New Jersey
Department of Community Affairs

SUPERSTORM SANDY COMMUNITY DEVELOPMENT BLOCK GRANT – DISASTER RECOVERY

Public Law 113-2, January 29, 2013
FR-5696-N-01; March 5, 2013
FR-5696-N-06; November 18, 2013

ACTION PLAN AMENDMENT NUMBER 7

SUBSTANTIAL AMENDMENT FOR THE SECOND ALLOCATION OF CDBG-DR FUNDS

PUBLIC COMMENT PERIOD: February 3, 2014 – March 5, 2014
DATE SUBMITTED TO HUD: _____
DATE APPROVED BY HUD: _____

Chris Christie
Governor

Kim Guadagno
Lt. Governor

Richard E. Constable, III
Commissioner

101 South Broad Street, P.O. Box 800
Trenton, NJ 08625-0800

This Substantial Amendment to the Action Plan (as proposed and then approved) will be available for public review at www.state.nj.us/dca/. It will be made available in English and Spanish.

For those who otherwise cannot obtain a copy of this Substantial Amendment to the Action Plan, the Department of Community Affairs will make copies available upon request. Requests for copies should be directed to the following address:

New Jersey Department of Community Affairs
1st Floor Information Desk
101 South Broad Street
Trenton, New Jersey, 08625

The State will consider any comments received in writing or via email on the proposed Substantial Amendment to the Action Plan. Comments on the proposed Plan will be accepted until March 5, 2014 at 5 p.m. Eastern Standard Time. Written comments may be submitted to the Department of Community Affairs via email at Sandy.publiccomment@dca.state.nj.us, or to the attention of Gabrielle Gallagher, NJ Department of Community Affairs, 101 South Broad Street, Post Office Box 800, Trenton, New Jersey 08625-0800. A summary of all comments received and responses will be included in the final version of this Substantial Amendment submitted for approval.

While HUD has required the State to hold at least one public hearing to solicit comments on this Substantial Amendment, the State plans to hold three public hearings at locations across the State. Tentatively, the dates, times and locations of the public hearings are:

- February 11, 2014; Stockton University (Atlantic County); 101 Vera King Farris Drive, Galloway, NJ 08205; Performing Arts Center; 4–7 pm
- February 12, 2014; New Jersey Institute of Technology (Essex County); 150 Bleeker Street, Newark, NJ 07102; Campus Center; 5:30–8:30 pm
- February 13, 2014; Brookdale Community College (Monmouth County); Robert J. Collins Arena; 765 Newman Springs Road, Lincroft, NJ 07738; 4–7 pm

Additional information will be disseminated as the hearing dates approach.

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SECTION 1: INTRODUCTION

A bedrock principle of the State's comprehensive approach to recovery has been to leverage available federal, state, private and philanthropic recovery resources in a coordinated way to maximize their impact for recovering New Jerseyans. This is necessary because the needs created by the catastrophic damage that Superstorm Sandy caused in New Jersey across all sectors far exceed available resources. With that in mind, the rules and requirements associated with each funding source must be separately understood so each can be integrated into the recovery effort to make the best use of all available resources in order to help the most people and to realize critical recovery and resiliency projects. Funding streams include monies administered by: the Federal Emergency Management Agency (FEMA), including Public Assistance, Individual Assistance, and National Flood Insurance Program (NFIP) funds; U.S. Army Corps of Engineers (Army Corps); Federal Highway Administration (FHWA); Federal Transit Administration; U.S. Environmental Protection Agency (EPA); U.S. Small Business Administration; U.S. Department of Health and Human Services; U.S. Department of Labor; U.S. Department of the Interior; and U.S. Department of Defense; among others.

Community Development Block Grant-Disaster Recovery (CDBG-DR) funds – administered by the U.S. Department of Housing and Urban Development (HUD) and intended to address "unmet needs" not satisfied by other recovery resources – are another primary funding source being leveraged within the broader recovery effort. While subject to various federal rules and regulations, CDBG-DR funds allow the State to target critical unmet needs across various sectors. On February 6, 2013, HUD announced its initial allocation of CDBG-DR funds to Sandy-impacted states and awarded $1,829,520,000 to New Jersey. On April 29, 2013, HUD approved the State's CDBG-DR Action Plan outlining New Jersey's intended programmatic uses of the first of three CDBG-DR funding allocations. New Jersey was able to begin accessing the first tranche of CDBG-DR funds in May.

The State quickly implemented a portfolio of programs targeting critical unmet needs. In standing up the programs, the State leveraged CDBG-DR funds with other funding sources to: (i) help homeowners and renters with unanticipated, non-construction storm-related expenses; (ii) repair or replace damaged owner-occupied and rental housing; (iii) provide much-needed capital to affected small businesses and investments in economic development and revitalization; (iv) allow for post-storm community planning; and (v) support hardest hit and financially strained municipalities to ensure essential services continue to be provided to residents.

The State also is leveraging recovery funds, including first tranche CDBG-DR monies, to rebuild more resiliently. Homes and other structures are being elevated. The State also is purchasing homes in targeted repetitive flood loss areas. Moreover, among large projects submitted for funding through FEMA Public Assistance (i.e., projects over $500,000), more than 88 percent are not rebuilding to old design standards, and instead are seeking to incorporate resiliency measures and enhanced hazard mitigation standards in a manner compliant with the federal Stafford Act. Additionally, the State, working with New Jersey universities and the Army Corps, is assessing longer-term resiliency strategies in repetitive flood loss areas, including a number of urban centers. Infrastructure projects targeting roadways are incorporating resiliency and best practice mitigation measures including pump stations, flood vents and anti-scour measures. The State is also implementing a comprehensive strategy to build energy resiliency. A multi-layered approach to flood hazard risk reduction, including dune systems, berms and other resiliency measures, will better protect New Jersey against future storms. These are just a few examples of how the State is seeking to rebuild better and stronger.

As a direct result of these efforts, the support of federal, state and local recovery partners, and the hard work of volunteers and affected New Jerseyans, the State has seen clear and substantial progress in just fourteen months following Superstorm Sandy. Nevertheless, fourteen months is not nearly enough time to address the multi-billion dollar breadth of damage caused by the storm. Unmet needs arising from Sandy remain substantial, and there is still a great deal of work ahead.

To assist in the ongoing effort, on October 28, 2013, HUD announced the second allocation of CDBG-DR funds to Sandy-impacted states, of which New Jersey will receive $1,463,000,000. On November 18, 2013, HUD published a notice to the Federal Register (FR-5696-N-06) prescribing rules for the use of these funds, and placing a particular focus on using second tranche funds for infrastructure projects. The rules require each state receiving funds to publish a Substantial Amendment to its Action Plan describing how second tranche funds will be used to satisfy overall unmet Sandy-related needs. For New Jersey, HUD also has required that at least 80 percent of second tranche CDBG-DR funds must be targeted to the nine most-impacted counties as determined by HUD (Atlantic, Bergen, Cape May, Essex, Hudson, Middlesex, Monmouth, Ocean and Union Counties).

In this Substantial Amendment, the State first proposes to allocate additional funding to a number of programs established in the Action Plan, where program demand has exceeded available funding. Specifically, the State will add funding to some of the established homeowner and renter programs and programs to stabilize and revitalize municipalities. With the programs already established, second tranche CDBG-DR funds will be easily and efficiently integrated. Additionally, the

State proposes to use second tranche CDBG-DR funds to bolster ongoing efforts to purchase properties in targeted repetitive flood loss areas and convert the land to open space. The State also proposes to create a New Jersey Energy Resilience Bank to support financing for often costly energy resilience projects that, among other things, will alleviate electrical power outage issues that crippled New Jersey after Sandy, as well as integrate CDBG-DR funds into its broader strategy to realize multi-faceted, more resilient flood risk reduction systems. Each of these programs is essential to addressing critical unmet needs arising from Sandy.

Importantly, second tranche CDBG-DR funds are not sufficient to satisfy all unmet recovery needs (including the more than $19 billion in unmet needs quantified in this Substantial Amendment) requiring difficult choices and a balancing of diverse interests. In determining how to best use these funds, the State sought input from residents, stakeholder groups, elected officials and federal, state and local agency partners. These efforts are described in more detail in later sections. If the State receives a third tranche of CDBG-DR funds, which would be vital to the State's ongoing recovery efforts, it will further evaluate unmet needs and target those resources to best support New Jersey's recovery.

Substantial Amendment to the Action Plan

Per Federal Register Notice FR-5696-N-06, to draw down second tranche CDBG-DR funds the State must prepare a Substantial Amendment to its Action Plan updating its unmet needs assessment and describing how second tranche CDBG-DR funds will be used to respond to Sandy-related unmet needs. In this Substantial Amendment:

- Section 2 updates the unmet needs assessment in the State's Action Plan and quantifies unmet needs across three critical recovery sectors: (i) housing, (ii) economic development, and (iii) infrastructure. The needs assessment is based on available data and is subject to change.
- Section 3 describes how second tranche CDBG-DR funds will be apportioned across existing State CDBG-DR funded programs and new programs.
- Section 4 sets out projected performance metrics with respect to the use of second tranche CDBG-DR funds.
- Section 5 describes the State's outreach efforts and public comment process with respect to this Amendment.

This document serves as an amendment to New Jersey's CDBG-DR Action Plan approved by HUD on April 29, 2013. All sections of that Plan, as adapted by amendments 1 – 6, remain in effect, unless otherwise noted herein.

SECTION 2: UPDATED IMPACT AND UNMET NEEDS ASSESSMENT

In accordance with HUD requirements, New Jersey's Action Plan used available data to quantify the State's unmet needs across three core recovery sectors: (1) housing, (2) economic development and revitalization, and (3) infrastructure. The assessment highlighted areas of unmet need and informed the State's allocation of its limited CDBG-DR funds while accounting for HUD requirements such as targeting assistance to low- and moderate-income (LMI) households and directing relief primarily to the nine most impacted counties as determined by HUD (Atlantic, Bergen, Cape May, Essex, Hudson, Middlesex, Monmouth, Ocean and Union Counties).

Demand for state programs funded with first tranche CDBG-DR monies has far outpaced available funding. Nearly all programs have waitlists or unfunded pipelines. Using the $1,463,000,000 of second tranche CDBG-DR funds allocated by HUD to New Jersey, the State plans to continue to respond to critical storm-related unmet needs across various sectors, and to provide additional funding to several existing programs.

Because unmet needs far exceed available resources, the State faces difficult choices as to how to best allocate funding. To inform its decisions, the State has updated the unmet needs assessment in its Action Plan. In developing the updated unmet needs assessment below, the State conducted considerable outreach that included engaging the public, affected communities, federal, state and local elected officials, stakeholder groups, and other partners. These outreach efforts are more fully described in Section 5.

2.1 Summary of Unmet Needs

New Jersey's Action Plan presented available data to quantify unmet needs across core recovery sectors, and that assessment directly informed how the State allocated first tranche CDBG-DR funds to assist homeowners, renters, small businesses, and affected communities. As explained in the Action Plan, the State expected that its initial assessment just a few months after the storm could not fully capture the breadth of storm-related needs. Now further along in the recovery, and with the benefit of additional information including demand for its implemented CDBG-DR funded programs and a more robust infrastructure impact analysis, the State has updated its unmet needs assessment. A summary of the revised unmet needs assessment based on existing program data and other data, as derived from the figures in the subsections that follow, is shown in Table 2-1.

Table 2-1: Summary of Revised Remaining Unmet Needs Assessment for Housing, Economic Development & Infrastructure Sectors	
Recovery Sector	**Remaining Unmet Needs**
Housing (Homeowners and Renters)	$1,669,357,190
Economic Development	$241,011,926
Infrastructure	$17,372,752,360
Total	$19,283,121,476
Source: Table 2-4, Table 2-5, Table 2-6, Table 2-7, Table 2-13	

Even after disbursement of this $1,463,000,000 in second tranche CDBG-DR funds, Table 2-1 indicates that unmet needs will still amount to almost $18,000,000,000 in these three primary recovery sectors (i.e., the projected $19.28 billion in identified unmet needs less the $1.463 billion provided to address unmet needs). Moreover, for the reasons described in the following subsections, that figure is based on approximations and likely undervalues the breadth of New Jersey's unmet needs, particularly when factoring in planning and resiliency measures.

2.2 Housing

New Jersey's Action Plan prepared in March 2013 estimated a total unmet housing need of $2,504,993,992. The assessment was based on FEMA Individual Assistance data from March 2013 indicating that approximately 40,500 homeowners' primary residences and 15,600 rental units sustained "severe" or "major" damage from the storm, as those terms are defined by HUD.

The State has committed approximately $1,300,000,000 (or 70 percent) of its initial tranche of CDBG-DR funds to housing initiatives (including $145 million of first tranche CDBG-DR funds that were initially allocated for economic programs but later were moved to housing programs with HUD approval). As of December 2013, approximately 38,000 New Jersey homeowners and 1,900 landlords and developers (representing over 13,000 units) applied for funding through one or more of the nine housing programs. All housing programs were launched with great interest, with most being oversubscribed within the first few months. This demonstrates that unmet housing needs in New Jersey remain significant. While demand for the State's existing CDBG-DR funded homeowner and rental programs is a viable proxy to show unmet needs in New Jersey, for the reasons that follow it is expected to undervalue actual unmet needs across the State.

2.2.1 Needs of Homeowners

The Reconstruction, Rehabilitation, Elevation and Mitigation (RREM) Program and the Homeowner Resettlement Program are the State's primary CDBG-DR funded recovery programs for homeowners. The State has allocated $710 million and $215 million of first tranche CDBG-DR funds to support these programs, respectively. Thousands of homeowners have been, or are being, assisted by first tranche CDBG-

DR funds provided through these two programs. However, as Table 2-2 shows, unmet needs for the RREM Program remain substantial.

Table 2-2: Summary of Homeowner Program Allocations and Existing Unserved Needs

Program	Total Allocation[a]	Total Number of Eligible Households	Number of Households Receiving Grant Award	Average Allocation per Unit	Estimated Program Need for Eligible Households ($)[b]	Excess / (Shortfall)
RREM	$710,000,000	12,389	5,124	$106,000[c]	$1,313,234,000	$(603,234,000)
Homeowner Resettlement	$215,000,000	18,335	16,791	$10,000	$183,350,000	$0

[a] This Total Allocation amount reflects the shift of funds approved in Action Plan Amendment 4.
[b] These figures exclude program delivery costs.
[c] This figure is based on the average RREM grant awards that were signed as of January 13, 2014, and reflects the impact of private insurance, U.S. Small Business Administration (SBA) loans and other funding sources that are accounted for in the State's duplication of benefits analyses performed to ensure that CDBG-DR funds only are provided to address unmet needs. Notably, as of September 12, 2013, SBA disbursed more than $122 million in loans across 5,100 homeowners and renters.

Calculating unmet need based on program demand likely undervalues the reconstruction and rehabilitation unmet needs of homeowners. It excludes the need of RREM Program applicants whose applications could not be funded because the applicants could not meet program eligibility criteria (e.g., second homeowners who, by federal rule, cannot receive CDBG-DR assistance). It also excludes primary and secondary homeowners affected by the storm who did not apply because they recognized they would not meet program eligibility criteria, or because of other reasons. Moreover, the State has received requests to re-open the application period for the RREM Program, which suggests there is additional demand for RREM assistance beyond the existing waitlist. Even with second tranche funding, the existing RREM waitlist likely will not be fully satisfied, so re-opening the RREM application period at this time is not currently feasible.

Table 2-2 also does not account for instances where unmet rehabilitation or reconstruction needs exceed the $150,000 RREM grant and other recovery funding resources available to a homeowner. Per the approved RREM Program requirements, if a homeowner's reconstruction needs exceed the maximum available $150,000 through the RREM grant, funding to cover the difference must be identified by the applicant before CDBG-DR funds can be invested in the rebuilding project. Philanthropic dollars committed through a "gap funding" program administered by the Community Development Financial Institution New Jersey Community Capital, with initial support of $15 million, is one source that may be leveraged by homeowners to address funding gaps. Other private funding sources, including private loans, also may be available for housing construction needs above the maximum $150,000 RREM grant.

Recognizing that CDBG-DR funds are insufficient to serve a substantial number of recovering homeowners, the State dedicated $100,000,000 in the FEMA Hazard Mitigation Grant Program (HMGP) funds to provide grants of up to $30,000 to

households to assist with a portion of the cost of elevations needed to meet revised FEMA elevation standards. The State estimates the HMGP funds can assist approximately 2,700 households; the elevation program has received over 6,000 applications. Like the RREM waitlist, the oversubscription to the HMGP elevation program demonstrates the substantial scope of homeowner demand for construction-related recovery assistance, as shown in Table 2-3.

Table 2-3: Summary of Unmet Need Based on Elevation Program

Program	Total Allocation	Projected Number of Households Assisted	Number of Households Requesting Assistance	Average Cost of Elevation	Need of Households Requesting Assistance ($)	Excess / (Shortfall)
HMGP Elevation Program	$100,000,000	2,700	6,510	$65,000[a]	$423,150,000	($323,150,000)[b]

[a] Costs of elevation vary significantly by property, depending on such factors as the size of the home to be elevated and the footprint of the home. A $65,000 elevation cost estimate is used because it is an approximate average of what an elevation in New Jersey might be expected to cost.
[b] This figure excludes program delivery costs.

Even allowing for the fact that there will be some overlap between RREM applicants and HMGP elevation program applicants, the unmet need is considerable.

Targeted buyouts of homes in repetitive flood loss areas are also a critical recovery priority for the State. The primary purpose of buyouts is to move people out of harm's way; however, buyouts also convert properties to open space, allowing communities to build natural systems designed to absorb flood waters from future storms. Buyouts also may enable state and local governments to create or expand public recreation areas, wetlands, forests and wildlife management areas.

The State has initiated a program funded with $100,000,000 of FEMA HMGP monies for buyouts, which is projected to purchase and demolish approximately 275-300 homes. As of January 3, 2014, the State had approved the purchase of 272 properties in Sayreville and South River. One hundred and twenty-two owners had accepted buyout offers and 22 have closed. Additionally, in December 2013, the State announced a partnership with the U.S. Department of Agriculture (USDA) on a $9.4 million project to purchase 33 homes and additional vacant lots in the Bay Point section of Lawrence Township in Cumberland County. Funding for the project will be provided through the New Jersey Department of Environmental Protection's (DEP) Green Acres Program and USDA's Natural Resource Conservation Service.

Additional funding is needed to continue these ongoing buyout efforts. The State remains committed to securing at least $300 million in recovery funding for buyouts for targeted repetitive flood loss areas to reduce the number of homes in these areas.

When unmet needs for buyouts is combined with unsatisfied demand for the RREM Program and the HMGP Elevation Program, the total unmet needs of homeowners

for reconstruction, elevation and mitigation exceed $1,000,000,000 as shown in Table 2-4.

