



Governor's Office of Storm Recovery

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U.S. Department of Housing and Urban Development (HUD)
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Disaster Relief Appropriations Act, 2013 (Public Law 113-2)

**COMMUNITY DEVELOPMENT BLOCK GRANT
DISASTER RECOVERY (CDBG-DR) PROGRAM
MARCH 5, 2013 ALLOCATION
NEW YORK STATE CDBG-DR APRIL 26, 2013 ACTION PLAN**

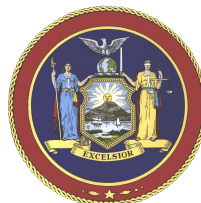
**SUBSTANTIAL AMENDMENT #5
Resiliency Institute for Storm & Emergencies**

Public Comment Period: October 30, 2013 - November 5, 2013

Submitted to HUD: November 7, 2013

HUD Approved: TBD

Andrew Cuomo
Governor



Robert Duffy
Lieutenant Governor

**COMMUNITY DEVELOPMENT BLOCK GRANT
DISASTER RECOVERY (CDBG-DR) PROGRAM
SUBSTANTIAL AMENDMENT #5
NYS CDBG-DR 2013 ACTION PLAN
PUBLIC COMMENT PERIOD ANNOUNCEMENT**

In 2011 and 2012, New York State was hit hard by several natural disasters including Hurricanes Sandy and Irene, and Tropical Storm Lee, which caused significant damage to homes, businesses, and infrastructure and placed a significant financial burden on local and state governments, residents, and businesses. In the FY 2012-13 Federal Budget, the U.S. Congress appropriated \$16 billion to the U.S. Department of Housing and Urban Development (HUD) for the Community Development Block Grant Disaster Recovery (CDBG-DR) program. In February 2013, it was announced that New York State would receive \$1.713 billion of an initial \$5.4 billion allocation to assist disaster recovery efforts in areas of the state that had received Presidential Disaster Declarations related to Hurricanes Sandy, Hurricane Irene and Tropical Storm Lee. In addition to the \$1.713 billion awarded to the State, New York City also received an allocation of \$1.77 billion. The funds awarded to the State will be administered by the New York State Office of Community Renewal (OCR), in coordination with the NYS Governor's Office, New York Empire State Development Corporation (ESDC), the NYS Division of Homeland Security and Emergency Services (DHSES), and units of general local government, among others, to address unmet housing, economic development, infrastructure and planning needs related to the disasters.

New York State submitted its Action Plan to HUD on April 3, 2013. As part of this Action Plan, New York State prepared a substantial amendment to allocate funds that were not originally allocated in the initial published Action Plan. Since launching recovery efforts, New York State has determined that facilitating coordination among local research centers engaged in Sandy-related work and storm resilience through an inter-disciplinary research, planning effort, conducted through a consortium of New York State higher education institutions can add tremendous value to the state's recovery efforts and improved resilience. The consortium will serve as a statewide anchor for policymakers, experts and emergency responders, providing comprehensive analysis to inform critical decisions before, during and after extreme weather events. The consortium will function as an institution for knowledge development of storm-hazards risk management; provide expertise to aid agencies in providing and quantifying resilience in ecosystem and infrastructure design, operation, and investment; and develop platforms for transforming predictions into adaptive measures. At this time, New York State is submitting a substantial amendment to allocate \$2.7 million to fund start-up costs of the Resiliency Institute, including faculty salaries, student stipends, technical consultants and equipment/materials to support the research projects of the consortium. Seed funding will enable the Resiliency Institute to leverage additional funding for ongoing research activities.

This 7-day public comment period will begin on October 30, 2013 and extend through close of business on November 5, 2013. Beginning on October 30, 2013 the Substantial Amendment to the New York State CDBG-DR Action Plan may be viewed on and downloaded from the New York State Homes and Community Renewal (HCR) website at <http://www.nyshcr.org/Publications/>. In addition, copies can be requested by e-mail (DRActionPlan@nyshcr.org) or by calling 1-866-ASK-DHCR (275-3427).

Comments should be written and mailed to:

New York State Homes and Community Renewal
Attention: Alison Russell
The Hampton Plaza, 2nd Floor
38-40 State Street
Albany, New York 12207-2804

Comments may also be e-mailed to DRActionPlan@nyshcr.org.

