S.<sup>144</sup> Goldman Sachs goes one step further, arguing that natural disasters will initially show a modest negative impact of a few tenths of a percent, but that this is immediately balanced in the coming months and results in no significant impact to GDP.<sup>145</sup> A representative from Goldman Sachs stated that; while there is little good to come from disasters, "the overall macro picture doesn't change much," do to them.<sup>146</sup> This raises questions about the effectiveness and efficiency of using federal funding to mitigate risks of disasters, especially given the limited national level impacts that they have.

Another consequence of funding PDM at this level is that disaster losses do not equal money saved. While this is not a goal of this specific proposal, it is an overarching goal that must be considered. When attempting to pass legislation that sets aside over \$4 billion in funding, there must be recognizable gains from the investment. A significant

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<sup>140</sup> Ibid., 11

<sup>141</sup> Centers for Disease Control, "Pandemic Flu History," U.S. Department of Health and Human Services, 2014.

<sup>142</sup> Mark Zandi, "The Economic Impact of Sandy," Moody's Analytics, November 1, 2012.

<sup>143</sup> Ibid.

<sup>144</sup> Ibid.

<sup>145</sup> Joe Weisenthal, "Goldman: Here's the Economic Impact of Hurricane Sandy," *Business Insider*, October 21, 2012.

<sup>146</sup> Ibid.

drawback to this proposal is that funds are appropriated annually, while the expected benefits extend over the life of the project completed, or mitigation activity that was performed.<sup>147</sup> There is no immediate return on investment that can be quantified. Additionally, the return is highly uncertain as the benefit is only realized once a disaster has occurred.<sup>148</sup> This is an investment to attempt to reduce future losses from phenomena that are not guaranteed to happen.

Although the most commonly utilized statistic in hazard mitigation declares it achieves a benefit of \$4 for every \$1 spent, this does not tell the entire story. This was the average of the 5,500 mitigation grants analyzed. Not all grants performed as well as this, which may be a limitation in this proposal as PDM is an all-hazards grant program. The NIBS-MMC found that earthquake mitigation project averaged a 1.4 benefit, in comparison to an average of 4.7 for wind projects, and 5.1 for flood projects.<sup>149</sup> While all three projects had positive benefits, all may not achieve the level of return on investment that the federal government desires. This should be considered when deciding on the direction of PDM funding, as a goal of this proposal is to achieve a 4 benefit ratio on all costs is a goal of this proposal.

Lastly, there are concerns about how this program will be funded. With the current sequestration in place, cuts in other discretionary funding will be necessary to increase PDM funding. Reducing federal spending, which has been a popular topic of discussion recently, has left no shortage in literature identifying wasteful governments programs where cuts could be made. The Heritage Foundation identified multiple wasteful programs costing the federal government billions. For example, the Housing

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<sup>147</sup> Adam Rose, et al., “Benefit-Cost Analysis of FEMA Hazard Mitigation Grants.”

<sup>148</sup> Ibid.

<sup>149</sup> Ibid.

and Urban Development ran Community Block Development Program duplicates efforts of other government programs and has strayed from its original plan to provide housing assistance and economic development to low-income neighborhoods.<sup>150</sup> Cutting this program would save over \$3 billion. Another program is the Jobs Corps, which attempts to assist disadvantaged youth from 16 to 24.<sup>151</sup> The program has a track record of being inefficient and costs \$1.6 billion. This would offset the increase needed to fund the PDM at \$1 billion for the first three years. Additional literature outlines the many programs that are argued to be inefficient or ineffective at meeting their expected goals.<sup>152 153 154</sup>

*Policy Proposal 2: Reduce Federal Cost Share After Five-Years PDM Investment Period*

In an attempt to reduce future federal spending on disaster relief, this proposal seeks to reduce the amount of federal cost share for DRFs to either no less than 50%, or no less than 65%, from the current 75%.<sup>155</sup> While the federal cost share has sometimes been provided at levels greater than 75%, for the sake of this analysis we will assume that all DRFs were provided at a 75-25% cost share between the federal government and state receiving assistance. Additionally, this analysis will use historical data on DRF usage to project future cost savings. This proposal seeks to reduce the amount of federal spending through DRFs by \$10 billion over the next 10 years.