Table 2-4: Estimated Unmet Needs of Homeowners[a]

RREM Program Unmet Need	Elevation Program Unmet Need	Buyouts Unmet Need	Total Unmet Need
$603,234,000	$323,150,000	$300,000,000[b]	$1,226,384,000

[a] All figures in this chart exclude program delivery costs.
[b] DEP continues to engage with communities across the State that have severe repetitive flood loss, or repetitive flood loss, areas and homeowners affected by Superstorm Sandy to gauge community and homeowner interest in voluntary buyouts. Currently, there are over 2,000 homes within severe repetitive flood loss areas and more than 13,000 homes in repetitive flood loss areas.

Moreover, the needs of homeowners are not limited to construction-related activities. Displaced homeowners are making both mortgage and rent payments on budgets still strained by other unanticipated storm-related expenses. As long as homeowners remain displaced, these storm-related expenses will persist, straining household budgets and reducing household disposable income that otherwise might support economic recovery and reconstruction.

The State has brought multiple funding sources to bear on this need. As described above, the Homeowner Resettlement Program was targeted to alleviate storm-related financial pressures. FEMA Individual Assistance has provided some relief. As of December 31, 2013, more than $418 million in FEMA Individual Assistance funds had been disbursed to homeowners and renters in New Jersey, including almost $361 million in Housing Assistance and more than $56 million in Other Needs Assistance. Recently, the State also implemented the Working Families Living Expenses Voucher Program (also known as the Sandy Homeowners and Renters Assistance Program or SHRAP), which is funded with $57 million of federal Social Services Block Grant (SSBG) and provides up to $15,000 for mortgage and rent assistance, security deposits, and household goods and appliances. As of January 20, 2014, more than 2,700 homeowner and renter households (representing more than 6,300 individuals) have been assisted, and more than $7.6 million has been disbursed.

Based on this unmet needs assessment for homeowners, the State continues to prioritize using CDBG-DR funds toward the following objectives:

- Assisting homeowners with the reconstruction or rehabilitation of their homes;
- Assisting homeowners in Sandy-impacted communities who are now required to elevate their "substantially damaged" homes to meet best available FEMA flood hazard data;
- Providing individual construction management and technical assistance to help homeowners navigate the building and reconstruction process; and

- Providing buyout assistance for homeowners residing in flood-prone areas where large scale buyouts would serve a public health and safety benefit, as well as an environmental benefit.

2.2.2 Needs of Renters

Superstorm Sandy significantly reduced the supply of rental housing stock. At the same time, displacement caused by the storm increased demand for rental housing. The increased demand, coupled with the storm-related depletion of rental stock, substantially increased rents in some areas in the months following the storm. Taken together, the loss of units, low vacancy rates and increased costs created particular hardships for LMI households seeking affordable rental units.

The State's foremost unmet rental need is in the repair or replacement of storm-damaged rental housing stock, which will stabilize the rental market and create more affordable housing. The State funded a number of programs with first tranche CDBG-DR funds to address this unmet need. With those funds, the State expects to assist thousands of renter households through the repair or replacement of more than 5,000 affordable housing units. However, unmet needs for the repair or replacement of rental housing stock remains substantial, as summarized in Table 2-5.

Table 2-5: Summary of Allocations and Needs of Rental Programs Focused on Repair or Replacement of Rental Stock

Program	First Tranche CDBG-DR Allocation	Amount Committed/ Obligated	Projected No. of Units Created (Projected No. of Affordable Housing Units)	Number of Projects in Program Pipeline	Funding Requests for Pipeline Projects[a]	Projected No. of Units Created by Pipeline Projects (Projected No. of Affordable Housing Units)
Fund for Restoration of Large Multi-Family Housing	$179,520,000	$156,714,275	2,720 (2,491)	58	$364,786,651	5,985 (5,157)
Small Rental Repair Program (Landlord Rental Repair Program)	$70,000,000	$4,674,703	1,400 (1,400)	350	$44,750,000	900 (900)
Pre-Development Loan Fund	$10,000,000	$8,500,000	1,300 (1,300)	10	$5,000,000	700 (700)
Blight Reduction Pilot Program (Neighborhood Enhancement Program)	$30,000,000	$25,685,318	170 (170)	--[b]	--[b]	--[b]
Sandy Special Needs Housing Fund	$25,000,000	$9,524,361	31 (31)	41	$28,436,539	235 (235)
TOTALS	**$314,520,000**	**$205,098,657**	**5,621 (5,392)**	**459**	**$442,973,190**	**7,820 (6,992)**

[a] *These figures exclude program delivery costs.*
[b] *The Neighborhood Enhancement Program was a pilot program intended to rehabilitate abandoned, blighted or vacant properties as part of a more comprehensive neighborhood revitalization effort. NEP shows no pipeline because it was a pilot program.*

In addition to providing CDBG-DR funding to repair or replace rental stock, the State has leveraged CDBG-DR and other funds to assist renters directly with storm-related needs. For example:

- The State committed first tranche CDBG-DR funds to the Landlord Incentive Program, which provides funding to landlords to make existing units available at affordable rates to low-to-moderate income renters. The program supplements rental payments to assist individual renters and increase the number of available affordable units.
- The State has targeted CDBG-DR funds to supplement housing vouchers to very low-income families displaced by Superstorm Sandy. The vouchers subsidized the rents of these families, making housing more affordable.
- Many storm-affected renters received funding for storm-related needs through FEMA Individual Assistance. More than $418 million in FEMA Individual Assistance was approved for homeowners and renters in New Jersey.
- The Working Families Living Expenses Voucher Program (also known as SHRAP), funded with $57 million of U.S. Department of Health & Human Services Social Services Block Grant monies, provides funding directly to individuals for rent.
- The State allocated first tranche CDBG-DR funds to the Sandy HomeBuyer Assistance Program that provided grants up to $50,000 to assist low- and moderate-income individuals with home purchases. Among other things, this assistance allowed some renters to afford to become first-time homebuyers.

Public Housing

Superstorm Sandy also affected public housing. Nearly all public housing authorities (PHAs) in New Jersey reported roof damage from high winds and minor to moderate flooding. Additionally, many PHAs identified resilience and mitigation needs, such as a need for back-up generators, a need to relocate critical infrastructure and a need to elevate public housing units that were storm-damaged but repaired.

The State dedicated $20,000,000 of its initial CDBG-DR allocation specifically to address damage to PHA units. As of December 2013, the State has received 6 applications totaling $24,952,825 for rehabilitation and mitigation activities for PHAs. Of this amount $7,200,000 has been committed. Based on initial assessment and underwriting, there is an inadequate amount of funding to satisfy unfunded demand. The unfunded pipeline requests of public housing authorities is captured within the Fund for Multi-Family Housing figures in Table 2-5.

Other Subsidized Housing

Other subsidized affordable multi-family housing projects were also affected by Superstorm Sandy, including projects funded under the Low Income Housing Tax Credit Program, bond-financed properties, housing financed primarily for older adults or persons with disabilities, and housing for Housing Choice Voucher (HCV) recipients located in flood plains. After the storm, it was reported that 2,188 federally-subsidized units in 192 multi-family properties were damaged and that 740 HCV recipient households were displaced.

Several assisted properties experienced ground floor water intrusion from the flooding and many experienced loss of power. At least one such property experienced damage to the units that exceeded the property's resources to repair; this property has submitted an application to the program under CDBG-DR first allocation funds. Twenty-six of 50 subsidized housing projects responded to a survey by New Jersey Housing and Mortgage Finance Agency (HMFA) to assess the needs for resiliency or hardening measures. Most of these housing projects cited the need for hurricane-proof windows, generators, and elevation of HVAC systems.

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Based on the revised unmet needs assessment for renters, the State continues to prioritize:

- Rental programs to repair or replace damaged rental units, particularly those that serve LMI households and provide affordable housing; and
- Rental programs that address the unique circumstances of New Jersey's special needs population.

2.2.3 Needs of Special Needs Populations

Individuals with special needs oftentimes may be vulnerable as a result of natural disasters, due to disrupted support networks, accessibility issues or increases in cost of living. Special needs populations displaced by Superstorm Sandy include the elderly as well as adults, children, and youth who are homeless or at risk of homelessness, who have intellectual or developmental disabilities, who have physical disabilities or who have behavioral health needs.

To assist households and individuals having special needs, the State used $25,000,000 in first tranche CDBG-DR funds to create the Sandy Special Needs Housing Fund. This program provides funding to experienced for-profit and nonprofit developers to construct quality, permanent affordable rental housing throughout New Jersey.

As shown in Table 2-5 above, demand for the program has outstripped available funds. As of December 2013, the State has made award commitments of over

$9,500,000 under this program, and currently is reviewing a pipeline of over $28,000,000 in requests, which exceeds the program's allocation. Many of the housing units being developed under the Sandy Special Needs Housing Fund restore the availability of units in Sandy-impacted communities, and as an ancillary effect, contribute to the Olmstead settlement requirements related to providing services and housing for persons moving out of institutionalized settings.

It is anticipated that applications to this program will continue to be submitted. The New Jersey Division of Developmental Disabilities projects the need for 1,102 beds by June 2015. Additionally, the Division of Mental Health and Addiction Services needs to provide permanent supportive housing for consumers of mental health services.

2.2.4 Needs of Low- and Moderate-Income (LMI) Populations

As described in the Action Plan, Superstorm Sandy had a particularly devastating impact on the affected LMI population. In response, the State directed first tranche CDBG-DR funds to programs specifically targeted to assist LMI populations. The State initially reserved 70 percent of its first tranche allocation of RREM Program funding and prioritized 60 percent of its initial funding round of the Homeowner Resettlement Program funding for LMI households. The State's renter programs overwhelmingly benefit LMI households; the projected LMI benefit for most renter programs is at least 95 percent. As of December 31, 2013, it is estimated LMI persons, communities or businesses have been awarded more than 50 percent of first tranche CDBG-DR funds.

Nevertheless, the unmet needs of New Jersey's affected LMI households, businesses and communities remain substantial. The State will continue to prioritize the use of CDBG-DR funds to address the needs of LMI populations.

2.3 Economic Development

2.3.1 Small Business Recovery and Revitalization

Superstorm Sandy affected thousands of businesses across New Jersey and across all business sectors. The storm caused significant physical damage as well as short-term and long-term business operations losses. Many of the businesses in hardest-hit communities fall within the leisure and hospitality industry or depend on tourism revenues for sustainability.

Following the disaster, access to capital for rebuilding and to offset business operations shortfalls presented the most critical unmet need with respect to economic development and revitalization. A number of recovery resources were directed toward addressing that need. Private insurance is one of the most critical

sources of funding for business recovery. SBA loans were distributed to eligible, affected New Jersey businesses, though that federal program was not without challenges. As of September 2013, more than $46 million in SBA loans had been disbursed to almost 900 New Jersey businesses. Other private funding sources, including microloans offered through Community Development Financial Institutions (CDFIs), provided capital to recovering businesses.

To augment assistance directly supporting economic development and revitalization, the State implemented two recovery programs funded by CDBG-DR monies and administered by the New Jersey Economic Development Authority (EDA). The Stronger NJ Business Grant Program provides grants of up to $50,000 to affected businesses for working capital and construction needs. The Stronger NJ Business Loan program provides loans of up to $5 million to allow businesses to rebuild and expand, which in turn creates jobs for recovering New Jersey households. The demand for these programs is summarized in Table 2-6; it shows that New Jersey small businesses still have significant unmet Sandy-related needs.

Table 2-6: Summary of CDBG-DR Programs Directly Assisting Affected Businesses[a]

Program	First Tranche CDBG-DR Allocation	Number of Applications	Amount Requested	Amount Obligated	Amount Disbursed	Excess / (Shortfall)
Stronger NJ Business Grants	$100,000,000	3,354	$167,700,000	$9,794,793	$7,248,537	($67,700,000)[b]
Stronger NJ Business Loans[c]	$100,000,000	414	$96,482,540	$11,264,000	$0	$3,517,460[c]

[a] Data as of December 31, 2013.

[b] This shortfall, which excludes program delivery costs, reflects amounts requested by 1,456 applicants who submitted applications as well as more than 1,850 applicants who opened applications but have yet to submit them. While EDA is no longer allowing new applications to be opened, EDA is working with those applicants who opened an application during the application period to bring those applications to completion. Because some applicants may elect not to complete their applications, this figure may overstate the grants program shortfall.

[c] Because a number of the 414 applications did not include a sufficiently concrete funding request, the Amount Requested column underestimates demand for the Stronger NJ Business Loans Program. While the Excess/(Shortfall) column shows a $3.5 million excess, the program actually has a significant shortfall.

At the same time, the State coordinated direct assistance for impacted employees. Approximately $5,000,000 in Disaster Unemployment Assistance was paid to affected New Jerseyans. The State has leveraged more than $15 million in federal National Emergency Grant funds to provide temporary employment related to disaster response and recovery efforts. The State also created talent networks to connect unemployed individuals with employers. The federal Sandy Task Force cited these recovery networks as a best practice in disaster recovery.

To further support economic recovery and revitalization, the State implemented the Neighborhood and Community Revitalization (NCR) program, funded with $75 million of first tranche CDBG-DR monies. The State committed $10 million for municipalities to support streetscape projects such as lighting and façade replacement in business districts, and an additional $2.5 million for CDFIs to

support ongoing micro-lending efforts. The lion's share of NCR program funding has been allocated to support larger economic revitalization projects. Economic revitalization projects have been submitted by affected communities across the State. Demand for the State's NCR program is summarized in Table 2-7.

Table 2-7: Summary of NCR Program Demand

Program	First Tranche CDBG-DR Allocation	Number of Applications Submitted	Amount Requested	Amount Obligated	Amount Disbursed	Excess / (Shortfall)
Neighborhood and Community Revitalization*	$75,000,000	93	$231,561,926	$7,500,000	$0	($173,311,926)

**Data as of December 31, 2013. The shortfall reflected in the Table excludes program delivery costs.*

Table 2-7 shows a significant unmet demand for NCR program funding. The funding for CDFIs has been fully committed. The $10 million initiative supporting streetscape projects and similar improvements currently has received over $17 million in requests. The substantial balance in demand reflects the fact that the NCR program initiative focuses on larger economic revitalization projects.

2.3.2 Tourism

Tourism is the third largest industry in New Jersey, and is critical to the State, to municipalities with budgets that depend on tourism revenues to provide essential services, to small business owners with businesses in, or dependent on, the hospitality and leisure industry, and to employees of those businesses. As detailed in the Action Plan, the storm created a misperception that tourism assets throughout New Jersey had been destroyed by Superstorm Sandy, even in comparatively less-affected communities.

To combat that misperception, the State sought a waiver from HUD to use CDBG-DR funds to support a tourism marketing campaign. HUD granted the waiver request, and the State allocated $25 million of first tranche CDBG-DR funds to create New Jersey's "Stronger than the Storm" campaign. The campaign included: outreach and community events; local, regional and national advertising; and marketing tools and techniques. This campaign began in May 2013, immediately after HUD approved New Jersey's CDBG-DR Action Plan when the State could begin drawing down first tranche CDBG-DR funds. The majority of the campaign occurred between Memorial Day and Labor Day, driven largely by when the State could access the CDBG-DR funds to support tourism; the State also held some fall events to support tourism at that time.

The "Stronger than the Storm" campaign incorporated advertising across different forms of media to reach New Jersey's target tourism market in a variety of ways. A television advertising effort introduced New Jersey's "Stronger than the Storm"

campaign to key markets such as New Jersey, New York, Philadelphia, other areas on the Eastern Seaboard and eastern Canada. Billboard advertising in top commuter locations around New York City supported the advertising campaign. Digital advertising appeared on sites popular with target audiences. Radio spots were created and aired throughout New Jersey and surrounding locales. A website designed around tourism and recovery was launched; it received over 390,000 visits and attracted 105,000 online fans. Social media was utilized and yielded 98,057 "likes" on Facebook and 6,616 followers on Twitter and 217 million Twitter impressions.

Community events across the Jersey Shore were organized and held to attract tourists and media coverage that reinforced the message that the Jersey Shore was open for business. In total, 43 events were held in shore communities that were attended by over 334,000 people, with 16,320 pieces of collateral materials distributed. Beginning with Memorial Day Weekend launch events, the campaign generated 1,746 total media placements and 1.25 billion total media impressions.

Following the most devastating natural disaster in New Jersey's history, preliminary data on tourism metrics suggest that New Jersey's 2013 summer season largely exceeded expectations, though some of the most impacted communities saw a significant reduction in tourism revenues. It will take time for more comprehensive data to be collected and analyzed to paint a complete picture of the 2013 tourism season. However, preliminary publicly available and third-party data available at this time – including hotel tax receipt data, hospitality employment statistics, hotel occupancy rates, and beach pass sales – show the following:

Table 2-8: Preliminary 2013 Tourism Metrics

	BEACH PASS SALES (as of Labor Day 2013)	HOTEL OCCUPANCY (June – August)	HOTEL REVENUE PER AVAILABLE ROOM (June – August)	HOTEL TAX RECEIPTS (June – August)	HOSPITALITY EMPLOYMENT (in thousands)
2009	$20,963,881	60.8%	75.26	$11,787,778	165.8
2010	$22,593,957	64.5%	81.36	$12,742,891	166.8
2011	$23,569,642	65.3%	81.39	$12,967,055	166.4
2012	$24,852,653	68.0%	85.72	$14,236,708	174.5
2013	$22,309,375	67.3%	84.55	$13,673,292	180.9
Source	*Municipal administrators, clerks and mayors*	*Smith Travel Research Analytics*	*Smith Travel Research Analytics*	*State of New Jersey, Department of Treasury, Division of Taxation*	*Total leisure and hospitality employment for Atlantic City, Ocean City and Edison metropolitan areas in August of each year. Retrieved from the Bureau of Labor Statistics*

In nearly all cases the summer 2013 tourism season, as measured by these preliminary statistics, outperformed the summer seasons for 2009 through 2011, and only slightly trails New Jersey's record-breaking tourism year in 2012. This occurred despite that June 2013 was the wettest June in New Jersey's history.

Importantly, these are cumulative figures spread across all communities; many hardest hit areas saw significant declines in 2013 tourism revenues.

The "Stronger than the Storm" campaign made a significant difference for tourism across the State, bringing revenues into recovering communities and protecting most hospitality and leisure jobs threatened by the impact of the storm. However, the State's local and business partners, especially those in New Jersey's shore communities, have emphasized the importance of additional advertising in 2014 in order to fully recover from the storm, revitalize damaged communities, and prevent any backslide from the recovery gains made by tourism-recovery investments in 2013. In particular, hardest hit communities that could not take full advantage of the 2013 tourism season because of the damage caused by the storm need a strong 2014 tourism season to support their ongoing recovery efforts.