Comments must be received by close of business on November 5, 2013.

New York State Resiliency Institute for Storm & Emergencies

Severe weather events including Hurricane Sandy, Hurricane Irene, Tropical Storm Lee, and recent severe flooding in the Mohawk Valley have revealed critical gaps in the State's capacity to plan for and respond to weather events that threaten life and property of New Yorkers. The devastation caused by Sandy and other storms raised awareness of the potential of climate change to exacerbate weather hazards such as hurricanes, Nor'easters, severe winter weather, and flash floods. As described in the Needs Assessment section of the CDBG-DR Action Plan, the storms caused substantial damage to homes and businesses, caused extensive damage to the transportation infrastructure, left thousands of people without electrical power for weeks, damaged wastewater treatment and clean water facilities, and removed protective coastal and natural infrastructure.

It is now apparent that extreme storm events pose significant threats to human safety, as well as man-made and natural environments, and that lack of coordination across systems can cause cascading failures which amplify a storm's damaging impact. Critical infrastructure and lifelines, including shelter, power, potable water, sanitation, communication, transportation, medical care and emergency response all evolved separately, and are directed and controlled by different providers. There is an unmet need to overcome the lack of coordination among systems, the fragmented nature of vital information, and the interdependencies of natural and man-made systems.

Facing an unprecedented opportunity to rebuild with greater resiliency and to meet this challenge of fragmented information systems, the State of New York seeks to engage the expertise of local academic institutions. The Resiliency Institute will be a consortium to act as a hub for cutting-edge research and education on preparedness, an interface of government agencies and private citizens to communicate and mitigate risks, a clearinghouse of data and information during and in the aftermath of natural disasters to inform mitigation measures and systems to protect life and property.

The Resiliency Institute consists of prominent faculty from seven regional academic institutions and a national laboratory, selected for specific expertise in areas across the spectrum of social and natural sciences relevant to disaster preparedness. The Institute's headquarters will be at the Stony Brook University of SUNY in the School of Marine and Atmospheric Sciences, and New York University-Polytechnic Campus in the Civil Engineering Department. The team includes experts from Stony Brook University of SUNY, New York University, NYU-Polytechnic, Columbia University, Cornell University, the City University of NY, and Brookhaven National Laboratory. Core project delivery staff include two Principal Investigators and 15 Co-Principal Investigators, 21 graduate assistants, undergraduate students, and technical support staff. Additional technical expertise will be brought on as necessary throughout the course of the research. The efforts across the institutions will be tightly integrated from project identification and implementation to end products and deliverables. Stony Brook University will serve as fiscal agent for the consortium. Treatment of intellectual property created by the consortium will be addressed in the organizing documents for the Institute.

The Resiliency Institute's priorities will be set by an Advisory Board with input from stakeholders from all sectors and government levels and from the public. The Advisory Board consists of representatives for partner institutions, governmental emergency response and management agencies, and major stakeholders. It will advise on research and strategic directions of the Institute. Its tasks will be implemented by an Executive Committee, and carried out by coordinated teams of researchers, engineers, and educators organized around specific objectives. The Executive Committee will determine the scope of work and budgets for research and development projects.

The project has strong support from New York State, with funding committed or anticipated from state resources including the New York State Environmental Facilities Corporation, the State University of New York, the New York State Energy Research and Development Authority. These State resources will complement federal recovery resources provided through Disaster Relief Appropriations Act of 2013 (P.L. 113-2).

Key goals of the Resiliency Institute are to improve the coordination among multiple sources of

information and expertise, and speed the translation from research to application to improve the built environment and prepare stakeholders for extreme weather events. It will encourage a total systems approach to statewide hazards and climate variability that will inform decision models designed to maximize cost-savings and minimize economic and social, climate and weather-related tasks. It will serve as a state-wide anchor for policymakers and emergency responders providing comprehensive analysis to inform critical decisions before, during, and after extreme weather events. In addition, the Resiliency Institute will provide rapid assessment, long-term retrofit and rebuilding engineering, triage approaches, and investment strategies to enhance the robustness and resourcefulness of New York State. It will house knowledge development of storm-hazards risk management; provide expertise to aid agencies in providing and quantifying resilience in ecosystem and infrastructure design, operation, and investment; and develop platforms for transforming predictions into adaptive measures. The Institute will publish work products and related information on a website open to the public and engage stakeholders in open public forums.