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<sup>150</sup> Romina Boccia, “10 Programs to Eliminate in the January 2014 Spending Bill and Save \$10.2 Billion,” *The Heritage Foundation*, January 03, 2014.

<sup>151</sup> Ibid.

<sup>152</sup> Chris Edwards, “A Plan to Cut Federal Spending,” *Cato Institute*, May 2014.

<sup>153</sup> Randal O’Toole, “How to make federal transit funding less wasteful,” *The Examiner*, April 29, 2015.

<sup>154</sup> Doug Bandow, “Now’s the Time to Start Cutting Wasteful Government Programs,” *Forbes*, January 16, 2012.

<sup>155</sup> Robert T. Stafford Disaster Relief and Emergency Assistance Act, as Amended 42 U.S.C. § 5121 et seq (2013).



The federal government has provided over \$173 billion in DRFs over the last 25 years.<sup>156</sup> This number includes annual appropriations, as well as supplemental appropriation to the DRF when it is depleted due to increased usage. Supplemental appropriations to the DRF have been provided in all but seven years since 1991 (including 2015).<sup>157</sup> With the assumption that all DRFs were provided at the 75% cost share, the federal government provided \$173 billion in response to an approximated \$231 billion in damage and associated impacts from disasters during this period. Altering the federal cost share from 75% to 65%, would equate to a savings of nearly \$23 billion over the 25-year period. The savings would be greater if the cost share were reduced to 50%; the federal government would have reduced DRF spending by over \$57 billion from 1991 to 2013.

While the DRF has been funded at nearly \$7 billion annually over the last 25 years, this number has risen over the last five years to an average of nearly \$9.5 billion annually.<sup>158</sup> This is a significant increase. While the initial projection of savings was based on actual appropriations to the DRF, this projection will be based on assumed DRF usage. If the DRF continues to be funded at the \$9.5 billion level, we can assume this is provided in response to approximately \$12.6 billion in disaster related impacts. A reduction in the cost share from 75% to 65% could result in a savings to the federal government of roughly \$1.3 billion annually.

This could potentially lead to \$13 billion in savings over a 10-year period. Reducing the cost share to 50%, would result in a \$3.2 billion reduction in expenditures annually, and a

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<sup>156</sup> Bruce Lindsay, "FEMA's Disaster Relief Fund: Overview and Selected Issues," 8-9.

<sup>157</sup> Bruce Lindsay and Justin Murray, "Disaster Relief Funding and Emergency Supplemental Appropriations," 4.

<sup>158</sup> Bruce Lindsay, "FEMA's Disaster Relief Fund: Overview and Selected Issues," 8-9.

\$32 billion reduction over a 10-year period. According to these projections, both proposed reductions would meet the goal of reducing DRF funding by \$10 billion over a 10-year period.

Reducing the federal cost share may also address concerns about equity, or the ability for each individual to pay a proportionate share of the DRF based on their level of risk, as well. While the entire country is subject to some degree of risk associated with disasters occurring in their area, the level of risk, type of disaster, and magnitude of potential impacts vary greatly due to, for example, a difference in demographic circumstances, climate, topography, and economics, just to name a few.<sup>159</sup> That being said, individuals who choose to live in states with modest to low risk of disasters occurring, such as Ohio, Virginia, Idaho, and New Mexico, are equally responsible for funding the DRF as individuals who choose to live in high-risk areas like Florida and Louisiana. Research shows that individuals have historically been unable to accurately assess expected costs and benefits, especially from disasters.<sup>160</sup> This is complicated by the expected assistance from the federal government after a disaster has occurred.