With the breadth of housing needs and HUD's second tranche focus on infrastructure projects, funding in this tranche to support economic initiatives is extremely limited. Support for the tourism industry in 2014 presents the State's most immediate unmet business need. The State will continue to evaluate the unmet capital needs of businesses and also look to prioritize large revitalization projects in impacted communities to create jobs and expand and diversify industry in impacted areas.

2.4 Infrastructure

Superstorm Sandy significantly affected New Jersey's infrastructure. The combination of storm surge, wave action, and high winds damaged or destroyed much of New Jersey's existing coastal risk reduction infrastructure. Breach of New Jersey's dune systems and other extensive flooding in non-coastal areas resulted in significant damage to homes, businesses, and critical infrastructure throughout the State.

Sandy highlighted New Jersey's vulnerability to coastal and other flooding and revealed how various infrastructure systems in the State are interdependent. New Jersey's energy infrastructure was significantly impaired with end users experiencing prolonged outages, despite best efforts to restore systems as soon as possible. Flooding of substations and other electric distribution components brought many operations to a standstill and caused an immediate threat to public health and safety. Damage to key facility components as well as electrical outages rendered New Jersey's petroleum production and delivery systems unusable, resulting in fuel availability issues throughout the State.

Widespread energy failures triggered damages across a number of other infrastructure sectors. As a result of energy failure, water and wastewater operations were significantly disrupted when those facilities were unable to operate

pumping stations and other equipment. Failure of these systems compromised the quality of the State's water supply and, in some cases, resulted in the improper discharge of raw sewage into local waterways.

Flooding and power loss caused significant damage to New Jersey's transportation and public transit infrastructure. Local and state roadways experienced significant damage from flooding. Flood waters inundated critical public transit facilities, interrupting commuter service across the region. Sandy also caused extensive damage to other types of infrastructure including, schools, parks, and public and community buildings.

The State has collaborated with FEMA, the U.S. Army Corps of Engineers, U.S. Department of Transportation, U.S. Environmental Protection Agency, and other federal agencies to leverage available funding streams to allow for the repair of key infrastructure and public building assets and also to pursue significant resilience initiatives. Section 3.5 summarizes the State's holistic approach to long-term infrastructure recovery.

Significant needs remain unmet in all infrastructure sectors. Over the last several months, the State continued to analyze and update its unmet needs assessment across infrastructure sectors. Specifically, New Jersey's agencies have conducted extensive damage assessments of infrastructure facilities and equipment throughout the State. The State has also taken steps to improve New Jersey's resiliency for future severe weather events. To that end, New Jersey has partnered with several federal agencies to assess and identify opportunities to rebuild more resilient infrastructure. The State has also engaged six universities to evaluate repetitive loss areas and develop innovative flood risk reduction strategies. The estimated cost of these resiliency measures has been factored into the unmet needs assessment.

It should be noted that the State's infrastructure unmet needs assessment is based on current best available data. It is anticipated that latent damage caused by Sandy may continue to arise and that the total damage from saltwater corrosion and other impacts may not be known for some time, which may alter the State's unmet needs. In addition, New Jersey's overall unmet infrastructure need may increase as the State continues to assess and identify opportunities for infrastructure resiliency.

2.4.1 Flood Hazard Risk Reduction & Resiliency Needs

Superstorm Sandy highlighted New Jersey's vulnerability to coastal and other flooding. From Bergen County to the tip of Cape May, Sandy's storm surge caused extensive flooding. All along New Jersey's 126-mile Atlantic coast, the combination of storm surge, wave action, and high winds overcame and eroded engineered beach and dune systems. According to the National Weather Service, Sandy produced record wave heights of more than 30 feet near Sandy Hook, resulting in a storm surge 8.57 feet above sea level. Significant inundation also occurred in densely populated urban areas as well as non-coastal communities in many of New Jersey's floodplains.

When Sandy hit, large sections of the New Jersey coast were outfitted with beach and dune systems built by the U.S. Army Corps of Engineers (Army Corps) in partnership with the State and local governments. However, large segments of New Jersey, including densely populated areas along the Hudson River, did not have risk reduction measures in place at the time of the storm and experienced significant flood inundation. Those areas which had been the beneficiaries of the Army Corps' coastal risk reduction projects, including sand dunes, berms, and engineered beaches, suffered significantly less damage than those without similar risk reduction infrastructure. Seaside Heights, for example, experienced "catastrophic damage to infrastructure and property as a result of having no dune system and an approximate berm width of 250 feet," according to the findings of The Richard Stockton College of NJ Coastal Research Center's (CRC) Beach-Dune Performance Assessment following Superstorm Sandy. By contrast, the CRC found that Cape May County's "[w]ide beaches with in-depth dune protection provided all the storm-stopping power needed to prevent wave damage and the flooding of oceanfront streets with sand."

Although New Jersey's existing coastal risk reduction infrastructure effectively protected some communities, it was also significantly damaged by Sandy's record storm surge. Dunes and other risk reduction measures that cushioned the storm surge's blow during Sandy were significantly eroded and in some cases washed away entirely. According to the CRC's Beach-Dune Performance Assessment of Atlantic County, "huge breakers [from Superstorm Sandy] essentially bulldozed the berm, beach and irregular dune system all along the . . . Atlantic shoreline."

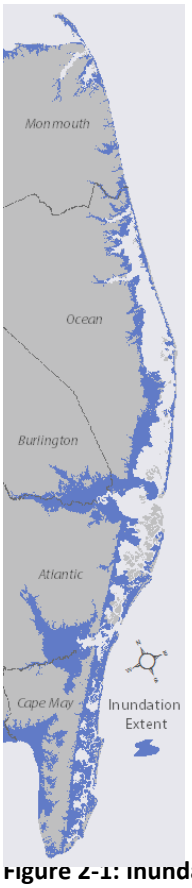

Figure 2-1: Inundation Map, Atlantic Coast, New Jersey

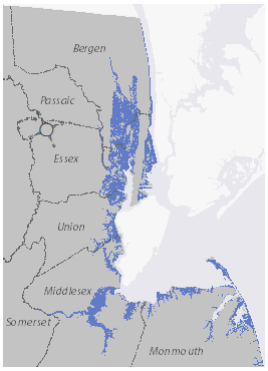

Figure 2-2: Inundation Map, Northern New Jersey

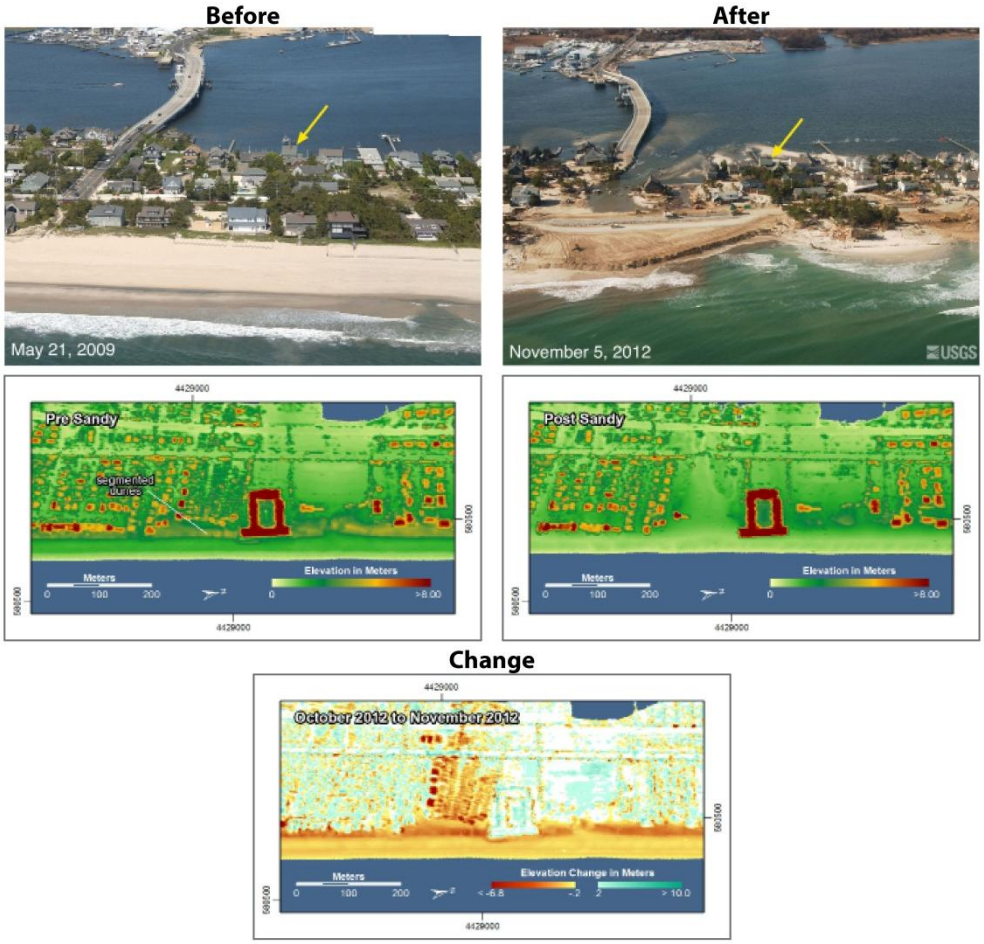

Figure 2-3: Damage in Mantoloking, NJ. These photographs and lidar images present a before and after snapshot of Sandy damage in Mantoloking, New Jersey. On top, pre- and post-storm photographs show a view looking west along the New Jersey shore. The photographs show that storm waves and surge cut across the barrier island, eroding a wide beach, destroying houses and roads, and depositing sand onto the island and into the back-bay. Below the photographs, airborne lidar images are used to characterize the nature, magnitude, and spatial variability of hurricane-induced coastal changes.
Source: U.S. Geological Survey (USGS)

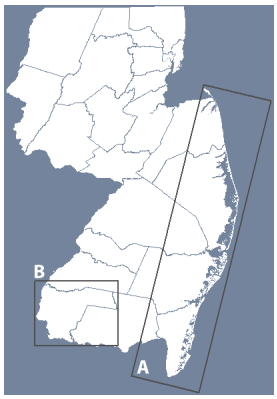

Figure 2-4: New Jersey Easements Map
Source: DEP

To restore the beaches and coastal infrastructure damaged by Sandy, the State has taken several steps to pave the way for the Army Corps to begin construction of previously designed and congressionally authorized projects on an accelerated schedule. Many beaches and coastal areas of the State are privately owned. Prior to beginning construction, the Army Corps requires that the State acquire the necessary property rights, or easements, to allow for the construction of coastal risk reduction measures. The State has worked hand-in-hand with community leaders to encourage homeowners to voluntarily provide easements to allow projects to be constructed to benefit their neighbors and larger communities. As of January 2014, the State continues to seek voluntary easements from approximately 1,000 properties for upcoming projects. An Executive Order by Governor Christie directed the State's Attorney General to take legal action to acquire the necessary easements

to build dunes and construct engineered beaches. The State also created the Office of Flood Hazard Risk Reduction Measures to support these efforts. In collaboration with the State, the Army Corps has already undertaken construction of certain dunes and engineered beaches. The Army Corps is expected to continue to break ground on additional authorized and congressionally approved projects throughout the remainder of 2014 and into February 2015, but significant areas of the State remain vulnerable.

The State has identified substantial unmet needs in connection with the Army Corps repair and restoration of engineered beaches, dunes, and other existing risk-reduction measures in 14 project areas. The Army Corps has identified over $1.6 billion in total funding towards flood hazard/coastline projects, approximately $1.2 billion of which will be federally funded. The State's local match obligation of these Sandy-related Army Corps projects is $369,450,000. HUD Federal Register Notice FR-5696-N-06 provides that the use of CDBG-DR funds to satisfy Army Corps local match obligation is limited to $250,000 per project. Based on this restriction, the CDBG-DR-eligible portion of the State's local match obligation is $2,250,000. In addition, local communities have identified more than 350 flood risk reduction and resiliency projects – including the installation of pump stations, the construction of new flood walls, and other system improvements – at an estimated implementation cost of $4,573,207,003. $46,854,315 in project worksheets[1] have been submitted to the FEMA Public Assistance (FEMA PA) program for flood infrastructure repair, of which $34,182,188 has been deemed eligible for federal funding. Therefore, excluding the federal share, New Jersey's current estimate of its unmet flood risk reduction and resiliency needs totals approximately $4,955,329,131.

2.4.2 Utility Infrastructure Needs

2.4.2.1 Energy Infrastructure

Superstorm Sandy caused extensive damage to New Jersey's energy infrastructure, disrupting delivery of electricity, petroleum, and natural gas to consumers across the State. Seventy-one percent of New Jersey's electrical distribution systems were impacted by Sandy. Flooding and high winds damaged high-voltage lines, substations, and distribution components throughout the State, leaving 2.8 million electric utility customers without power. In the aftermath of Superstorm Sandy, 100 transmission lines were out of service and over 4,000 transformers were damaged or flooded and had to be replaced.

[1] Data are as of December 31, 2013 and include the insurance-reduced amount of $107,450.

At least one-third of New Jersey residents lacked power for at least six days after the storm. Schools, small businesses, and other commercial enterprises did not have power restored, in some cases for more than a week. Failure of the electric grid had a significant impact on the region's economy. Manufacturers ceased operations and research facilities were shut down, many of which lost vital research.

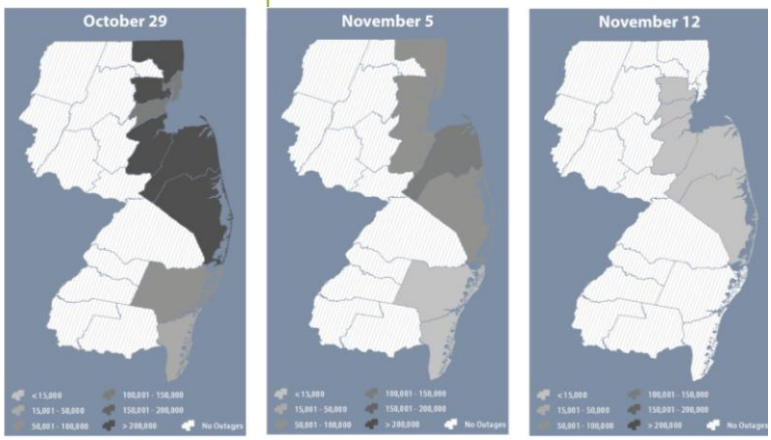

Figure 2-5: Power Outage Timeline (October 29, 2012 – November 12, 2012)
Source: State of New Jersey

New Jersey's critical energy infrastructure and assets experienced significant disruption in service, which brought everyday operations to a standstill and had significant, and in some cases life-threatening, community impacts. Hospitals, nursing homes, long-term care facilities, domestic violence shelters, foster homes, mental health facilities, and other critical social service providers throughout the State were forced to contemplate evacuation in light of prolonged power outages. Low-lying facilities in flood hazard areas, such as wastewater treatment plants, could not operate pumping stations without power, causing direct and significant long-term damage to facilities. Police stations, fire stations, 9-1-1 call centers, and other buildings were also severely hindered in their efforts to provide emergency services.

Even those critical infrastructure and assets reliant on diesel generators for back-up power experienced electric reliability issues, due to limitations on the availability of liquid fuel. Petroleum production, transport, distribution, and retail sales were also significantly impacted. In many cases, flooding and wind damage to key facility components, coupled with electrical outages, rendered petroleum production and delivery systems unusable, by disabling refineries, terminals, pipeline operations, and gas stations needed to deliver petroleum products to end users. Over 70 percent of gas stations in northern New Jersey were unable to operate for as much as a full week after the storm. As one of the largest petroleum product hubs in the northeast, damage and loss of power to New Jersey's petroleum infrastructure – including the Colonial Pipeline – caused interruption to fuel distribution across the region, including to New York City and Long Island.

Immediately following the storm, the State and its utilities took steps to restore the State's energy services. The State mobilized over 17,000 crew workers, the largest mutual aid response to a hurricane in history, to restore electrical services. In addition, natural gas service was restored to all customers who could safely accept

it. The State has taken action to address supply- and retail-side liquid fuel interruptions in preparation for future hazards or events, using FEMA HMGP funds. New Jersey's Retail Fuel Station Energy Resiliency Program targets retail fuel stations within one-quarter of a mile of identified evacuation routes in the State and incentivizes the permanent installation of a back-up electric generator or "quick connect" capability. In addition, the State is partnering with the U.S. Department of Homeland Security to explore opportunities to increase the resiliency of the State's petroleum storage, distribution and supply systems.

New Jersey has also taken steps to fully assess the impact to the State's energy infrastructure and develop long-term recovery plans focused on increased energy resilience. While complete repair and restoration of service is essential, it is also critical that New Jersey's energy infrastructure become more able to withstand the impacts of future severe weather events. To that end, the State partnered with the U.S. Department of Energy (USDOE), the USDOE's National Renewable Energy Laboratory (NREL), and FEMA to study opportunities to expand energy resilience for the State's critical infrastructure and assets. As part of the State's partnership, NREL conducted a comprehensive analysis of energy needs of critical facilities in municipalities and counties and identified opportunities for communities to build energy resilience by pursuing innovative – but cost-effective – energy solutions. In some cases, NREL's analysis identified cost-saving opportunities, including retrofitting existing solar panels on public buildings to "island off" from the larger electric grid. The State has increased funding to the New Jersey Clean Energy Program, to provide increased rebates to projects that are rebuilding with clean energy and Energy Star projects to reduce grid demand in affected areas. In addition, the State has undertaken a cross-agency initiative to enhance the State's mapping capabilities to assist the State in identifying cost-effective candidates for distributed generation. The State also partnered with President Obama's Hurricane Sandy Rebuilding Task Force, the USDOE, and Sandia National Laboratories to study energy resilience through expanded use of micro-grid networks to protect critical facilities in urban centers and transportation networks. New Vegetative Management Pilot Programs are being explored to work to proactively remove dead or dangerous trees from private property that may threaten the power grid, to prevent power line disruption in the future.

Despite widespread failure of the electric distribution system, there were several entities throughout New Jersey in storm impacted areas that maintained full power; even in the face of prolonged and diffuse failures of the larger electric grid. These "islands of power" had distributed generation units, which allowed these facilities to operate as micro-grids while the distribution grid was down. For example, Princeton University's combined heat and power (CHP) micro-grid operated for a week when the larger grid failed, saving the University millions in documented avoided loss in

hundreds of irreplaceable research projects. Similarly, the College of New Jersey's CHP micro-grid provided heat, power, hot food and hot showers to 2,000 mutual aid workers from other states that helped to restore power after the storm. Several medical facilities were also able to maintain power through CHP micro-grids, becoming larger shelters as well as accepting patients from other facilities. Further, as the President's Hurricane Sandy Rebuilding Task Force's Rebuilding Strategy noted, the Bergen County Utilities Authority (BCUA) was able to operate its sewage facilities both during and after the storm by relying primarily on a biogas-powered CHP system. The resilience of these facilities during and after the storm highlights opportunities to protect certain critical infrastructure by pursuing technologies that allow facilities to operate independently from the grid or by utilizing more cost-effective, energy efficient and cleaner resilient power options. The State has implemented resiliency programs to increase awareness of distributed generation units, such as CHP capabilities, to provide emergency power at times when generators fail due to flooding or fuel supply issues.