The Resiliency Institute will leverage the resources and expertise of its constituent institutions and technical experts to design solutions for recovery from recent storms and to mitigate damage, or to adapt, to weather hazards which will be exacerbated by climate variability, change, and uncertainties. Its activities will increase the effectiveness, efficiency, and quality of disaster recovery efforts by various levels of government and partners and build the capacity of front-line organizations to deliver successful disaster recovery programs. The Institute proposes to marshal resources of institutions to bring timely scientific data to inform recovery planning and implementation efforts to repair critical damaged systems, improve resilience of community assets, and protect against the coming season and future storms.

The Institute's activities will include recovery mapping services to provide comprehensive information about the availability of community assets in the impacted areas. Ready access to geo-spatial information will ensure the most effective and efficient disaster recovery efforts now and in anticipation of the current storm season and into the future. The Institute will serve as an "action-think tank" to provide state government actors and private partners with the best scientific information available to inform ongoing recovery efforts and investments in improving resilience against future storms. In addition, visualization and communications tools, drawing on GIS mapping capacities, will comprehensively document the status of public assets within impacted areas to coordinate disaster recovery planning efforts and inform the policy-makers, community residents and other stakeholders of assets such as infrastructure, critical facilities, housing, community services, and public spaces.

Proposed Use of CDBG-DR Funding

Funds for this activity are being reprogrammed from the Resilience Retrofit Fund identified in the State's CDBG-DR Action Plan. The Retrofit Resilience Fund has yet to expend funds and demand for assistance under the program is currently being assessed. As additional information becomes available, and necessary adjustments to the program design are made, funding for this activity will be restored as warranted from available CDBG-DR resources.

Out of the Resilience and Retrofit category, \$2,700,000 will be utilized to seed the Resiliency Institute.

Eligible Activity	Planning
National Objective	Urgent Need
Activity Amount	\$2,700,000

CDBG-DR program resources will fund start-up costs of the Resiliency Institute, including faculty salaries, student stipends, technical consultants and equipment/materials to support the research projects of the consortium. Seed funding will enable the Resiliency Institute to leverage additional funding for ongoing research activities.

The team includes experts from Stony Brook University of SUNY, New York University, NYU-Polytechnic, Columbia University, Cornell University, the City University of NY, and Brookhaven National Laboratory. Core project delivery staff include two Principal Investigators and 15 Co-Principal Investigators, 21 graduate assistants, undergraduate students, and technical support staff. Additional technical expertise will be brought on as necessary throughout the course of the research.

CDBG-DR funding will be used to advance the action-oriented research and analysis projects within applicable expenditure timeframes. Illustrative near-term projects include:

Rapid Response Planning

- Assessment of base plans, evacuation zones, response capabilities and gaps.
- Scenario-driven and real-time information based storm evacuation planning.
- Rapid warning system enhancements.
- Enhancements to long-lead forecasting of extreme events.

Assessment of Cascading Dynamics – Interdependence of Bodies of Water, Infrastructure and Ecosystem

- Data-driven analysis of the interaction of NY bodies of water and tunnels, rail, highways, water and wastewater treatment facilities under storm scenarios.
- Carrying capacity (resistance) of different infrastructure systems during Sandy and ways to increase resourcefulness and redundancy, including options for advanced technology applications such as renewable energy in combination with energy storage.
- Flooding impacts on wastewater infrastructure.
- Flooding impacts on drinking water systems
- Storm impact on coastal ecosystem and fisheries

Vulnerability Assessment and Resiliency – Investment Strategies

- Identification and prioritization of vulnerabilities of critical facilities and economic, social and environmental resources.
- Vulnerability assessment of communities in the New York Rising Community Reconstruction Program.
- Assessment of economic vulnerability and investment strategies targeting coastal and inland flood-prone communities.
- Development of metrics to quantify impacts of infrastructure investments to address community vulnerabilities.

Storm and Environmental Risks Under Climate Change

- Projection of evacuation zones, including flooding scenarios under climate variability
- Integration of multiple monitoring systems targeting coastal zones

New York State is aware of the need to avoid duplication of benefits. Since the Institute's work consists of planning and capacity building projects, rather than deployment of mitigation measures, the State has determined that its activities are not likely to be eligible for FEMA HMGP funding.