People tend to choose to live in high-risk areas, in part, due to a moral hazard surrounding disaster assistance from the federal government. Although individuals assume a level of risk to live in areas often impacted by disasters, they do not feel the full burden of their decision. The current 75% offering from the federal government balances the responsibility throughout the national tax base, providing no incentive, or consequence, to those who chose to live in less or more disaster prone areas. Upon review of DRF expenditures from 2004 to 2011, it was noted that 34 states had a zero to

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<sup>159</sup> David Wildasin, "Disaster Avoidance, Disaster Relief, and Policy Coordination in a Federation," *University of Kentucky*, July 2008.

<sup>160</sup> *Ibid*, 17.

negative \$126 net DRF contribution per capita, compared to only 16 states that had a positive benefit.<sup>161</sup> Some argue that providing federal assistance after a disaster establishes the moral hazard for subnational and private sector partners as well. STLL entities, as well as private sector partners will invest minimal amounts in mitigation and disaster avoidance due to the moral hazard that is created.<sup>162</sup> Reducing the cost share by the proposed 10% or 25% could reduce this inequity and place additional responsibility on individuals, as well as SLTT governments.

With the current 75% federal cost share, the federal government is assuming the majority of the responsibility when it comes to financial assistance for disaster relief and recovery. Some have argued that the current Stafford Act cost share incentivizes states to request federal assistance whenever possible, as well as focus less on preparedness measures, as the federalization of disasters has increased in recent decades.<sup>163</sup> A FEMA supported study on repetitive flood loss victims found that the 25% cost share is a disincentive for the household to take further actions.<sup>164</sup> The study found that federal assistance actually made people more reluctant to execute mitigation efforts, or to vacate their risky location for a safer area.<sup>165</sup>

While these options may work to achieve the goal of reducing federal spending on disaster relief, it must be noted that any reduction in federal assistance leads to an increase in state responsibility. Given these projections, states would be responsible for

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<sup>161</sup> Mark Skidmore, "Natural Disaster Preparedness and Recovery: Issues and Policy Options," *National Agricultural & Rural Development Policy Center*, August 07, 2013.

<sup>162</sup> David Wildasin, "Disaster Avoidance, Disaster Relief, and Policy Coordination in a Federation," *University of Kentucky*, July 2008.

<sup>163</sup> David Inserra, "FEMA Reform Needed: Congress Must Act," *The Heritage Foundation*, February 04, 2015.

<sup>164</sup> Edward Kick, James Fraser, Gregory Fulkerson, Laura McKinney, and Daniel DeVries, "Repetitive flood victims and acceptance of FEMA mitigation offers: an analysis with community-system policy implications," *Disasters* 35(3), January 01, 26, 2011.

<sup>165</sup> Edward Kick, et. Al., "Repetitive flood victims and acceptance of FEMA mitigation offers."

the difference in funding for disaster relief going forward. The federal government would maintain the ability to increase the cost share from the proposed 50% or 65%, but in most situations, states would be responsible for making up for the reduction from 75%. For example, Alabama received \$2.7 billion in DRFs from 2000 to 2013.<sup>166</sup> While the majority of these funds were provided due to national level storms (Hurricanes Katrina and Ivan), it did however receive \$720 million in DRFs due to severe weather in 2011.<sup>167</sup> In an attempt to show the impact this cost share reduction would have on Alabama, a review of their budget for 2011 is necessary.

The Alabama budget in 2011 was roughly \$1.5 billion, with over \$130 million dedicated to the Alabama Emergency Management Agency, and an additional \$2 million appropriated to an emergency fund.<sup>168</sup> Given that \$720 million in DRFs were provided, we can assume that Alabama provided \$240 million in funds due to the severe weather event that occurred in 2011. If the cost share were decreased by 10%, Alabama would have been required to provide an additional \$96 million, roughly 6% of its 2011 operating budget. Had it been responsible for a 50% cost share, this would have cost roughly \$480 million, over 30% of its operating budget for the fiscal year. The impacts of this policy change could cause significant issues for states' budgets, especially with many states still recovering from the recession. While this is only one example, this is a matter that must be taken into account when discussing the reduction in federal cost share for disaster relief going forward.