The costs of building a more resilient energy infrastructure will be substantial. Publically regulated utilities in New Jersey have identified a need of $945,919,000 to repair damage to utility infrastructure. These utilities have also estimated costs of $4,038,500,000 in projects to prevent future storm damage to generation, transmission and fuel delivery infrastructure. Additionally, $301,838,003 in project worksheets have been submitted to the FEMA Public Assistance (FEMA PA) program for energy infrastructure and emergency generator projects, of which $10,891,643 has been deemed eligible for federal funding. There has also been an identified need of $332,169,227 in Hazard Mitigation Grant Program funding for energy infrastructure. Therefore, excluding the federal share, New Jersey's current estimate of its unmet energy infrastructure needs totals approximately $5,607,534,587.

Seventy-seven percent of the federal funding to these projects has gone to eight of the ten municipal Independently Owned Utilities in the State that are not regulated by the BPU (see Table 2-9). Butler Boro, Lavallette, Madison, Milltown, Park Ridge, Seaside Heights, South River and Sussex Rural Electric Cooperative have eligible projects worth $9,327,676, receiving $8,396,929 in FEMA assistance, with the utilities providing matching funds of $930,747. The remaining two independent municipalities, Pemberton and Vineland Municipal Electric Utility have not applied for any FEMA assistance funds for energy infrastructure, although these utilities did apply for FEMA Emergency Protective Measure funds.

Table 2-9: Percentage of FEMA Funds Paid to Date by Location		
Location	**FEMA Funds Paid to Date**	**Percentage of Federal Money**
Butler Boro	$543,058.82	4.99%
Lavallette	$2,399,624.38	22.04%
Madison	$448,807.28	4.12%
Milltown	$144,860.51	1.33%
Park Ridge	$210,215.62	1.93%
Seaside Heights	$3,393,297.05	31.16%
South River	$216,418.79	1.99%
Sussex Rural Electric Cooperative	$1,040,646.68	9.56%
Remaining State Energy Projects	$2,492,193.81	22.89%
Total	**$10,889,122.94**	
Source: FEMA Project Worksheets		

The State is proposing to allocate a portion of the second CDBG-DR funding allocation to a New Jersey energy resilience bank that will fund projects that will help prevent a reoccurrence of the energy disruptions and build energy resilience. Projects may include the increased deployment of micro grids, distributed generation, smart grid technologies, and energy storage. The bank can also fund site acquisition and preparation and other aspects of development to support the deployment of distributed generation or other energy technologies.

2.4.2.2 Water & Wastewater Infrastructure

New Jersey's drinking water and wastewater operations were significantly compromised as a result of Superstorm Sandy, resulting in $2.6 billion in estimated needs (including emergency repair, recovery, mitigation and resiliency). A variety of sources confirm the significant unmet needs that New Jersey's environmental infrastructure faces in the long-term recovery process. Following Superstorm Sandy, New Jersey's Environmental Infrastructure Trust collected information from over 380 water and wastewater utilities, on their total needs, including resiliency costs. Through this process, water and wastewater utilities and municipalities identified $636 million in damages and resilience projects that will cost an additional estimated $1.6 billion. Separately, FEMA Project Worksheets (FEMA PW) data provides a total of over $167.5 million in damages.[2] In addition, Letters of Intent for State Revolving Funds (SRF) 2015 funding estimated nearly $1.1 billion in funding needed for environmental infrastructure-related projects. While there is likely some overlap between these three data sources, at least $2.6 billion in damages and resilience opportunities have been identified as unmet needs.

[2] This figure includes FEMA Category B data, so it may be greater than the actual infrastructure need.

Table 2-10: Summary of Estimate of Water & Wastewater Damages and Resilience Opportunities		
Source of Total Damage Estimate	**Estimate**	**Description of Source**
Declaration of Needs Assessment (DONA) Survey – March 2013	$2,237,822,127	Online survey conducted through the Environmental Infrastructure Trust website in March 2013 asking municipalities to estimate current repairs, additional repairs, and resiliency costs
Letters of Intent for SRF for 2015 Funding	$1,086,142,688	Water and wastewater utilities and municipalities submitted letters of intent for funding through clean water and drinking water state revolving funds (SRF)
FEMA Project Worksheets Total	$167,540,663	Total of applicants for projects eligible under 406 Public Assistance

At the height of the storm, 94 wastewater treatment systems in all 21 counties suffered failures or disruption, including reduction or complete loss of power; reduction or loss of treatment capacity; broken sewer mains; and other operational issues. Treatment facilities, pump stations, and sewer mains in several areas on the barrier islands sustained catastrophic surge and flood damage or, in some cases, complete destruction. Salt water inundation of pump stations destroyed electrical equipment, including pumps, motors, and electric controls. Damage also spread to municipal storm water systems, many of which were clogged with sand or other sediment.

Several regional wastewater facilities were either rendered inoperable following Sandy or operated with reduced capacity for an extended period of time. For example, the State's largest wastewater and biosolids processing facility, which directly or indirectly serves 25 percent of the State's population and processes approximately 15 percent of the biosolids produced in New York City, was inundated and rendered inoperable. This caused a cascading impact on over 100 other facilities across New York and New Jersey that were forced to locate alternative management sites. Damage to the State's wastewater infrastructure led to the improper discharge of more than three billion gallons of raw, untreated sewage into local bodies of water. Even facilities that were not directly impacted by Superstorm Sandy's storm surges or diffuse power outages were overburdened with increased processing demand, due to the large number of facilities that were forced to operate at reduced capacity.

The vast majority of New Jersey's community water supply systems were impacted: 427 of 604 community water systems experienced power loss during the event. As a result of these service interruptions, water quality was compromised. Boil water advisories were issued by 37 water systems, impacting 362,334 New Jersey residents. One month after Superstorm Sandy made landfall, seven drinking water systems were still subject to a boil water advisory, the last of which was not lifted until December 27, 2012. In the months following Sandy, many customers reported

water discoloration caused by an inability to sufficiently flush sitting water from pipes.

Over the last several months, the State has facilitated and assisted in the repair and recovery of water and wastewater systems by ensuring that broken pipes, sewer mains, and pump stations are repaired, key electrical components are replaced, sediment is removed from clogged storm water systems, and other needs are met. The State continues to help resolve issues, coordinate expedition of permits, and serve as a liaison, as needed, between these critical public facilities and federal funding sources. In addition to complete repair and restoration, increased resiliency and durability of the State's water and wastewater systems is essential to help mitigate future risk. In an effort to build long-term resiliency, the State plans on taking steps to harden water and wastewater infrastructure by flood-proofing facilities, elevating key assets or buildings, building floodwalls, strategically placing berms, and taking other protective measures. In addition, because loss of power was a major instigator of damages to the water and wastewater sector, the State has also identified a range of potential energy resiliency projects to ensure uninterrupted power distribution to this critical infrastructure sector, discussed in detail elsewhere in this section.

The cost of rebuilding New Jersey's water and wastewater infrastructure will be substantial. As of December 31, 2013, $167.5 million in project worksheets have been submitted to the FEMA PA program for drinking water, wastewater, and storm water infrastructure projects, of which nearly $123 million have been obligated with federal funds; the total remaining funding is about $38 million. This includes projects for towns which have their own water utilities, such as Lavallette, Park Ridge, and South River. In addition, there are Sandy-related drinking water funds for New Jersey from EPA totaling $38 million with a match requirement of more than $7.6 million. Clean water funds for New Jersey from EPA totaling $191 million carry a match requirement of more than $38 million. Both the drinking water and clean water funds are available as low-interest loans, and not as grants.

Table 2-11: Grant and Match Requirements for Sandy SRF Funding

Source of Funding	Cap Grant	20% Match Requirement
Drinking Water	$38,221,192	$7,644,238
Clean Water	$191,105,958	$38,221,192

Source: DEP

2.4.3 Transportation Infrastructure Needs

Superstorm Sandy significantly affected New Jersey's transportation and transit infrastructure, crippling mobility across the region. To protect life and mitigate the potential for damage, the State closed three quarters of the 173-mile long Garden State Parkway prior to the storm – an unprecedented safety precaution. New Jersey

Transit (NJ Transit) also instituted a system-wide shutdown of all services, including bus, rail, light rail, and ferry services.

Superstorm Sandy's strong storm surge and high winds wreaked havoc on New Jersey's roadways. A number of roads in shore communities were entirely washed out, as were the berms and seawalls that protected the roadways. For example, in Mantoloking Township, the Atlantic Ocean breached over 1,000 feet of State Route 35 in three locations. Highways, including parts of State Route 37 in Toms River Township, experienced severe erosion and scour.

Even roadways that did not flood experienced significant damage. In Jersey City and Point Pleasant, the arms of barrier gates were torn off due to excessive wind. Guiderails and fences along roads throughout the State sustained damage from falling trees and other debris. Hardwired warning signs – intended to guide residents in times of disaster – were damaged and disabled by the storm's powerful winds. Traffic signals throughout the State were knocked down or otherwise rendered inoperable by power outages. Sandy also caused sinkholes throughout the State; on State Routes 35 and 36 alone, the storm created approximately eighty sinkholes.

The storm caused structural and other damage to many of New Jersey's bridges that will cost millions of dollars to repair. For example, the State Route 71 Shark River Bridge suffered flooding of electrical and mechanical bridge operations equipment. The State Route 37 Bridge suffered bearing damages. The State Route 72 Causeway Bridge experienced considerable erosion.

Immediately following Sandy, the State completed emergency repairs and implemented protective measures to ensure that primary roadways were passable. Among these initial efforts to restore the roadways to operational condition, the State removed trees and large debris – including cars, watercraft, and other structures – from public roads and rights-of-way; removed over 4,000 truckloads of sand; and replaced over 1,000 traffic signals.

In reconstructing the State's transportation infrastructure, the State aims to build back a more resilient infrastructure. For example, State Route 35's reconstruction will incorporate best practices in mitigation, including an improved drainage system, pump stations, and 24-inch thick pavement and sub-base materials. In addition, the State has undertaken the installation of more than four miles of steel sheeting to further protect Route 35. The State is also using advanced technologies in rebuilding, including radar, to detect voids under roadways. Other long-term projects are also underway, including the construction of a new bridge, among other improvements, to be built parallel to the State Route 72 Manahawkin Bay Causeway. The new bridge will provide the safety of a redundant route on or off Long Beach Island in the event a span needs to be closed.

The State has identified a number of additional projects to make transportation infrastructure less susceptible to future storm damage. Potential projects include reconstruction and replacement of critical roads and bridges, the construction of bridge abutment/pier scour counter measures at 130 crucial state-owned bridges, traffic signal hardening including emergency generator interface capability, drawbridge hardening and movement of electrical and mechanical systems to higher elevations, and the installation of emergency generators at maintenance yard facilities.

The storm also significantly impacted New Jersey's public transit systems. Commuter rail service was disrupted for months in what has been described by the President's Hurricane Sandy Rebuilding Task Force as "the worst disaster for public transit systems (e.g., bus, subway, commuter rail) in the nation's history." NJ Transit's rail network experienced substation flooding, track washouts, downed overhead catenary wires, and damage to signal and communications systems.

As the heaviest traveled portion of the Northeast Corridor, damage to New Jersey's transit systems had significant ripple effects across the region, impacting thousands of customers and doubling or tripling commuter travel time. NJ Transit quickly implemented emergency repairs to restore service. Significant restoration and repair of communication and signal systems, substations and catenary wires, and other key assets were necessary to restore rail service. Restoration and repair was also required on the Hudson-Bergen Light Rail and Newark City Subway systems. Prolonged and diffuse electrical outages also significantly hampered recovery. Despite the extraordinary effort and expenditures to repair damage and restore service, NJ Transit rail did not resume full operations until December 3, 2012, with some lines on remaining on limited service for several months.

The State continues to explore ways to improve the resiliency of public transit systems to reduce the impact of future natural disasters. To that end, a number of resiliency projects have been identified. Potential resiliency projects for NJ Transit include, raising substations in flood prone areas; building new storage, service, and inspection facilities; improving operating efficiencies; and implementing various flood control strategies near Morgan Draw, Secaucus Junction and other facilities. In addition, in August 2013, the State announced a partnership with the USDOE and Sandia National Laboratories to study the potential implementation of "NJ TransitGrid" – a first-of-its kind transportation microgrid capable of providing highly reliable power in the event the larger electrical grid fails capable of supporting commuter transportation to and from New York City and ancillary facilities needed to operate rail services.

The cost of rebuilding a more resilient transportation and transit infrastructure will be substantial. Superstorm Sandy is estimated to have caused a total of $810 million in damages to systems maintained by the New Jersey Department of Transportation, the New Jersey Turnpike Authority, NJ Transit, the South Jersey Transportation Authority, and county and municipal transportation agencies. Nearly 75 percent of that amount pertains to NJ Transit assets (Figure 2-6). An additional $3,251,402,178 in resiliency projects is needed to ensure protection of roadways and transit systems from future events. These totals do not take into account latent system damages from saltwater intrusion which may arise in the future and may not factor in private insurance proceeds where data was not yet available.

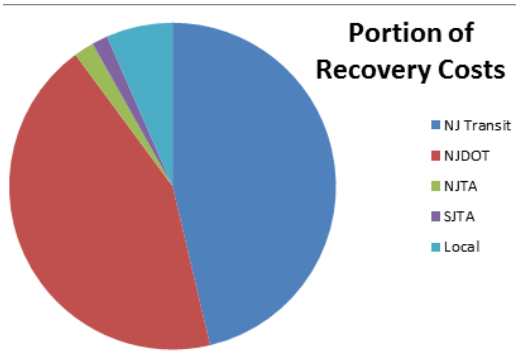

Figure 2-6: Portion of Recovery Costs by Agency
Source: NJDOT, NJTA, NJ Transit

2.4.4 Community Facilities Infrastructure Needs

Superstorm Sandy significantly damaged many New Jersey community facilities including schools, parks, police and fire departments and other public buildings.

Schools

Flood waters and power outages forced at least 370 school districts to close for at least one week. Seventy-seven New Jersey schools suffered physical damage as a result of the storm, including flooding, roof and other structural damage, and window damage. The damage inflicted on schools by Superstorm Sandy is estimated at more than $36 million, $21 million of which was not covered by insurance or FEMA funds. In the aftermath of the storm, the New Jersey Department of Education coordinated alternative accommodations and transportation needs for more than 2,800 displaced students. Within three weeks of the storm, 99 percent of New Jersey schools were reopened. Damage to six New Jersey schools was so severe that they remained permanently closed for the remainder of the school year. On Long Beach Island, one Sandy-damaged school remains closed and is expected to reopen in March 2014.

State and Community Parks

Superstorm Sandy also caused substantial damage to New Jersey's State and community parks. Throughout impacted communities, State and local officials worked to repair and reopen community parks. In many cases, cleanup involved significant and costly debris removal. Statewide, New Jersey marinas, beaches, parks

and boardwalks suffered more than $80 million in damage. As part of the disaster cleanup, the State conducted aerial surveillance of New Jersey beaches; assisted in the removal of 200 vessels from state waters; completed side scan sonar of 195,000 underwater acres; and cleared debris from 275 marinas. In addition, recreational beach water quality monitoring was performed at 175 ocean and 43 bay monitoring stations to ensure public safety. As a result of these efforts, nearly 100 percent of New Jersey beaches were open prior to Memorial Day Weekend. Moreover, the State spent considerable effort to restore public boardwalks despite severe damage or total destruction of many of New Jersey's iconic boardwalks. There is approximately $23 million in projects remaining to be completed.

Public Health & Safety

Police departments across the State suffered damage. Local fire departments, which are predominantly volunteer-led in New Jersey, were crippled, sustaining an estimated $237 million in damage. The loss of facilities as well as public safety and emergency vehicles caused increased response times for fire and medical services, further endangering local residents. Since the storm, the State has worked with local communities in repairing and rebuilding this critical infrastructure. While some facilities have been restored, more than $56 million in damage remains, forcing some communities to rely on neighboring towns to share services.

In addition, the State has worked to protect New Jerseyans' health during Sandy recovery. For example, the State created the Hope and Healing program, which offers confidential mental health information and referrals from trained counselors. In addition, the New Jersey Department of Health launched a public awareness campaign – including radio, op-ed articles and flyers – encouraging people working on recovery efforts to protect their health by getting a tetanus booster and by wearing goggles, rubber gloves, boots and a respirator; using insect repellant to protect against West Nile Virus and other mosquito-borne diseases; and taking measures to minimize storm-related mosquito-breeding habitats. The Department also published a pamphlet that provides guidelines to residents on how to assess mold and hire contractors to remove mold, distributing more than 13,000 copies in English and Spanish, as well as providing free training classes to more than 800 participants.

Public & Community Buildings

Superstorm Sandy did more than $231 million in estimated damage to many public and community buildings, which provide critical services to New Jersey residents including city/town halls, courthouses, libraries, post offices, correctional facilities, day care, family and social services centers and senior care facilities. As with public health and safety infrastructure, many of these facilities remain damaged. Complete

and immediate repair of these buildings is critical to New Jersey's recovery. The current unmet need exceeds $136,000,000.

The cost to repair the damage to community facilities, as reflected in FEMA project worksheets is summarized in the Table 2-12. New Jersey's overall unmet infrastructure need for community facilities is $236,548,191.

Table 2-12: Damage to Community Facilities Based on FEMA Data

Community Facilities	Damage Estimate	Eligible for FEMA Reimbursement	Unmet Needs
Schools	$36,564,844	$15,288,857	$21,275,987
Parks and Recreational Facilities	$80,797,209	$57,729,094	$23,068,115
Public Health Facilities	$237,501,114	$181,307,744	$56,193,370
Public and Community Buildings	$231,408,083	$95,397,364	$136,010,719
Total	**$586,271,250**	**$349,723,060**	**$236,548,191**

Source: FEMA Project Worksheets

2.4.5 Debris Removal Infrastructure Needs

In the process of damaging homes, businesses, and infrastructure, Sandy's violent storm waters have had devastating and continuing impacts in the form of newly accumulated debris and sediment in waterways across the State, in confined disposal facilities and landfills that now have reduced long-term capacity. In allocating funding to CDBG-DR grantees, HUD did not consider the present and future unmet needs associated with debris and sediment management, but the already realized (and expected future) costs are substantial and will impact the State's ability to respond to recovery challenges by diverting already limited resources.

