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# Shelter from the Superstorm

How Climate Preparedness and Resilience  
Saves Money and Lives

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By Cathleen Kelly and Jackie Weidman July 2013

Center for American Progress



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# Contents

- 1 Introduction and summary**
- 5 The new normal**
- 15 An ounce of prevention is worth a pound of cure**
- 17 Resilience roadblocks**
- 19 Using Superstorm Sandy relief aid to rebuild more resilient communities**
- 20 Needed action to build resilience and tackle climate change**
- 26 Conclusion**
- 28 Endnotes**

# Introduction and summary

*Americans across the country are already paying the price of (climate) inaction — in insurance premiums, state and local taxes, and the costs of rebuilding and disaster relief. ... And what we've learned from Hurricane Sandy and other disasters is that we've got to build smarter, more resilient infrastructure that can protect our homes and businesses and withstand more powerful storms. That means stronger seawalls, natural barriers, hardened power grids, hardened water systems, hardened fuel supplies. So the budget I sent Congress includes funding to support communities that build these projects, and this plan directs federal agencies to make sure that any new project funded with taxpayer dollars is built to withstand increased flood risk.*

— President Barack Obama, June 25, 2013, speech at Georgetown University announcing his “Climate Action Plan”<sup>1</sup>

Natural disasters leave communities devastated, often in desperate need of assistance to rebuild shattered homes and lives. As city leaders lay plans to repair broken bridges, roads, and hospitals in the aftermath of a storm, they have a rare moment to rethink the design of their communities and infrastructure and to rebuild with resilience to future storms in mind.<sup>2</sup> Without such foresight, city leaders risk inadvertently reconstructing electric grids, public transportation, and other critical infrastructure in ways that leave communities vulnerable to future storm damages.

Superstorm Sandy lashed the East Coast on October 29, 2012, devastating communities across the densely populated states of New York and New Jersey. The storm killed 147 people and damaged more than 650,000 homes.<sup>3</sup> The Internal Displacement Monitoring Centre reported that Superstorm Sandy drove the third-largest number of people from their homes of all worldwide extreme weather events last year. In New Jersey alone 39,000 families are still displaced.<sup>4</sup>

While much of the debris from Sandy has been cleared away, the hard task of repairing and rebuilding the homes, schools, roads, bridges, hospitals, and other critical infrastructure still lies ahead. In the wake of Superstorm Sandy, New York City Mayor Michael Bloomberg (I-NY) is seizing the moment to call for new infrastructure and resilience projects. New York City leaders recently released a report commissioned by the mayor that pinpoints more than 250 steps the city should take to protect neighborhoods, infrastructure, and New Yorkers from the impact of superstorms, heat waves, droughts, floods, and other extreme weather driven by climate change.<sup>5</sup> Supporting local climate preparedness and resilience building is a core aspect of President Obama's new national Climate Action Plan. When he announced the plan, he said, "we'll partner with communities seeking to help to prepare for droughts and floods, reduce the risk of wildfires, protect the dunes and wetlands that pull double-duty as green space and as natural storm barriers."<sup>6</sup>

Three months after Superstorm Sandy, Congress appropriated \$50.5 billion primarily for relief and recovery efforts in the Sandy-impacted region and increased the National Flood Insurance Program's borrowing authority by \$9.7 billion.<sup>7</sup> In May Department of Housing and Urban Development Secretary Shaun Donovan gave the green light to New York state and New York City to begin spending \$1.77 billion in Sandy recovery assistance through Community Development Block Grants.<sup>8</sup> Secretary Donovan also approved New Jersey's \$1.83 billion disaster recovery plan in April.<sup>9</sup>

As states and communities impacted by Sandy continue to develop their recovery plans, they have an opportunity to channel available disaster assistance into more resilient rebuilding strategies that will reduce the costs and damages of future extreme weather and climate change. Once reconstruction is complete, the window to redesign more resilient communities may not open again until another storm hits or the lifetime of newly constructed infrastructure expires.<sup>10</sup> Federal agencies, President Obama's Hurricane Sandy Rebuilding Task Force, and state and city leaders have already taken initiative to support resilient rebuilding after Sandy. But more is needed at all levels of government.

Building on the president's Climate Action Plan, we recommend that federal, state, and local officials take the following four actions to rebuild better after Sandy and prepare for future superstorms:

- **Increase federal climate preparedness and resilience investments to save billions of dollars in disaster damages and costs.** Every dollar that the Federal Emergency Management Agency, or FEMA, invests in resilience and actions to reduce disaster losses saves the nation \$4 in disaster-recovery costs.<sup>11</sup> With the federal government domestic-disaster aid expenses totaling \$136 billion between 2011 and 2013, investing in resilience is a strategy we cannot afford to overlook.<sup>12</sup> In many cases, the federal government can increase its climate-preparedness investments simply by adding resilience requirements to existing federal grant programs, rather than waiting for new appropriations from Congress.
- **Make resilience a core aspect of all federal disaster assistance.** To avoid spending taxpayer dollars on rebuilding the same vulnerable structures over and over again, the Department of Housing and Urban Development—or HUD—FEMA, and other federal agencies should require that rebuilding projects supported by federal disaster assistance are resilient to extreme weather and other climate changes. Congress should amend the Robert T. Stafford Disaster Relief and Emergency Assistance Act to assure that all FEMA-funded reconstruction is designed to better withstand future extreme weather and other climate-change impacts.
- **Increase community and infrastructure resilience.** President Obama should establish a national infrastructure resilience plan and investment strategy to more effectively leverage public and private capital to modernize and strengthen our nation’s infrastructure.<sup>13</sup> The president should also ensure that infrastructure grant programs within the Department of Transportation, HUD, the Army Corps of Engineers, and other agencies only support project designs that are disaster and climate resilient. Local officials and electric utilities should work together to build electricity-grid resilience by putting vulnerable power lines underground where possible, creating incentives for consumers to install smart meters, and distributing and decentralizing clean power around the grid so that communities are not as vulnerable to massive outages.<sup>14</sup> State and local governments across the nation should develop sound hazard-mitigation and climate-change resilience plans, update building codes, and take other actions to reduce the consequences of future storms and climate change.

- **Give decision makers ready access to the climate-change risk information they need.** FEMA should accelerate its work to update nationwide flood maps to reflect increasing flood risks tied to sea-level rise, future superstorms, and other climate-change impacts. Congress and the president must ensure that FEMA has the necessary resources to make these rapid updates to keep people and property out of harm's way. Federal agencies producing coastal maps and providing climate services should also strengthen coordination to improve the accessibility and quality of climate information that communities need to improve their climate preparedness.

Without such steps, communities, businesses, and federal, state, and local governments risk investing Sandy recovery funds and future disaster aid in projects that continue to expose people, critical infrastructure, and local economies to the impacts of superstorms and climate change.