### **Political Analysis**

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<sup>166</sup> "FEMA DRF Major Disaster Assistance: Alabama," *Congressional Research Service*, January 28, 2015.

<sup>167</sup> Ibid.

<sup>168</sup> State of Alabama: Executive Budget, Fiscal Years 2013.

In order to make a recommendation on the proposals included in this paper, a political analysis that reviews the key stakeholders, current political environment, potential benefits, and costs of the legislation, as well as a review of public opinion surrounding federal spending and hazard mitigation, is necessary.

*Policy Proposal 1: Increase PDM Funding*

Upon review of key stakeholders, the discussion pertaining to this proposal begins with the American public. Hazard mitigation spending is often not popular with taxpayers, in part, due to the lack of immediate results and visible benefits from the program.<sup>169</sup> Additionally, the fact that hazard mitigation is a long-term investment that may never come to fruition is another concern.<sup>170</sup> Instead, voters tend to support and provide incentives (votes) to elected officials for policies with short-term and recognizable gains.<sup>171</sup>

Research indicates that many citizens are disinterested in politics, and lack details on policy specifics, which may lead to a misunderstanding of preparedness and mitigation policies or their inherent benefits.<sup>172</sup> Here a public awareness campaign may promote mitigation efforts. Internationally, public awareness campaigns and focused messaging have been used to present information about the economic efficiency and effectiveness of hazard mitigation.<sup>173</sup> This has helped to manage expectations, as well as obtain general acceptance by citizens and politicians, to fund mitigation activities.<sup>174</sup>

Another issue that must be addressed in the messaging is that the American public

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<sup>169</sup> Stephanie Sanok Ostro and Garrett Riba, "Achieving Disaster Resilience in U.S. Communities," 18.

<sup>170</sup> Andrew Healy and Neil Malhotra, "Myopic Voters and Natural Disaster Policy," *American Political Science Review* 103(3), August 2009.

<sup>171</sup> Ibid.

<sup>172</sup> Ibid.

<sup>173</sup> U.S. Agency for International Development, "Caribbean Disaster Mitigation Project," Organization of American State's Unit, December 1997.

<sup>174</sup> Ibid.

believes the federal government wastes 51 cents of every dollar spent.<sup>175</sup> The previously documented policy analysis included statistics on the effectiveness of reducing future losses and efficiency in using federal funds for mitigation projects, compared to using federal funds on response and recovery measures. Available data can be used to educate the public and other elected officials and garner support for proposed funding.

Although support for pre-disaster spending has been difficult to obtain, interviews with individuals who participated in the original PDM program, Project Impact, found that the participants greatly valued the program.<sup>176</sup> Additionally, counties that participated in Project Impact saw a change in Democrats' vote share of nearly 2% from 1996 to 2000, when compared with counties that did not participate.<sup>177</sup> (Additional analysis on political gains associated with distributive benefits is covered in the DRF policy analysis section). While Democrats have historically benefitted from distributive benefits like the PDM program, this is a policy that Republican leaders can utilize for similar gains.<sup>178</sup> This proposal is in line with Republican' desires to reduce federal spending (long-term investment), stabilize the economy, and promote job creation.<sup>179</sup> The previously discusses reductions in losses from disasters could result in a substantial reduction in federal spending on disaster relief in the future. Additionally, mitigation efforts have historically played a role in creating jobs and promoting state and local economies. The Florida Department of Emergency Management notes that \$811 million in mitigation spending from 2004 to 2011 has resulted in an economic output of

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<sup>175</sup> Rebecca Riffken, "Americans Say Federal Gov't Wastes 51 Cents on the Dollar," *Gallup*, September 17, 2014.

<sup>176</sup> Andrew Healy and Neil Malhotra, "Myopic Voters and Natural Disaster Policy."