Sandy-related sediment can be found in approximately 160 of the State's over 200 coastal navigation channels. This sediment is a threat to navigation (commercial, recreational, commuting) and must be addressed as an important part of New Jersey's long-term recovery efforts. The New Jersey Department of Transportation's Office of Maritime Resources has identified potential dredging projects at an approximate cost of $150,000,000.

New Jersey has already made substantial progress in dredging and debris removal, using side-scan sonar and other technologies to prioritize areas of need. The State is working actively with FEMA to dredge channels, but coastal lakes and other sediment-laden bodies of water will continue to present flooding and other challenges.

As of December 31, 2013, throughout the State, the damage estimates reflected in FEMA project worksheets was $730,360,727 for debris removal and clearance/demolition of storm-related debris. The federal share of this damage is

$504,954,463, which leaves the unmet need for debris removal for the State at over $225 million.

2.4.6 Summary of Unmet Infrastructure Needs

To estimate the extent of New Jersey's unmet infrastructure needs, the State must use best available data to quantify the cost to repair damage to infrastructure caused by Superstorm Sandy as well as the cost to implement resilience measures to reduce risk to federal and state investment from future severe weather events. The State must then subtract costs that are paid by another funding source. Insurance proceeds have been subtracted from these estimates but in some instances are not yet known. Specifically, this assessment calculates: (a) the cost of repairing storm-induced damage minus the amount eligible for Federal Assistance (including Army Corps, EPA, Federal Highway Administration (FHWA), Federal Transit Administration (FTA), FEMA, and other federal agencies) plus local match; and (b) the cost of implementing identified hazard mitigation projects as reported through state agencies as of December 31, 2013. Based on this analysis, New Jersey currently has an estimated unmet infrastructure need of more than $17.3 billion.

As illustrated in Table 2-13, $3.6 billion is the estimated cost of repairs to critical infrastructure and public buildings, and approximately $16.5 billion has been identified by state agencies for resilience projects.

Table 2-13: Summary of Infrastructure Needs

Infrastructure Sector	Estimated Damages	Mitigation and Resilience Opportunity Costs	Expenses Eligible for Federal or Other Reimbursement	Resulting Unmet Need
Flood Hazard[1]	$46,854,315	$6,177,032,189	$1,268,557,374	$4,955,329,131
Energy[2]	$787,257,003	$4,831,256,727	$10,979,143	$5,607,534,587
Water/Wastewater[3]	$803,941,989	$2,141,682,936	$306,004,498	$2,639,620,426
Transportation[4]	$810,175,282	$3,251,402,178	$353,263,699	$3,708,313,761
Community Facilities (incl. Emergency Warning Systems)[5]	$514,252,632	$72,018,619	$349,723,060	$236,548,191
Debris Removal and Dredging[6]	$730,360,727	-	$504,954,463	$225,406,264
Total	**$3,692,841,948**	**$16,473,392,649**	**$2,793,482,237**	**$17,372,752,360**

Sources:
[1] *FEMA Project Worksheets; Army Corps of Engineers; NJOEM*
[2] *FEMA Projects Worksheets; NJ BPU; NJOEM*
[3] *FEMA Project Worksheets; NJOEM; EITS DONA Survey; NJDEP*
[4] *FEMA Project Worksheets; NJDOT; NJ Transit; NJTA; SJTA; NJOEM*
[5] *FEMA Project Worksheets; NJOEM*
[6] *FEMA Project Worksheets; NJDOT*

2.4.7 Port Authority of New York and New Jersey

The Port Authority of New York and New Jersey is a bi-state agency that provides transportation, terminal and other facilities of commerce in the New York-New

Jersey Port District, including bridges, tunnels, airports, PATH and bus terminals. In Federal Register Notice FR-5696-N-06, HUD directed New Jersey to assist the Port Authority in "address[ing] resiliency and local cost share requirements for damage to . . . the Port Authority or demonstrate that such resiliency needs and local cost share has otherwise been met."

Superstorm Sandy caused significant damage to Port Authority assets, including, but not limited to, extensive damage to the Port Authority Trans-Hudson (PATH), an interurban rapid transit system, which links Manhattan with neighboring New Jersey urban communities and suburban commuter railroads. The Port Authority has estimated total damages from Superstorm Sandy to exceed approximately $2 billion, which does not include possible future latent damages. The Port Authority has also identified additional resiliency and mitigation projects. It is the State's understanding that the Port Authority intends to satisfy its Sandy-related damage and resiliency costs through one or more of the following sources of funds: grant proceeds from the Federal Transit Administration and FEMA; proceeds from insurance; and available Port Authority capital funds, including through the issuance of its debt obligations.

At this time, the State anticipates that the Port Authority will meet its local share requirements, but the State will continue to assess and evaluate financial conditions at the agency. The State will also further consider the Port Authority's unmet needs and cost share requirements if a third tranche of CDBG-DR funds is announced.

2.5 Community Development, Planning, and Other Needs

2.5.1 Zoning and Code Enforcement Needs

The devastation from Sandy left New Jersey's communities in various stages of disrepair. To rebuild, communities must assess and manage a range of recovery activities including demolition, clearance, reconstruction and rehabilitation. The steps in this process, even in the ordinary course can be time consuming and costly. The number of homes and other buildings damaged by Sandy dramatically increased the demand for services performed by local code and zoning officials. Most property owners have now settled insurance claims and are beginning the process of reconstruction. In hard hit communities, the number of applications for zoning and building permits has put an enormous burden on municipal personnel.

With the first tranche of CDBG-DR funds, the State created a program designed to increase municipalities' capacity to respond to increased demand for building code enforcement services and to enhance the New Jersey Department of Community Affairs' (DCA's) continuing education curriculum for code officials to include

training in flood hazard mitigation practices and other storm-related code issues. Immediately after Sandy, state inspectors were dispatched to supplement many local code enforcement offices in the nine most impacted counties. The State also hired four full-time code officials and fifty part-time code officials to assist in that effort. Approximately twenty eight state inspectors will remain in at least 11 of those municipalities for the foreseeable future. The State also created a program to allow municipalities to hire additional staff or pay for additional staff hours to cover the increased need for zoning officials. Even with these investments, the need for code enforcement is expected to increase over time.

2.5.2 Local Public Services Needs

Demand for essential public services provided by local government entities increased substantially following the storm, as local budgets were strained by unanticipated storm-related costs and loss of revenue. Of the 193 unique individual first responder capabilities impacted, 69 fire departments, First Aid stations, EMS squad, police, and sheriff units have long-term rebuilding needs. Public schools which can serve as the backbone to a community were also affected. Of the 241 distinct public boards of education, school districts and/or charter schools initially eligible for FEMA funding post Sandy, 211 of these school systems had damage that required rebuilding funds.

With the first tranche of CDBG-DR funds, the State created a program that made financial assistance available to local government entities in those instances where FEMA Community Disaster Loans (CDLs) were either unavailable or insufficient to fund the continuation of eligible essential public services such as police protection, fire protection, health and welfare (including public works, garbage collection/disposal, and water/sewer), and education. Demand for this program has been considerable.

Many municipalities and local government agencies have experienced, and will continue to experience, difficulties in meeting the demands and costs for critical public services as a result of the impacts of Superstorm Sandy. Seventeen CDBG-DR grant awards have been provided to communities and/or boards of education to sustain or expand: public safety services such as fire and police; housing services; and public works such as trash collection. Funds were also provided to pay teacher salaries in school districts that found their student bodies swelling as students who would normally attend a school damaged in the storm were transferred to an undamaged school within the district. Analyses by DCA's Division of Local Government Services show that, particularly for hardest hit communities, continuation of this program is imperative to ensure that resources are available for essential public service needs that still exist after other federal and State resources are exhausted.

2.5.3 Planning Needs

Developing goals and objectives that promote sound revitalization and growth that is sustainable and resilient is essential to achieving long-term recovery. Planning for the future often demands a post-disaster evaluation of community vulnerabilities and an assessment of what must be rectified, both within and across municipal borders. The State has determined that there is still an unmet need for local and regional planning support to assess the issues and opportunities facing storm-damaged communities, and articulate priority actions that will improve public safety and stimulate economic recovery after Sandy. To accomplish that, the State dedicated first tranche CDBG-DR funds to the Post Sandy Planning Grant Assistance Program, which supplements the ongoing efforts of storm-impacted local and county governments to rebuild and revitalize. This program was specifically designed to augment and not conflict with other planning initiatives that local governments may be undertaking as a result of Superstorm Sandy.

Demand for the Post Sandy Planning Grant Assistance Program has been considerable, and continuing to support the planning needs of communities remains a priority for the State. Additionally, supporting statewide and regional coordinated planning-related initiatives remains a critical recovery need.

SECTION 3: METHOD OF DISTRIBUTION

Based on the revised unmet needs assessment, as well as input received from citizens, stakeholder groups, local government officials and other partners, the State prioritized second tranche CDBG-DR funding for the portfolio of recovery programs set forth in Table 3-1. In most cases, the State proposes to dedicate second tranche funds to programs currently approved by HUD, and for which demand has exceeded available funding. Integrating additional CDBG-DR funds into these established programs should be efficient and effective. However, the State also has prioritized new recovery initiatives, particularly for infrastructure. This is consistent with HUD Federal Register Notice FR-5696-N-06, which strongly encouraged the use of second tranche CDBG-DR funds to support infrastructure recovery initiatives.

Table 3-1: CDBG-DR Second Tranche Plan Programs

Category	Allocation Level		Program	Allocation Level	LMI Estimate
	Total Amount	Total Estimated LMI Amount			
Homeowner Assistance Programs	$490,000,000	$220,000,000	Reconstruction, Rehabilitation, Elevation & Mitigation	$390,000,000	50%
			Blue Acres Buyout Program	$100,000,000	25%
Rental Housing and Renter Programs	$245,000,000	$230,000,000	Fund for Restoration of Multi-Family Housing	$200,000,000	95%
			Neighborhood Enhancement Program	$20,000,000	75%
			Sandy Special Needs Housing Fund	$25,000,000	100%
Economic Development	$5,000,000	$750,000	Tourism Marketing Campaign	$5,000,000	15%
Infrastructure Programs	$535,000,000	$218,500,000	Flood Hazard Risk Reduction Program	$100,000,000	25%
			New Jersey Energy Resilience Bank	$210,000,000	60%
			Non-Federal Cost Shares (Match)	$225,000,000	30%
Support for Local Government Entities	$105,000,000	$19,250,000	Essential Public Services	$90,000,000	15%
			Unsafe Structures Demolition Program	$10,000,000	50%
			Zoning/Code Enforcement	$5,000,000	15%
TOTAL	**$1,380,000,000**	**$688,500,000**	**TOTAL FUNDED PROGRAMS**	**$1,380,000,000**	**50%**
Planning, Oversight, and Monitoring	$83,000,000	N/A	Planning Grants	$10,000,000	N/A
			Administration	$73,000,000	N/A
TOTAL	**$1,463,000,000**				

Overall, based on these estimates and the projected distribution of first tranche funds, per HUD requirements, at least 50 percent of the CDBG-DR funds allocated to New Jersey to support Sandy recovery will be targeted to LMI households, business or communities.

3.1 Housing Overview

Consistent with federal guidance, the State has allocated CDBG-DR funds to housing programs in a manner responsive to its unmet housing needs assessment. The State will support the repair or replacement of damaged owner-occupied and rental housing. The State also will dedicate funding for buyouts in targeted repetitive flood loss areas.

As with the first tranche of funding, the State will continue to prioritize the needs of LMI households in its homeowner and renter programs. Nearly 100 percent of CDBG-DR funding for the State's renter programs are expected to assist LMI households. The State also will dedicate additional funding specifically to support the development of affordable special needs housing.

The State's housing recovery efforts also offer an opportunity to continue to address sustainability and resiliency by incorporating modern building standards, green building technology and energy efficiency into the reconstruction process, where feasible. As examples:

- Reconstruction Standard: Where applicable, replacement and new construction will meet the 2009 Residential International Code and green building standards by requiring compliance with ENERGY STAR™.
- Rehabilitation Standard: Where applicable, programs will adhere to the State of New Jersey's Uniform Construction Code, the Single Family Housing Rehabilitation Standard, and the HUD Office of Community Planning and Development's (CPD) Green Building Retrofit checklist.

The State remains committed to affirmatively furthering fair housing through its housing programs, following all applicable federal and state statutes and regulations, and vigorously enforcing fair housing laws. The State will continue to ensure that housing assistance is prioritized and allocated based on financial hardship and disaster-related need, without regard to race or ethnicity. The State likewise will continue to adhere to additional standards and requirements for housing programs identified in its Action Plan.

3.2 Homeowner Assistance Programs

To support the recovery of homeowners, the State will use second tranche CDBG-DR monies (i) to increase funding for the RREM Program, and (ii) for buyouts in targeted repetitive flood loss areas.

3.2.1 Homeowner Reconstruction, Rehabilitation, Elevation and Mitigation (RREM) Program

The RREM Program provides grant awards to eligible primary homeowners for activities necessary to repair storm-damaged homes, including rehabilitation, reconstruction, elevation and mitigation. The program allows for reimbursement for eligible expenses to the extent permitted by HUD (as noted in HUD CPD Notice, July 2013). The State has allocated $710,000,000 in first tranche CDBG-DR funds to the RREM Program, which is projected to benefit approximately 5,124 homeowners. As of December 31, 2013, 246 reimbursement checks have been issued, and 902 grant agreements have been signed.

The State proposes to allocate $390,000,000 in second tranche CDBG-DR funds to further support the RREM Program. Given the existing waitlist, the State will continue to prioritize LMI households as well as homeowners whose homes were substantially damaged. The State will closely monitor the award amounts and impact on overall LMI benefit, anticipating approximately 50 percent of this tranche of funding for LMI households.

The State incorporates the description of the RREM Program as well as all eligibility and other criteria set forth in the Action Plan, as amended, except to the extent different from the descriptions below.

Allocation for Activity: $390,000,000

Maximum Award: $150,000, not inclusive of design and other soft costs, as applicable.

Eligible Applicants: Applicants will be taken from the program's existing waiting list.

Eligibility Criteria: Eligibility and prioritization criteria described in the Action Plan continue to apply.

Criteria for selection: The State will award from the existing waitlist, with continued prioritization of LMI households and homeowners whose homes were substantially damaged, as long as the need exists.

Eligibility for CDBG-DR: Section 105(a)(4)

National Objective: Low and moderate income housing; alleviate slums and blight; urgent need.

3.2.2 Blue Acres Buyout Program

Superstorm Sandy substantially affected certain New Jersey communities that repeatedly sustain significant flood losses. Many residents of these communities have expressed a preference for buyouts to allow them to relocate to less flood-prone areas. The decision to pursue a buyout is a difficult, personal choice unique to every household, and the State is committed to an expedited, voluntary buyout process to assist those households that want to relocate.

Buyouts are an important component of the State's holistic approach to smart and resilient housing sector recovery. Buying out flood-prone properties removes people from harm's way. Converting the land to open space creates more open areas that can help absorb flood waters in future storms, making the State more resilient to future weather events. Buyouts may also allow communities to create, or add to, local park lands, or expand wetlands, forests and wildlife management areas.

The State has already allocated $100,000,000 in HMGP funds for buyouts and conversion of the property to open space and has approved the purchase of 272 of properties in Sayreville and South River. One hundred and twenty-two owners have accepted buyout offers and 22 have closed. An additional $9.4 million in funding through the New Jersey Department of Environmental Protection's (DEP) Green Acres program and the USDA's Natural Resources Conservation Service will support buyouts in the Bay Point area of Lawrence Township in Cumberland County.

The State now proposes to commit $100,000,000 of second tranche CDBG-DR funds for additional buyouts, to be administered and overseen by DEP. DEP has a long and successful history of voluntary acquisition of real estate for open space, recreation, and natural resource restoration. The Green Acres program has been purchasing land for preservation for over fifty years. For the past two decades, the State, through the Blue Acres Program, has been purchasing flood-prone properties and restoring the natural landscape. The Blue Acres program is primarily responsible for the Superstorm Sandy-related buyouts.

To reduce administrative burden and maximize funding available for buyouts, the program initially will be limited to homeowners in pre-defined targeted buyout areas. DEP will notify communities in this area of their eligibility; this may extend to communities throughout New Jersey. DEP may extend the program to other areas at its discretion, assuming available funding. Homes will be purchased at 100 percent of their pre-storm fair market value as determined through Blue Acres' established valuation process. Consistent with Federal Register Notice FR-5696-N-01, the State will uniformly apply its valuation methodology. Until a written agreement on the

purchase price of the home has been reached, DEP, at its discretion, may decide not to move forward with the purchase of any home being considered for a buyout (as may the homeowner). After properties are acquired, CDBG-DR funds through this program also may be used to conduct demolition and debris removal activities, and other related activities necessary to convert the purchased property to open space.

Allocation for Activity: $100,000,000

Maximum Award: Amount set through the Blue Acres valuation process at pre-storm fair market value, and also may include additional funding in the amount of costs for eligible necessary activities as defined by program criteria necessary to purchase property or covert purchased property to open space.

Eligible Applicants: Property owners in a floodway, a flood-prone area or an area that has sustained severe repetitive flood losses in all counties.

Eligibility Criteria:

- Property must be located in the floodplain.
- Property must be in a floodway, flood-prone area or an area that has sustained severe repetitive flood losses.
- Property must have been impacted by Superstorm Sandy.
- Property must be a one-unit, two-unit, three-unit or four-unit private residence.

Criteria for Selection:

- Property is located in pre-defined targeted buyout area determined by the State.
- Pre-defined targeted buyout area may include LMI households targeted for buyouts.
- Purchase of property will meaningfully enhance resilience against future storms.

Eligibility for CDBG-DR: Section 105(a)(1); Section 105(a)(2); Section 105(a)(4); Section 105(a)(11); Federal Register Notice FR-5696-N-01

National Objective: Low and moderate income area and/or limited clientele; alleviate slums and blight; urgent need.

3.3 Rental Housing and Renter Programs

To support the recovery of renters, the State will use second tranche CDBG-DR funds to increase funding for (i) the Fund for the Restoration of Multi-Family Housing, (ii) the Neighborhood Enhancement Program, and (iii) the Sandy Special

Needs Housing Fund, all of which will increase the supply of affordable rental housing in the State.

3.3.1 Fund for Restoration of Multi-Family Housing

The Fund for the Restoration of Multi-Family Housing (FRM) is administered by the New Jersey Housing and Mortgage Finance Agency (HMFA) and provides funding to facilitate the creation or rehabilitation of quality, affordable rental housing units to address the loss of multi-family housing caused by Superstorm Sandy. CDBG-DR funds are provided as zero- and low-interest loans to qualified developers to leverage 9 percent and 4 percent low-income housing tax credits and tax-exempt bonds to facilitate development projects. FRM funds also can be provided as stand-alone project financing.

In its Action Plan, the State allocated $179,520,000 of first tranche CDBG-DR funds to FRM. Of that total, $20 million was reserved exclusively to support the recovery of public housing authorities. The FRM program was quickly oversubscribed. As of December 31, 2013, HMFA had obligated all of its available first tranche FRM project funds, with a remaining unserved program pipeline approaching $364,786,651.

The State will dedicate an additional $200,000,000 of second tranche CDBG-DR funds to the FRM program, of which $10 million will be initially reserved for PHA recovery projects. HMFA has set a goal that eighty percent of the non-PHA FRM funds from this tranche will be initially prioritized for projects to repair or replace multi-family housing within the nine most impacted counties as determined by HUD.

The State incorporates the description of the FRM program in its Action Plan, as amended, as well as all eligibility and other criteria, except to the extent different from the descriptions below.

Allocation for Activity: $200,000,000, inclusive of a $10 million allocation initially reserved to support the recovery of public housing authorities.

Maximum Award: Amount of the award is to be based on underwriting the gap in the project rather than setting a maximum amount per unit. Standard HMFA underwriting applies.

Eligible Applicants: Private for-profit and nonprofit housing developers, as well as public housing authorities capable of developing and managing large multi-family developments.

Eligibility Criteria: Projects must repair or replace affordable rental units that were lost as a result of the storm or build new rental housing that addresses an unmet need resulting from the storm.

Criteria for Selection: Eighty percent of FRM funds from this tranche will be initially prioritized for projects to repair or replace multi-family housing within the nine-most impacted counties as determined by HUD.

Eligibility for CDBG-DR: Section 105(a)(1); Section 105(a)(4); Federal Register Notice FR-5696-N-01

National Objective: Low and moderate income housing; alleviate slums and blight; urgent need.

3.3.2 Neighborhood Enhancement Program

The Neighborhood Enhancement Program (NEP) – described as the Blight Reduction Program in the Action Plan – provides funding to stabilize "threatened but viable" neighborhoods through the creation of affordable housing. It funds the rehabilitation or re-use of abandoned, foreclosed and vacant housing, structures or lots and addresses the shortage of affordable housing caused by the storm, while at the same time returning blighted buildings to viable use. The program is intended to be a component of local plans to invest in and rebuild communities.

NEP provides zero percent loans to non-profit and for profit developers who will create affordable for-sale or rental housing units through either rehabilitation or redevelopment. The program will encourage the development of mixed income housing to prevent concentrations of poverty and build stable neighborhoods. As of January 13, 2014, the State has awarded all of NEP project funds, and the program is considered fully subscribed. Given the success of the NEP pilot program supported by first tranche CDBG-DR funds, the State will continue to fund the program, and expand its impact by seeking to further integrate the program with local redevelopment and rebuilding plans. The State also may look to integrate recovery partners into the administration of this program.

The State incorporates the description of the NEP in its Action Plan, as amended, as well as all eligibility and other criteria, except to the extent modified below:

Allocation for Activity: $20,000,000

Maximum Award: $250,000

Eligible Applicants: Nonprofit and for-profit developers.

Eligibility Criteria:

- Project must provide housing for households that are LMI.
- Units must be affordable at 30 percent of the gross income of the resident applicant.

- Properties must have an unaddressed funding need to bring the structure into compliance with all building code ordinances.
- Properties may have seven units or less.
- Projects must be feasible within funding caps and underwriting standards.

Criteria for Selection: Impacted areas that are viable but threatened and in need of rehabilitation.

Eligibility for CDBG-DR: Section 105(a)(4); Federal Register Notice FR-5696-N-01

National Objective: Low and moderate income housing; alleviate slums and blight; urgent need.

3.3.3 Sandy Special Needs Housing Fund

Superstorm Sandy reduced the available stock of permanent, affordable housing that supports special needs populations. In response, the State used $25,000,000 in first tranche CDBG-DR funds to establish the Sandy Special Needs Housing Fund (SSNHF) to repair or replace housing for special needs populations. The program provides low-interest loans or grants to these projects.

As of January 13, 2014, $9,524,361 of the SSNHF funds have been obligated to support special needs housing projects. An additional $28,436,539 in proposed projects is currently in the program pipeline, and in the process of being evaluated for funding by HMFA. Based on the interest in the program, as described in the unmet needs assessment, the State anticipates that additional requests for funding under this program will be made by special needs housing developers.

Continuing its commitment to the restoration or replacement of damaged housing that supports special needs populations, the State will allocate $25,000,000 in second tranche CDBG-DR funds to SSNHF. Seventy-five percent of funding will be reserved initially to benefit households with annual gross incomes at or below 30 percent of Area Median Income. The remaining 25 percent will be reserved initially to benefit households with annual gross incomes between 30 percent and 80 percent of Area Median Income. All funding in this program is projected to benefit LMI households.

The State incorporates the description of the SSNHF in its Action Plan, as amended, as well as all eligibility and other criteria, except to the extent modified below:

Allocation for Activity: $25,000,000

Eligible Applicants: For-profit and nonprofit housing developers and public housing authorities capable of developing and managing the permanent supportive housing projects, and providing supportive services directly or indirectly through a service provider, to the targeted special needs populations.

Criteria for Selection: Experienced for-profit and nonprofit housing developers preferably with experience developing permanent, supportive housing; public housing authorities.

Eligibility for CDBG-DR: Section 105(a)(2); Section 105(a)(4); Federal Register Notice FR-5696-N-01

National Objective: Low and moderate income housing and/or limited clientele; alleviate slums and blight; urgent need.

3.4 Economic Development

3.4.1 Tourism Marketing Campaign

As described in the unmet needs assessment, tourism officials and businesses, especially but not exclusively those in New Jersey's shore communities, have emphasized the importance of a robust advertising campaign in 2014 in order to recover from the storm, revitalize damaged communities, and prevent any backslide from the recovery gains made by tourism-recovery investments in 2013. In particular, hardest hit towns that could not take full advantage of the 2013 tourism season because of the damage caused by the storm need a strong 2014 tourism season to support their ongoing recovery.

While the State does not envision a 2014 tourism campaign investment on par with the investment in 2013, a meaningful investment is required in 2014 to be responsive to the storm-related needs of the tourism industry, given the importance of that industry to employees, business owners, local communities and the State. The State anticipates leveraging multiple funding sources to achieve a timely and effective 2014 tourism marketing campaign. Assuming HUD grants the State's waiver request to increase by $5 million the State's cap on using CDBG-DR funds for tourism – making New Jersey's cap the same as that approved for New York State – the State plans to add $5 million of second tranche CDBG-DR funds to bolster the tourism marketing effort. The State plans to use these funds for many of the same efforts undertaken as part of the 2013 campaign, including television advertising, digital and radio advertising, social media and community events to attract tourists to New Jersey tourism destinations.

Campaign Goals and Intended Outcomes

The goals and intended outcomes of the advertising and marketing campaign for 2014 are substantially similar to those described in the Action Plan for the State's 2013 campaign, and include:

- Continued stabilization or increase in tourism-related **revenues** in impacted areas for 2014, particularly for hardest hit areas that could not take full advantage of the 2013 tourism season;

- Continued stabilization or increase in tourism-related **employment** in impacted areas for 2014, particularly for hardest hit areas that could not take full advantage of the 2013 tourism season; and
- Continued stabilization or increase in tourism-related **tax revenues** in impacted areas for 2014, particularly for hardest hit areas that could not take full advantage of the 2013 tourism season.

The State Tourism Office collects annual statistics and will measure the return rate of tourism activity in the most impacted areas, and across the State.

Allocation for Activity: $5,000,000, contingent on HUD's approval of the State's pending waiver request to use second tranche funds to support a 2014 marketing campaign.

Eligibility Criteria: The projected use of funds for marketing and outreach efforts will be focused as follows: event and festival planning and sponsorship in impacted areas within New Jersey; advertising creation and media placement (television/radio/digital and out-of-home advertising) both within and outside of New Jersey, with a focus on areas noted in the Action Plan with a large base of New Jersey visitors.

Eligibility for CDBG-DR: Federal Register Notice FR-5696-N-01

National Objective: Low and moderate income area; urgent need.

3.5 Infrastructure

New Jersey's reliance on the proper functioning of its infrastructure systems – including transportation, energy, and water infrastructure – became painfully evident when these same systems failed in the aftermath of Superstorm Sandy. As documented in Section 2, Superstorm Sandy's associated storm surge and flooding caused a series of rippling effects on all New Jersey infrastructure sectors and led to widespread and prolonged failures. Sandy's rising waters overwhelmed water and wastewater treatment plants, hospitals, and other buildings that provide critical services. The storm triggered the State's worst transit disaster in its history and washed away portions of critical evacuation roadways. Electrical substations were crippled, causing power failures in all 21 New Jersey counties. Millions of New Jerseyans were subject to boil water advisories. Lacking both a steady power supply and functioning transportation and water infrastructure, industrial facilities and critical fuel distribution and production facilities shut down causing disruptions over an extensive geographic region.

New Jersey is pursuing a holistic approach to identify and realize opportunities to address infrastructure vulnerabilities and to make critical facilities more resilient in the face of future extreme weather events and other hazards. The State is rebuilding

infrastructure in a stronger, safer, and smarter way to better mitigate and manage disaster risk.

In the days immediately before and after Superstorm Sandy, the State worked with each of the infrastructure sectors to implement a rapid-response strategy to restore infrastructure services in the short term, while laying a foundation for the responsible administration of federal and State resources in the years ahead. State agencies conducted extensive damage assessments of infrastructure, facilities, and equipment across all regions of New Jersey. On a local level, the State comprehensively surveyed communities across New Jersey on vulnerabilities and local resilience needs, and expanded the New Jersey Office of Emergency Management's (OEM's) Disaster Recovery Bureau in order to support community technical needs in the infrastructure recovery process. The State's Office of Homeland Security and Preparedness and New Jersey's Infrastructure Advisory Committee – which includes representatives from utility companies, chemical and pharmaceutical firms, the telecommunications and healthcare industries, and other industries that rely on New Jersey's ability to restore infrastructure services following a disaster – conducted a series of meetings and workshops meant to identify lessons learned from Sandy and opportunities for potential mitigation and resilience. New Jersey brought together cross-agency "working groups" to address recovery issues that cut across multiple sectors.

New Jersey drew on the expertise of academics and researchers, subject matter experts within government, and other leaders in their fields to design projects and programs to make infrastructure more resilient to future hazards. For example, the State partnered with two of the U.S. Department of Energy's (USDOE's) national laboratories to assess statewide energy vulnerabilities and identify opportunities to leverage commercially available technologies to address power generation needs at critical facilities. The State also engaged six universities to devise flood mitigation strategies for particularly flood-prone communities located near the Hudson River, Hackensack River, Arthur Kill, Barnegat Bay and Delaware Bay.

As a result of these assessments and collaborations, New Jersey has identified multiple infrastructure needs that must be addressed to best position the State to be prepared for future disasters such as: (i) policies and standards aimed at realizing smart infrastructure investment, (ii) comprehensive planning to identify resilience opportunities, and (iii) technological innovation and "best in class" mitigation designs to meet future challenges and hazards. In designing responsive cross-agency infrastructure programs and projects, New Jersey is infusing policy, planning, and innovation in pursuing resilience opportunities at critical facilities across the State.

- **New Jersey adopted more resilient building standards, facilitated the use of nature-based measures to reduce risk from flooding and storm surge, and encouraged communities to incorporate mitigation elements in their rebuilding.** The State established by emergency rule the best available data from FEMA's new flood maps, plus one foot of freeboard, as the general rebuilding standard to adapt to changing flood hazard risks. Federal agencies, and President Obama's Hurricane Sandy Rebuilding Task Force, subsequently adopted this standard for all reconstruction activities funded by the Sandy Supplemental Appropriation. New Jersey also adopted rules that enhance coastal protection by simplifying permitting processes to encourage sand fencing, maintenance of engineered beaches and dunes to design levels, and more widely adopting "living shorelines" – projects that utilize strategic placement of native vegetation, sand, organic materials, and oysters, clams, and mussels to reinforce shorelines and prevent flooding naturally. The State also encouraged local communities to not just repair damaged infrastructure, but to incorporate mitigation elements available under Section 406 of the Stafford Act. As of December 2013, over 88 percent of large FEMA Public Assistance projects in New Jersey (i.e., projects over $500,000) now incorporate Section 406 mitigation elements.
- **New Jersey is planning for a variety of hazard scenarios and evaluating risk using a holistic framework.** Infrastructure must be prepared for a range of potential natural or man-made hazards. New Jersey's risk profile is not limited to Superstorm Sandy's trajectory: the State's 1,800 miles of tidal coastline and its concentration of critical infrastructure assets in densely populated areas render infrastructure particularly vulnerable to future extreme weather events and other hazards. To address and assess risk, State agencies have collaborated to identify those infrastructure assets most vulnerable to future risk and to assist communities in identifying potential resilience solutions. New Jersey also convened representatives from across state government to develop an integrated platform for mapping infrastructure assets in order to explore opportunities for regional resiliency. The State has already mapped existing energy, fuel, and other resources to identify areas where resilience is most needed. The State compiled fifteen years of FEMA Public Assistance data on a community and county basis to inform potential infrastructure resilience needs, and is using historical data as an opportunity to identify with greater precision those areas of the State that routinely experience loss from repetitive flooding. The State is working with all 21 counties to prioritize potential resilience and mitigation measures on a local- and regional-needs basis and to project areas of future vulnerability.

- **Enhanced planning remains a cornerstone of infrastructure project identification and development.** OEM launched a planning initiative under FEMA's HMGP to provide eligible counties with grants to develop multi-jurisdictional hazard mitigation plans, incorporating municipal perspective to address regional vulnerabilities. As part of the State's hazard mitigation planning efforts, a cross-agency effort was initiated to identify regional resiliency opportunities by examining the locations and characteristics of critical infrastructure including drinking water, wastewater, transportation and transit, energy, and communication systems and assessing infrastructure against over 20 potential risks, including coastal erosion, drought, flood, geological hazards, "Nor'Easters", hurricanes, and terrorism events. New Jersey's Statewide Hazard Mitigation Plan will apply the National Oceanic and Atmospheric Administration's Sea Level Rise Tool and other mapping tools to assess potential future risk to State assets. Studying where multiple infrastructure systems intersect and overlap enables the State to highlight and implement synergistic mitigation initiatives.
- **New Jersey is employing innovative technology and "best in class" mitigation enhancements to build resilience.** Innovation remains a critical cornerstone of New Jersey's recovery process and the State is employing experts from within the State and across the nation to identify new ways of managing risk and hardening infrastructure assets. New Jersey Transit (NJ Transit) is working with USDOE and Sandia National Laboratories to develop "NJ TransitGrid" – a first-of-its-kind microgrid capable of providing highly reliable, resilient power to NJ Transit's critical infrastructure and systems. NJ Transit is also collaborating with Stevens Institute of Technology to develop real-time, site-specific, "micro-surge" modeling technology for use during significant weather events to enable potential prediction and modeling of storm surge. DEP, in collaboration with FEMA, employed side-scan sonar technology across nearly 195,000 acres of waterways in an effort that ultimately removed over 360,000 cubic yards of debris and allowed for safer passage and navigation of waterways. The New Jersey Board of Public Utilities (BPU) developed a "Storm Cloud" outage data reporting system – an enterprise-ready, cloud-based application to monitor electric outages throughout the State. And the new Route 35 highway, being reconstructed through a partnership between the New Jersey Department of Transportation and Federal Highway Administration (FHWA), will feature a robust drainage system equipped with tide valves and pump stations to prevent the back-flow of water as well as 40-foot pile-driven sheets of steel to reduce washout of vulnerable areas of roadway while also protecting homes and businesses in the surrounding community.

This comprehensive approach is being applied as the State moves forward with infrastructure projects and programs. The State continues to work actively with FEMA, the Army Corps, EPA, the U.S. Department of Transportation, and other federal partners to realize cross-sector mitigation measures that better protect homes and businesses, public buildings, and critical infrastructure from future hazards. To ensure that recovery resources are purposed for their best and highest uses, New Jersey's infrastructure agencies have incorporated cost-benefit analyses into project development, and have retained leading economists to advise on the potential benefits of infrastructure investment.

The State is pursuing opportunities to realize Army Corps engineered beach and dune projects, to construct state-of-the-art road and transit projects, and to repair and harden water and wastewater facilities. Leading firms in the nation are designing and implementing these initiatives. In the coming months, the State intends to work with federal partners to realize additional regional and innovative resilience measures, including the potential implementation of the State's and USDOE's design of the "NJ TransitGrid" microgrid, which can provide regional energy resilience for critical transportation services that benefit the Northeast's economy and over 130,000 daily commuters on Amtrak and NJ Transit. For most of the resilient design projects that are or will be undertaken, the federal funding agencies require the State to contribute substantial matching dollars, known as "match" or "local share," to support project implementation. New Jersey's total local share obligations will be substantial. CDBG-DR funds, which can be used as a proxy for local share funding in some circumstances, is especially needed to assist the State in meeting its substantial local share obligations. The State proposes to use a portion of this allocation of CDBG-DR funds as match to support those existing and future projects that are being undertaken by State agencies in partnership with the various federal funding agencies.

Beyond meeting a portion of New Jersey's local share obligations, there are additional opportunities to build resilience and harden critical infrastructure using CDBG-DR funding. As New Jerseyans rebuild and reinvest in their communities, there is a substantial need to examine opportunities to integrate gray and nature-based infrastructure, along with technology and asset management techniques, that can reduce the risk of recurrent flooding and storm surge by better managing the flow of water. The State has partnered with universities from across the State to develop techniques and technology that can be deployed in regions of the State where there are no current Army Corps projects or where the addition of layered measures would complement the Army Corps' existing projects. A new CDBG-DR program – the Flood Hazard Risk Reduction & Resiliency Measures Program – would enable the State to realize temporary-, short-, or intermediate-term projects

that will offer appropriate levels of immediate risk reduction for homes, businesses, and critical infrastructure.

To address the energy vulnerabilities that were revealed at critical facilities throughout New Jersey, the State proposes the creation of the New Jersey Energy Resilience Bank, which would allow some of the State's most innovative and resilient energy projects to become a reality. The New Jersey Energy Resilience Bank would be the first Bank of its kind in the nation; it would focus exclusively on hardening critical facilities to address energy vulnerabilities. The Bank would support energy infrastructure projects that lack funding and support projects that incorporate energy technologies that are resilient in order to allow infrastructure to continue to operate even if the larger electrical grid fails. To the extent possible, the Bank would leverage limited federal dollars with State funding and private sector capital to maximize energy resilience at the most critical of facilities using microgrids or other cutting-edge designs. The Bank will provide the resources New Jersey's critical facilities need to invest in fuel cells, combined heat and power, solar with storage, and other technology that will better prepare water and wastewater facilities, schools and hospitals, police and fire stations, and other key community infrastructure for future weather events.