<sup>177</sup> Ibid.

<sup>178</sup> Jeffery Lazarus, "The Electoral Benefits of Distributive Spending," *Political Research Quarterly* 63(2), June 2010.

<sup>179</sup> John Boehner and Mitch McConnell, "Now We Can Get Congress Going," *The Wall Street Journal*, November 5, 2014.

approximately \$1.6 billion and has resulted in the creation of over 12,000 full time positions that average an annual salary of over \$50,000.<sup>180</sup>

Additionally, support for the PDM can be gained through the utilization of key stakeholders like the current and former FEMA Administrators. These individuals have been vocal about the lack of hazard mitigation funding in the U.S. Former FEMA Administrator Robert Paulison stated post-disaster legislation is “reactive and poorly constructed, without the proper criteria and controls to guide efficient allocation of money.” He believes pre-storm mitigation would be more beneficial.<sup>181</sup> Additionally, current FEMA Administrator Craig Fugate will be a key stakeholder capable of providing assistance due to his previous position as the Florida Division of Emergency Management Director. Administrator Fugate also understands the needs of SLTT communities and could be a great resource to bridge communication between federal and state components to not garner support for this legislation. Support can also be found within the Congressional Hazard Caucus, which focuses on promoting preparedness, mitigation, and response to disasters.<sup>182</sup> The Caucus is comprised of many organization including the American Red Cross, Association of State Flood Plain Managers, Council of State Governments, and Wells Fargo. While the Caucus has support from some large private sector organizations, many of them are insurance companies, which would benefit from the proposed legislation.

There are also concerns about the allocations of PDM funds if this proposal is passed. Concerns stem around other programs, like the Highways Trust Fund (HTF),

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<sup>180</sup> Florida Department of Emergency Management, “Economic Impact Analysis,” Bureau of Mitigation, 2011.

<sup>181</sup> *Rebuilding After the Storm, Hearing before the Committee on Transportation and Infrastructure*, (statement of Robert Paulison).

<sup>182</sup> “Congressional Hazards Caucus Factsheet,” American Geosciences Institute, 2013.

where appropriations have been earmarked for political gains. The 2005 HTF reauthorization included nearly 6,000 earmarks, resulting in approximately \$25 billion in HTF spending.<sup>183</sup> The earmarks were utilized to fund specific projects in the districts or home states of Congressional leaders.<sup>184</sup> Additionally, a GAO report found that from 2004 to 2008, the Department of Transportation allocated nearly \$80 billion in HTF for purposes other than construction and maintenance of highways and bridges, including projects for scenic beautification and behavioral research, for example.<sup>185</sup> While this is a concern considering the appointment process for the FEMA Administrator, it should not deter this project. This is something that must be taken into account though, as the goal is to fund projects based on the amount of hazard reduction and cost effectiveness, not political agendas.

While a recent poll found that only 16% of potential voters support increases in federal spending, the ability of this proposal to reduce future losses and the overall efficiency of the program to maximize benefits from the spending make this a viable policy option.<sup>186</sup> Additionally, the fact that the PDM has historically been funded at low levels and subject to large amounts of competition will assist in garnering support for this legislation.<sup>187</sup> Actions must be taken to ensure that messaging surrounding this proposal demonstrates the benefits it can have to both loss reduction, and the economy and job creation, two topics that resonate with the Republican base and voters today.

#### *Policy Proposal 2: Reduce Federal Cost After Five-Year PDM Investment Period*

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<sup>183</sup> “Pork Over Transportation Priorities,” Taxpayers for Common Sense, August 9, 2007.

<sup>184</sup> Erich Zimmerman, “The Highway Trust Fund,” Taxpayers for Common Sense, January 18, 2012.

<sup>185</sup> Senators Tom Coburn and John McCain, “Out of Gas: Congress Raids the HTF for Pet Projects While Bridges and Roads Crumble,” *American Trails*, July 07, 2009.