The benefits of executing a smart infrastructure rebuilding strategy will extend beyond better preparing the State for the next extreme weather event or other hazard. Infrastructure development can revitalize communities, attract a highly skilled workforce, help develop new industry and manufacturing, and increase economic activity in areas particularly distressed by Sandy's lingering effects. By pursuing resilient energy programs, New Jersey can realize more in-state generation of electricity – which will not only make the State more resilient, but will also make energy more affordable and reliable for critical facilities, and lead to the increased use of renewable technologies and a reduced dependency on diesel fuel.

The incorporation of nature-based approaches in designing flood risk reduction measures will not only blunt the impact of storm surges and flooding, but also preserve ecological functions, provide wildlife habitats, and foster balance between natural and built environments. Communities will benefit from storm-hardened roadways that incorporate "Complete Street" features that provide increased pedestrian and bicyclist access and safety. Over the long term, New Jersey will benefit from comprehensive planning efforts that seek to maximize limited dollars to harden the public buildings and other infrastructure on which the entire region depends.

3.5.1 Flood Hazard Risk Reduction & Resiliency Measures Program

As detailed in Section 2, Superstorm Sandy highlighted the flood and storm surge vulnerabilities of New Jersey's coastal and inland communities. Flooding from Sandy damaged housing stock and businesses and had significant impacts on critical infrastructure, causing widespread energy failures throughout the State. In some cases, existing risk reduction infrastructure was either damaged or destroyed.

The State is committed to building back better and more resilient. To that end, the State has adopted resilient building standards and developed programs and policies designed to infuse resilience and mitigation planning into reconstruction efforts. Through the Flood Hazard Risk Reduction and Resiliency Measures Program, the State and local communities will be able to address the risk of flooding and other hazards from future severe weather events.

As part of an ongoing risk assessment following Superstorm Sandy, the State and local communities have undertaken considerable efforts to evaluate the State's current and future flood plain and storm surge risk, identify communities and regions highly vulnerable to flooding and storm surge, and consider and develop designs for new infrastructure measures or improvements that can blunt storm surge and reduce flood risk. Cost-effective measures that reduce risk from flooding, storm surge, and other current and future disasters will assist the State in protecting federal investments in rebuilding infrastructure, housing, and businesses and will better prepare the State for future potential extreme weather events and other hazards.

To assess risk in repetitive loss areas, the State is analyzing Superstorm Sandy's flooding and surge data in order to identify potential resilient solutions that offer the best risk reduction potential. The State retained leading academic experts in civil and environmental engineering, storm water management, watershed and water environment restoration, and hydrology from six of the State's universities, including Monmouth University; Montclair State University; New Jersey Institute of Technology; Richard Stockton College of New Jersey; Rutgers, the State University of New Jersey; and Stevens Institute of Technology. Those experts are focused on analyzing regions of the State that were impacted by Sandy and that remain vulnerable to future loss, including areas along the Hackensack and Hudson Rivers, the Arthur Kill tidal strait, Barnegat Bay and the Delaware Bayshore. It is expected that the lessons learned from these vulnerable areas of the State – and the innovations and techniques used and developed in the course of analyzing risk – can be broadly applied to benefit other regions of the State with similar risk profiles.

Part of the State's work has focused on comprehensively identifying and cataloging the sources of flooding in repetitive flood communities, including communities with recurrent or chronic rainfall- or tidal-induced flooding. By cataloging the volume of rainfall and its impact on storm water and combined sewer overflow systems, through physical inspection of existing risk reduction measures for damage or breach evidence, and by mapping assets including drainage systems, the State may be able to realize resilience improvements with the highest potential benefits and at the lowest possible implementation cost. The State is also harnessing technological innovation by partnering with universities to develop new methods for modeling flood and surge pathways to inform decision making, including through the use of "crowd-sourcing" (using personal photographs following Sandy to determine water levels on a street-level basis in communities).

Figure 3-1: Physical Inspection of Existing Risk Reduction Infrastructure. Teams assigned by the New Jersey Department of Environmental Protection have endeavored to catalogue Superstorm Sandy's impact on berms, tidal gates, and other existing risk-reduction infrastructure. Physical inspection is a key part of the State's assessment of the current condition of measures to identify necessary repairs as well as opportunities to enhance existing measures to address future extreme weather events and maximize federal investment.
Source: State of New Jersey/New Jersey Institute of Technology Partnership

Figure 3-2: Drainage Systems, Moonachie/Little Ferry. Addressing drainage issues could offer low-cost investment opportunities to increase New Jersey's flood resilience. For example, bottlenecks in drainage systems, accumulated debris, and overgrowth may collectively exacerbate the impact of flooding and storm surge on communities. In addition, some drainage systems, constructed piecemeal over the last two centuries, have never been mapped. For example, Rutgers has been evaluating how minor drainage improvements can reduce flooding in the Moonachie/Little Ferry region (pictured).
Source: State of New Jersey/Rutgers, the State University of New Jersey Partnership

Figure 3-3: Crowdsourcing to Validate Flood Modeling. In partnership with the State, Stevens Institute of Technology is exploring innovative techniques to gather data to inform risk analysis. This photograph is one of many captured both during and following Superstorm Sandy through crowdsourcing. Geo- and time-stamped photos, like this one, allow the State to validate model projections against documented data points, further refining the accuracy of flood modeling to identify areas of increased flood vulnerability.
Source: State of New Jersey/Stevens Institute of Technology Partnership

Understanding the cause, source, and volume of flooding is critical to designing risk reduction measures that are suitable for specific localities or regions in the State and will lead to the highest and best use of limited recovery funds. Densely populated communities, such as those in Bergen and Hudson counties, will necessarily require solutions different from coastal or agricultural communities, such as those in Ocean, Monmouth, and Cumberland counties. In some areas, the enhancement of existing infrastructure to address future risk may provide added layers of risk reduction at lower cost.

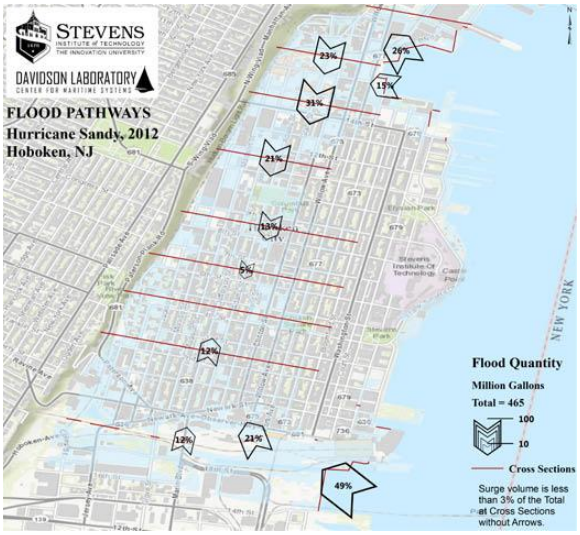

Figure 3-4: Flood Pathways, Hoboken, NJ. In partnership with the State, Stevens Institute of Technology is creating and testing models to understand flood pathways. These models can provide information on local risks and can inform the selection of appropriate risk reduction measures and characterize the benefits and efficacy of different options. The State's assessment of flood pathways in Hoboken, New Jersey (pictured), for example, highlights the State's ongoing work to identify effective strategies for densely populated urban settings.
Source: State of New Jersey/Stevens Institute of Technology Partnership

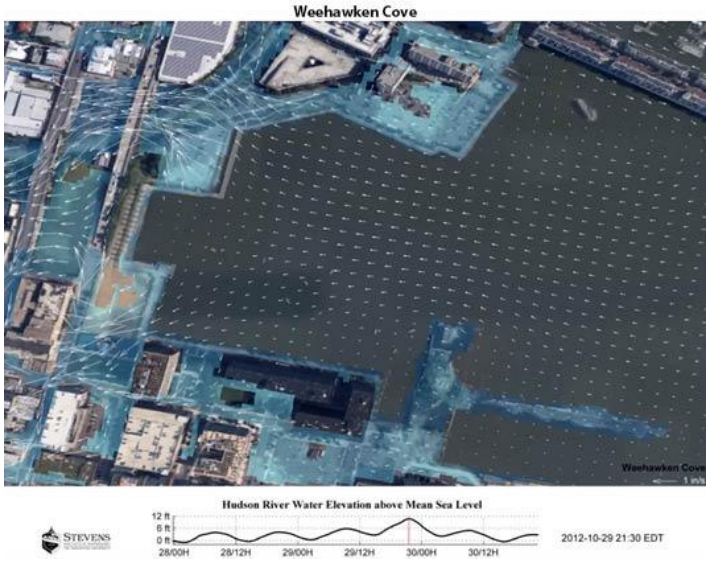

Figure 3-5: Storm Surge Modeling, Weehawken Cove, NJ. Modeling the interaction between land and waterways during a storm surge event reveals impacts to public safety, including to evacuation routes and critical infrastructure. These models can be used to understand local risks from storm surges.
Source: State of New Jersey/Stevens Institute of Technology Partnership

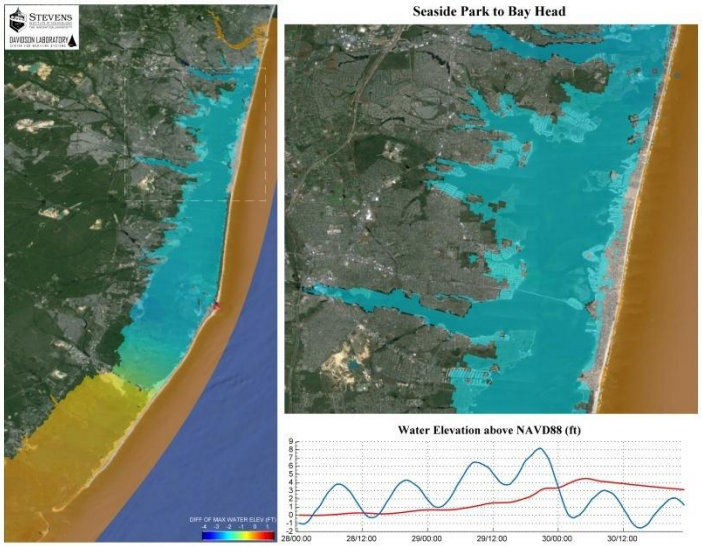

Figure 3-6: Water Elevation Mapping, Seaside Park to Bay Head, NJ. Mapping water elevation using the dynamic models developed by Stevens Institute of Technology in partnership with the State, facilitates a better understanding of flood risk. These models can be used to assess flood risk under numerous scenarios.
Source: State of New Jersey/Stevens Institute of Technology Partnership

Ultimately, a mix of risk reduction solutions could be realized through the Flood Hazard Risk Reduction and Resiliency Measures Program. The measures to be considered will vary based on regional and community needs and could include short- and intermediate-term projects, such as clearing debris blocking drainage systems, and installing permeable pavement, rain gardens, mobile flood barriers and bioretension basins. More traditional measures, such as flood walls, pump stations, tide gates, engineered beach systems, and berms are also critical to reducing risk in certain circumstances.

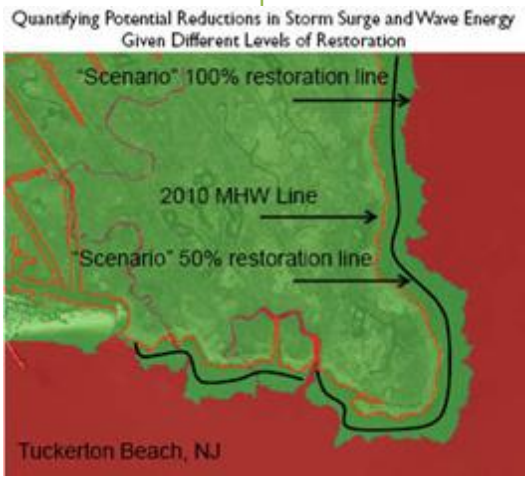

Figure 3-7: Wetlands Restoration, Tuckerton Beach, NJ. The efficacy and cost-effectiveness of nature-based risk reduction measures are being considered as potential solutions to reduce surge and flood risk. For example, by identifying potential wetland restoration scenarios, combined with dynamic modeling of the potential impact on wave energy and storm surge, the State can perform quantitative and qualitative analyses of the risk reduction provided by wetland restoration. This effort, undertaken by New Jersey in partnership with the Richard Stockton College of New Jersey, also allows for dynamic benefit-cost calculations. *Source: State of New Jersey/The Richard Stockton College of New Jersey Partnership*

Potential solutions being considered and evaluated by the State and universities include new resilient technologies that currently may not be commercially available or broadly employed. For example, many critical infrastructure owners and operators, including those at water and wastewater facilities, have identified the need for more resilient pumping stations to better control flood waters. As a result, the State is considering using CDBG-DR funding to support innovative water pumping station technologies that are not dependent on diesel fuel or the electrical grid, including pumps driven by rainwater, wave action, or wind. The State is also studying the efficacy and potential benefits of nature-based infrastructure. For example, through collaboration with Stockton, the State is evaluating the potential of wetlands restoration to reduce wave height.

In the process of constructing new risk reduction measures or making improvements to existing measures, natural habitats and other environmental impacts will be considered. The State is both researching potential environmental impacts of new flood control solutions and interacting with stakeholders to identify potential environmental challenges early on in the design and development process.

Projects funded with CDBG-DR will not, and cannot, supplant the need for Army Corps projects in vulnerable areas of the State. The Army Corps is in the best position to realize projects that will reduce risk in the most highly vulnerable regions of the State, including Hoboken, Jersey City, Little Ferry, and Moonachie, as well as Barnegat Bay, areas of Cumberland County, and other coastal communities, which lack existing Army Corps-constructed risk reduction measures. The State is collaborating with the Army Corps on the Corps' Comprehensive Study of the North Atlantic Coastal Region by providing data and other support to catalog the region's vulnerabilities and assist the Corps in the identification of new potential study and

project areas. The Comprehensive Study can lead to meaningful future studies and authorized long-term projects to better protect New Jersey's communities. The study is scheduled to be completed by January 2015.

Even when potential projects are identified through the Comprehensive Study, the likely duration of the investigation, study and design, authorization, appropriation, and construction process may leave communities vulnerable and without interim protection for a period of years. The Flood Hazard Risk Reduction and Resiliency Measures Program may be used to support temporary-, short-, or intermediate-term projects that will offer appropriate levels of immediate risk reduction for homes, businesses, and critical infrastructure in a community/region where there is a reasonable expectation that an Army Corps project will be undertaken to provide a future, long-term risk reduction solution. Flood Hazard Risk Reduction and Resiliency Measures Program projects or improvements can also be used to support the development of a layered approach of risk reduction measures for communities and the region. For communities where there are authorized projects that currently exist or will be soon constructed, the Flood Hazard Risk Reduction and Resiliency Measures Program can lay the groundwork to support the Army Corps' efforts to construct projects as soon as possible, by providing support for land and easement acquisition and site preparation.

Comprehensive Risk Analysis Framework for the Selection of Potential Risk Reduction Measures

The State's assessment of risk is an ongoing evaluation of current and future flood and other hazards. This assessment informs the State's framework for the selection of potential risk reduction measures. In applying that framework, the State will employ science-based risk analysis for risk reduction measures on a project-by-project basis.

Risk reduction measures must be developed on a localized and regional basis to address identified and known risks and hazards in specific areas of the State. Solutions must be individually tailored to a project area's risk profile and designed to maximize efficacy against potential future extreme weather events and other hazards, while balancing the cost and potential benefits of the proposed project. Risk reduction measures for densely populated urban areas will differ substantially from those measures that will be needed to reduce risk for shore communities.

Ultimately, there are several key principles that will guide the State's identification of specific risk reduction measures, consistent with HUD Federal Register Notice FR-5696-N-06. These principles, which are consistent with the State's approach to long-term recovery and the President's Hurricane Sandy Rebuilding Strategy, will guide the identification and selection of risk reduction projects to be funded using CDBG-DR funding:

- **Prioritize the Most Highly Vulnerable Flood Areas of the State for Proposed Projects or Improvements**. The State's ongoing efforts to understand and catalogue flood and storm surge risk will be used to identify those communities and regions most vulnerable.
- **Prioritize Projects that Will Reduce Flood and Surge Risk at Critical Facilities or for Federal and State Sandy Recovery Investments.** Where possible, risk reduction measures are needed to better protect areas in which there is substantial federal and state recovery investment. Through ongoing partnerships with FEMA, HUD, EPA, the U.S. Department of Transportation, and other federal agencies, the State is actively rebuilding areas impacted by Superstorm Sandy. To the extent possible, potential projects funded through the CDBG-DR Flood Hazard Risk Reduction and Resiliency Measures Program should seek to build on and protect existing investment.
- **Maximize Limited Recovery Funds By Assessing Projects Using a Robust Cost-Benefit Analysis.** The State is committed to ensuring that investment in risk reduction measures will provide a high degree of effectiveness relative to the cost of project development. In selecting individual projects, to the extent feasible and appropriate, the State will use best available economic principles and analytical techniques, including consideration of environmental impacts, public health and safety impacts, social impacts, and environmental impacts. The cost-benefit analysis will also consider population density and other population data, including potential project benefits for low- and moderate-income communities consistent with HUD requirements.
- **Prioritize Regional and Cross-Sector Risk Reduction Measures.** Given the limited availability of funding and substantial need for the deployment of risk reduction measures in highly vulnerable areas throughout the State, proposed projects that benefit more than one community or an entire region of the State will be given priority, as compared to projects that benefit a particular infrastructure sector or single jurisdiction alone. The State is already working with other federal partners, including the EPA, the FHWA and FEMA to maximize available federal funding to support projects that offer regional or cross-sector risk reduction benefits.
- **Consider Regional Impacts of Risk Reduction Measures, Including Water Displacement.** The construction of a risk reduction measure or improvement in one community may lead to the increased flood or storm surge in another community. The design of new risk reduction measures or improvements must account for displaced water flow, and the displacement

of water and its impact on surrounding communities and regions. In addition, where proposed projects have the potential to impact other CDBG-DR grantees, including New York State and New York City, or where there are design opportunities that will benefit the larger region, the State will consult with regional partners to consider regional solutions and impacts.