<sup>186</sup> “Voters Prefer Federal Budget with Spending Cut, No New Taxes,” Rasmussen Reports, February 02, 2015.

<sup>187</sup> *Role of Mitigation in Reducing Federal Expenditures for Disaster Response*, (statement of BuildStrong Coalition), 10.



While this proposal seeks to reduce future federal spending on disaster relief, the political feasibility of passing this legislation depends on views of a few key stakeholders. As was shown in a Gallup conducted survey, 85% of Americans polled were dissatisfied with the nation's finances.<sup>188</sup> The majority of voters support budget cuts, with only one in five believing the current spending levels should remain the same.<sup>189</sup> The budget deficit remains a "top priority," as noted by 65% of respondents in the annual public policy poll conducted by the Pew Research Center. There is a 17% difference between individuals that represent as Democrat (55%) and those that identify as Republican (72%) when discussing budget deficit as a priority in 2015, which must be taken into account.<sup>190</sup> However, the majority of Democrats still see it as a top priority, which will benefit this proposal.

While the American public has shown a clear desire to reduce spending, they are largely in support of FEMA operations and the federal government providing assistance to those in need. Polling data from 2013 found that 75% of respondents were satisfied with the federal government's response to natural disasters, a substantial increase from the 33% after Katrina in 2005.<sup>191</sup> This is critical information that must be used when discussing the proposal with constituents. It will be important when describing the legislation to ensure people understand that federal response to disasters will not change. The federal government will still be able to provide the same level of assistance as it does today, however routine-funding levels will differ if the cost share is reduced.

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<sup>188</sup> "Congressional Hazards Caucus Factsheet," American Geosciences Institute, 2013.

<sup>189</sup> "Voters Prefer Federal Budget with Spending Cut, No New Taxes," Rasmussen Reports.

<sup>190</sup> Public's Policy Priorities Reflect Changing Conditions at Home and Abroad," Pew Research Center, January 15, 2015.

<sup>191</sup> Jeffrey Jones and Steve Ander, "Americans Praise Gov't Work on Natural Disasters, Parks," Gallup: Politics, July 12, 2013.

While voters are clearly in support of cutting spending, disaster relief may not be the best place to accomplish this as research shows disaster spending has impacts on voting tendencies and turnout. Existing research has shown that distributive benefits, like the DRF, will not only increase voter turnout for the incumbent party, but that it can also negatively impact voter turnout for the opposing party.<sup>192</sup> FEMA assistance provided one week before a 2004 election in Florida increased the probability of incumbent party voter turnout by over 5%, and cut turnout by over 3% for the opposing party.<sup>193</sup> Similar impacts have been noted at the federal level, and research shows that Presidents tend to provide more PDDs in years they were up for re-election than years they were not.<sup>194</sup> This is in part due to findings that a PDD can be worth up to 2.2 percentage points in state election outcomes, with marginal effects found in each additional PDD issued.<sup>195</sup> For example, according to the research, five PDDs for a state could result in a 4.9 percentage point increase in a state election outcome. With these items in mind, it is no wonder that after analyzing state voting competitiveness and the number of PDDs received we found that competitive states received nearly twice the number of PDDs as noncompetitive states.<sup>196</sup>

These findings may in fact lead to Congressional leaders supporting this reduction as in its current structure; PDDs are a unilateral policy tool with exponential benefits to the President and incumbent party. While Congress has the ability to pass supplemental appropriations to provide additional assistance to impacted areas, reducing the cost share

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<sup>192</sup> Jowei Chen, "Voter Partisanship and the Effect of Distributive Spending on Political Participation," *American Journal of Political Science* 57(1), January 2013.

<sup>193</sup> Ibid.

<sup>194</sup> Chris Edwards, "The Federal Emergency Management Agency: Floods, Failures, and Federalism," *CATO Institute*.

<sup>195</sup> Andrew Reeves, "Political Disaster: Unilateral Powers, Electoral Incentives, and Presidential Disaster Declarations," *The Journal of Politics* 73(4), October 2011.

<sup>196</sup> Ibid.

could create a new avenue for their involvement in disaster relief. For example, reducing the cost share to 50% could not only reduce the President's political impact of issuing DRFs, but it could also increase the Congress' impact of passing legislation to raise the cost share in certain situations. While Congress has the ability to raise the cost share from the currently mandated 75%, the impact of doing so would be greatly increased if the cost share was set to a minimum of 50%. Raising the cost share from 50% to 90%, for example, would be beneficial to Congress and could be viewed positively by the electorate. In a time where presidential power has been often questioned, this is an opportunity for Congress to increase their role and potential political benefits from use of the DRF.

While this proposal seeks to reduce the federal cost share from 75% to 50% or 65%, some argue this is not enough. Experts at the Heritage Foundation have called for the federal cost share to be reversed from a minimum of 75-25% to 25-75%, leaving states to bare the majority of disaster relief expenses.<sup>197</sup> However, they note for incidents that reach a national level impact, such as 9-11, Hurricane Katrina, or Hurricane Sandy, the federal government should take a larger role.<sup>198</sup> Some argue that raising the cost share burden could cause significant issues for states. For example, the National Association of State Budget Officers notes that, although things are improving at the state level, many states are still not back to prerecession levels.<sup>199</sup>

## **Recommendation**

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<sup>197</sup> Matt Mayer, "Congress Should Act on FEMA's Refusal to Reform," *The Heritage Foundation*, May 18, 2012.

<sup>198</sup> Ibid.

<sup>199</sup> National Governors Association and the National Association of State Budget Officers, "The Fiscal Survey of States," 2012.

Based on the available information, it is clear that continuing to provide reactionary federal assistance has been costly for taxpayers. With an increase in frequency and magnitude of disasters projected, the federal government must seek ways to reduce future losses and ultimately cut federal spending on disaster relief. The two proposals provided have benefits and consequences that have been outlined and analyzed in this paper. Given the information provided, funding the PDM is the only proposal that should be recommended at this time.

The federal government must stop superseding SLTT government efforts when it comes to disaster relief. Although federal disaster assistance was established for extreme situations that overwhelm SLTT capabilities, it is not utilized in this fashion today. The precedent to provide assistance, even for low level “disasters,” has been well established and will be difficult to change. While voters have made it clear they want to federal spending, this is money that is provided to individuals in need, not a social program like Social Security or Medicare. Additionally, research found that federal disaster assistance has impacted voting tendencies and turnout, which could be negatively impacted if the cost share were to decrease. The political ramifications could be devastating for the individual that proposes an alteration to the federal cost share. Additionally, the increased financial burden on states could have serious consequences. While this proposal is the most effective way to reduce federal disaster spending, the political and economic consequences are far too great to recommend it.

However, as research shows, the federal government can attempt to reduce future losses through hazard mitigation investments. With an average of a \$4 benefit on every dollar spent, it would be irresponsible for lawmakers to continue to focus on response and

recovery efforts.<sup>200</sup> The fact that 5,500 FEMA mitigation grants had a net benefit to society of approximately \$14 billion with an investment of \$3.5 billion (2004) cannot be overlooked.<sup>201</sup> Although the American public wants to reduce federal spending, the \$4.3 billion in PDM funding would reduce future losses by over \$10 billion based on existing research. The return on investment for hazard mitigation funding was equivalent to that of a 14% return on a 50-year annuity when comparing grants from 1993 to 2003.<sup>202</sup> While this proposal does increase spending over the next five years, the available research shows this will have an exponential return on investment for taxpayers and could lead to significant reductions in DRF spending in the future.

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<sup>200</sup> *Role of Mitigation in Reducing Federal Expenditures for Disaster Response*, (statement of BuildStrong Coalition), 9.

<sup>201</sup> Adam Rose, et al., “Benefit-Cost Analysis of FEMA Hazard Mitigation Grants.”

<sup>202</sup> Ibid.

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