- **Consider Opportunities To Leverage Additional Funding Sources To Realize Large-Scale Projects.** Because of limited funding and substantial statewide need, communities and regions will be encouraged to seek out or leverage other available funding sources, including, for example, innovative public-private partnership models.
- **Require Risk Reduction Measures to Meet Minimum Resilience Performance Standards.** Risk reduction measures to be funded through CDBG-DR funding will be required to meet minimum performance standards that provide acceptable levels of resilience against different types of extreme weather events and other hazards. Potential projects will be assessed on a project's ability to reasonably withstand an extreme weather event and provide a continuing level of protection where reasonably practicable. To the extent possible, the State will rely on performance standards already developed by the Army Corps, DEP, and other experts in the field.
- **Consider Nature-Based Solutions.** In designing resilient coastal risk reduction projects, the State will assess the feasibility, efficacy, and cost-effectiveness of incorporating nature-based infrastructure, including living shorelines, use of wetlands, dunes, and beach nourishment to reduce surge and flood volume.
- **Consider Qualitative and Quantitative Data and Individualized Risk Assessments in Project Design.** The State continues to engage in a cross-agency initiative to identify and map critical infrastructure, to consider dependencies and interdependences of the various sectors, including infrastructure, economic, and housing, and to maximize mitigation and resilience opportunities. As noted, the State has collaborated with universities, national laboratories, and other experts and stakeholders to perform this ongoing analysis. The data compiled through this process will be used to inform the selection of proposed projects where appropriate. To the extent data is provided to the State in connection with HUD's Rebuild by Design competition, and is appropriately verified or peer reviewed, the State will consider data and analysis supplied.

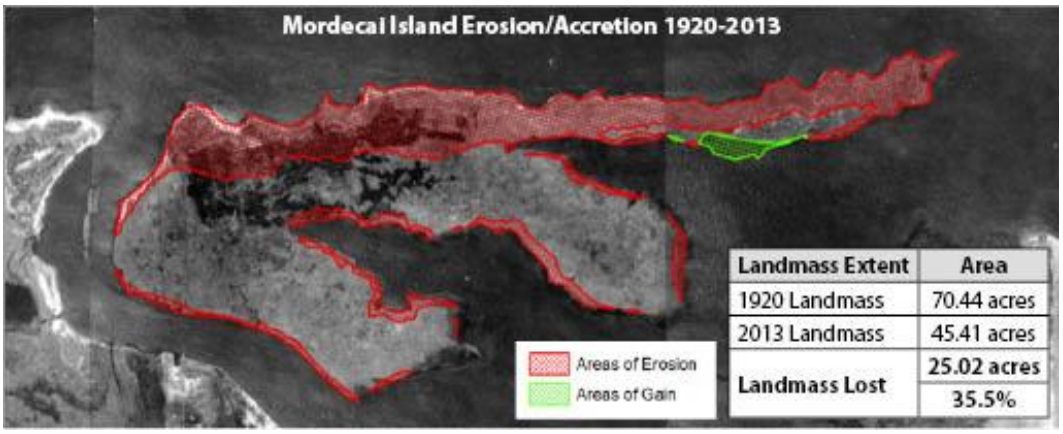

Figure 3-8: Mordecai Island Erosion/Accretion 1920-2013. This image, prepared as part of the State's comprehensive analysis in collaboration with the Richard Stockton College of New Jersey, shows areas of erosion and accretion on Mordecai Island, near Beach Haven, New Jersey, since 1920. Over a period of approximately ninety years, Mordecai Island experienced a landmass loss of 35.5% or 25.02 acres. More broadly, erosion and accretion in coastal areas of the State may result in similar types of changes in landmass and may have a significant impact in New Jersey. Understanding erosion and accretion patterns is critical for understanding New Jersey's risks and for planning for future changes in climate and development patterns.
Source: State of New Jersey/The Richard Stockton College of New Jersey Partnership

- **Utilize the Sea Level Rise Tool for Sandy Recovery to Inform Individual Project Selection.** The National Oceanic and Atmospheric Administration (NOAA) has identified four scenarios for global mean sea level rise in its 2012 report, "Global Sea Level Rise Scenarios for the United States National Climate Assessment." Based on these four scenarios, labeled "Lowest," "Intermediate-Low," "Intermediate-High," and "Highest," NOAA generally has estimated, factoring in future potential conditions, global sea level rise by the year 2050 at the following four levels, respectively: 0.3 feet; 0.7 feet; 1.3 feet; and 2.0 feet. In addition, NOAA has made available electronic tools for individual communities to assess risk on a local or regional basis, including its Sea Level Rise Tool for Sandy Recovery. In accordance with HUD Federal Register Notice FR-

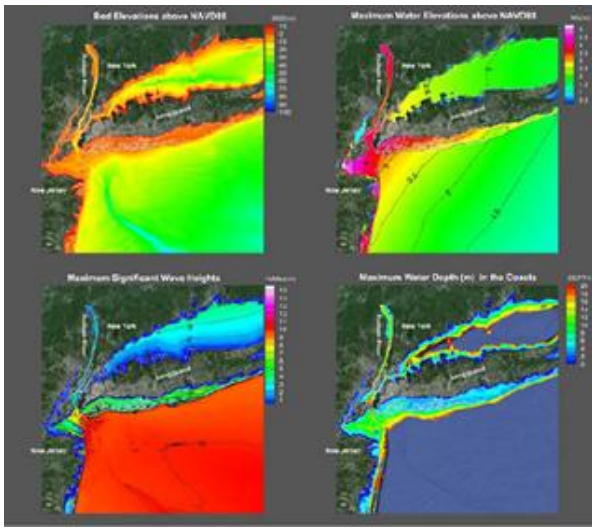

Figure 3-9: Simulated Flood Modeling. In prioritizing projects for CDBG-DR investment, the State will evaluate a potential project's efficacy and cost-effectiveness by considering multiple flood and sea-level rise scenarios. New modeling developed by the NJ Institute of Technology (NJIT), in partnership with the State, will allow New Jersey to simulate and analyze potential future extreme weather events to inform community- and regional-level flood risk.
Source: State of New Jersey/New Jersey Institute of Technology Partnership

5696-N-06, the State is consistently applying these tools to inform the development of the State of New Jersey's 2014 Hazard Mitigation Plan. In addition, as part of the State's comprehensive effort to assess the potential long-term efficacy and fiscal sustainability of specific risk-reduction measures and improvements using CDBG-DR funding, the State intends to utilize the federal government's available tools to consider the impact of potential sea-level rise and consider whether project designs should be enhanced to address potential sea level rise scenarios, where such enhancements are cost-effective and reasonably practical given the inherent uncertainty in sea-level rise modeling.

Allocation for Activity: $100,000,000

Maximum Award: Award amounts will vary depending on the size and complexity of the project to be funded. The amount will be based upon a review by technical experts at the New Jersey DEP, taking into account, on an as needed basis, input from other resources from government, academia or private industry.

Eligible Applicants: In certain circumstances, DEP or other state agencies and authorities may be best positioned to develop or construct risk reduction measures that benefit regions of the State. Other eligible applicants will include municipalities, counties, improvement authorities, and other government agencies and authorities. Where individual communities seek to construct risk reduction measures, regional coordination will be encouraged.

Prioritization Criteria:

Criteria for prioritizing projects will include:

- Proposed project area must present a high vulnerability or risk to storm surge or flooding, as developed by a science-based analysis.
- Proposed project or improvement must result in storm surge or flood risk reduction or otherwise support the development of risk reduction measures or improvements, including through property or easement acquisition, demolition, site preparation, and infrastructure construction, installation, or repair.
- Proposed project or improvement must be analyzed using a robust benefit-cost analysis, which will consider the benefit of the project, including consideration of environmental impacts, public health and safety impacts, social impacts, environmental impacts, and population data.

- Proposed project or improvement must meet minimum resilience performance standards. The performance standards developed must consider a wide range of risks, including potential future extreme weather events and other hazards. In addition, the federal government's available sea-level rise tools will be employed to consider project design enhancements, where such enhancements are cost-effective and reasonably practical given the inherent uncertainty in sea-level rise modeling.
- Nature-based infrastructure will be considered where possible, reasonably practical, and cost-effective.

Eligibility for CDBG-DR: All Sections of 105(a)

National Objective: Low and moderate income area; alleviate slums and blight; urgent need.

3.5.2 New Jersey Energy Resilience Bank

New Jersey's emergency management personnel were faced with significant challenges when widespread and prolonged electrical outages resulted from Superstorm Sandy's powerful winds and rising flood waters. As documented in Section 2, wastewater treatment plants were unable to continue operations. Pump stations failed without power, leading to flood waters overwhelming public buildings and causing substantial damage. Hospitals and shelters – dependent on diesel back-up generators – were forced to contemplate evacuation in light of diesel fuel supply challenges. Town centers and other public buildings were rendered unusable because of a total lack of electricity. Power loss caused New Jersey's entire transit network to delay in re-instating critical transportation services to the region.

Critical facilities must have access to highly reliable and resilient energy in order to function. In the widespread electrical outages that followed Superstorm Sandy, those wastewater and water treatment plants, hospitals, schools, and other public buildings with resilient energy solutions were able to continue to operate even when the larger electrical grid failed.

Distributed generation technologies – technologies such as combined heat and power, fuel cells, and solar with storage – proved extremely resilient following Superstorm Sandy and can offer critical facilities across New Jersey a path for building energy resilience. When configured to "island" – i.e., operate independently of the larger electrical grid – these distributed generation technologies can harness the energy being produced to sustain critical operations. President Obama's Hurricane Sandy Rebuilding Task Force highlighted the Bergen County Utilities Authority in Little Ferry, New Jersey, as a model for the region and nation because it was able to use a "biogas-powered [combined heat and power] system to keep its

sewage treatment facilities working during and after the storm," even in the face of a prolonged power outage.

Identifying Opportunities to Build Energy Resilience at Critical Facilities Throughout the State

Following Sandy, municipalities and counties re-examined infrastructure hardening needs and prioritized energy solutions that could keep infrastructure operating even when the electrical grid fails. As part of the long-term recovery process, OEM worked closely with municipalities, counties, and other infrastructure operators to assess the long-term resilience and mitigation needs of critical facilities throughout the State. Municipalities and counties were invited to identify potential mitigation and resilience projects that might meet local needs and address the vulnerabilities of their own communities. Through this process, close to 800 resilient energy projects were identified by 425 municipalities, counties, and government entities – resilient energy projects represented the single most requested type of resilience or mitigation project by New Jersey jurisdictions.

A cross-agency effort was initiated to identify critical infrastructure in New Jersey and opportunities for resilient energy solutions. OEM, New Jersey Office of Homeland Security and Preparedness (OHSP), BPU, and DEP used GIS mapping to view potential energy resilience projects across the State, and overlaid existing energy resilience solutions – highlighting opportunities to retrofit existing energy solutions to make those systems "islandable." In addition, the agencies compiled critical facilities maps with key demographic information and use data for wastewater treatment facilities, prisons, schools, fire departments, law enforcement, municipal buildings, and long-term care facilities.

The cross-agency effort also resulted in a large-scale analysis of critical facilities throughout New Jersey in partnership with the USDOE's National Renewable Energy Laboratory (NREL). Critical facility operators from across the State who identified energy resilience needs received a detailed questionnaire from the State requesting Sandy impact and energy needs data on a facility level. NREL then reviewed each questionnaire and identified potential distributed generation or other solutions on a micro-facility level. In addition, NREL and BPU conducted several site visits of buildings representing different categories of critical infrastructure to determine the market potential and applicability of technologies that would allow critical facilities to operate independently of the grid during future disaster events. NREL's analysis highlighted the extent to which critical facilities across New Jersey were impacted by Sandy, are vulnerable to future electrical outages, and are capable of pursuing technology solutions that will make these facilities more resilient to future events.

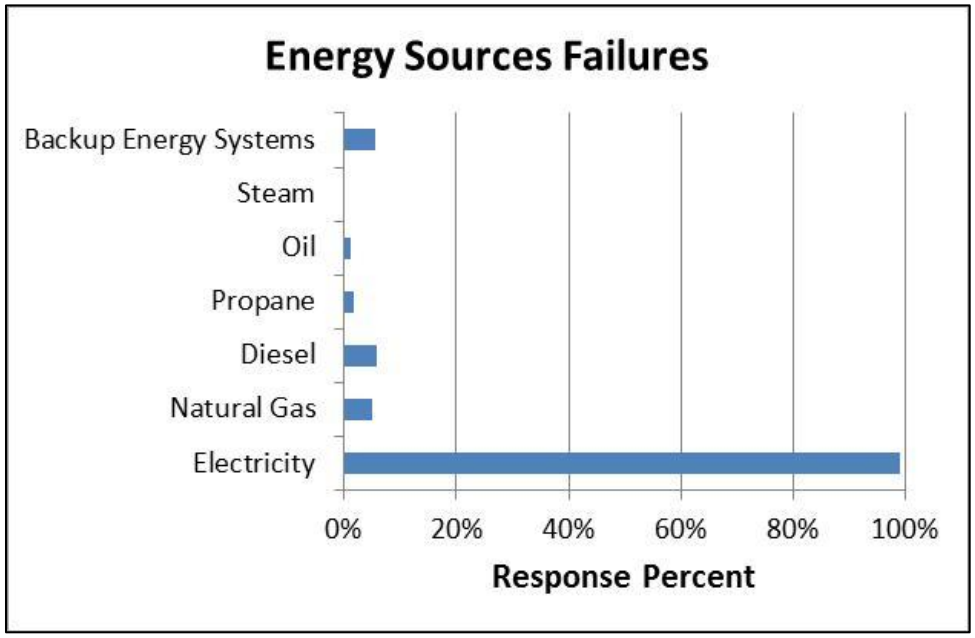

Figure 3-10: This graph shows the significant relative vulnerability of energy systems in New Jersey by highlighting energy source failures in the weeks following Superstorm Sandy. This data and analysis was developed through a partnership between the State, FEMA, and NREL and based on a survey of municipalities, communities, and other government entities throughout New Jersey. The graph demonstrates that the electricity system is most vulnerable to damage of significant storms, as shown by a near complete energy source failure following Superstorm Sandy. Other energy sources – including natural gas – were substantially more resilient than the larger electrical grid.
Source: State partnership with the U.S. Department of Energy's National Renewable Energy Laboratory (NREL)

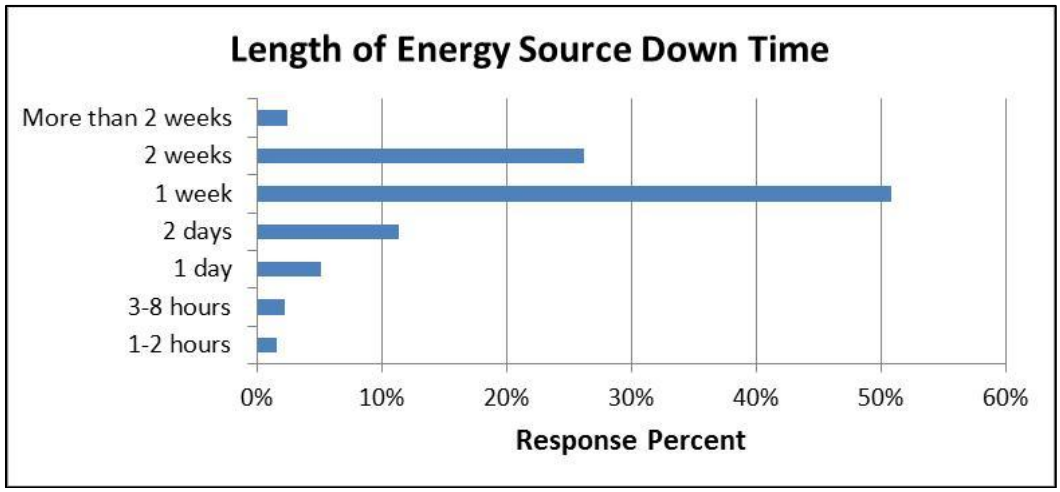

Figure 3-11: This graph is another indicator of the relative vulnerability of the overall energy system in New Jersey. It shows that roughly 80 percent of all energy failures experienced during Superstorm Sandy required at least one week for repair, thus indicating high exposure of energy assets to coastal or at-risk flood areas. Almost 30 percent of the shutdowns required two or more weeks to restore power.
Source: State partnership with the U.S. Department of Energy's National Renewable Energy Laboratory (NREL)

The State also brought in national experts on distributed generation and other resilience energy solutions to develop workshops for community leaders and emergency management professionals in three locations across New Jersey. Local leaders involved in developing long-term recovery plans for the State's communities learned how microgrids and other technology can lead to enhanced energy resilience.

These efforts culminated in the State's announcement of $25 million in funding through FEMA's HMGP to support resilient energy projects across more than 145 jurisdictions and entities. Energy projects submitted to the HMGP were assessed through an inter-agency evaluation process using nine sets of objective criteria, including a fifteen-year review of FEMA Public Assistance data, population density, and (in the case of water and wastewater treatment plants) total daily flow in millions of gallons per day. HMGP funding is intended to be used as initial "seed money" to support communities in exploring aspects of larger, resilient energy solutions. However, additional funding will be required to realize substantial projects.

In a parallel effort, the State partnered with the President's Hurricane Sandy Rebuilding Task Force, USDOE, HUD, FEMA, and other federal agencies to explore potential energy resilience opportunities. In June 2013, the State announced a collaboration with USDOE and Sandia National Laboratories to design a microgrid capable of powering the critical electric needs of Hoboken, New Jersey – with a design approach that can be implemented in other communities throughout the State. In August 2013, the State also announced a study to design "NJ TransitGrid" – a first-of-its-kind microgrid capable of providing highly reliable power to support regional transit services. NJ TransitGrid could power commuter trains and stations, even when the traditional grid is compromised. U.S. Energy Secretary Ernest Moniz hailed NJ TransitGrid as "an important example of the sort of resilience we will need throughout the country, and this project can provide a first-of-its-kind example for the Nation, while creating jobs and a more competitive economy." NJ TransitGrid will incorporate innovative technologies, including distributed generation and solar panels with dynamic inverters and storage, and can be used as a model for other transit systems in the Nation that are vulnerable to extreme weather or other events.

In recognition of the State's comprehensive planning and efforts to design new opportunities to build energy resilience, the President's Hurricane Sandy Rebuilding Task Force lauded the Christie Administration for "embrac[ing] the opportunity to provide national leadership in energy resilience."

Creating the New Jersey Energy Resilience Bank to Address Statewide Energy Resilience Needs

The State proposes to create the New Jersey Energy Resilience Bank to continue to pursue innovation and build energy resilience. The Bank could help realize the development of distributed generation projects, microgrids, and other resilient technology designs at critical facilities throughout the State. The Bank could provide technical and financial support, including grants and low-interest loans, to critical facilities to realize energy resilience projects or enhancements to existing energy infrastructure. The Bank can be initially funded with CDBG-DR funds, but additional State support could be leveraged on an ongoing basis.

For some time, New Jersey has encouraged the use and deployment of distributed generation technologies. The Christie Administration's Energy Master Plan committed to developing 1,500 megawatts of new distributed generation resources where net economic and environmental benefits can be demonstrated. The Energy Master Plan also emphasizes the need to develop new, clean, cost-effective sources of electricity which lessen the State's reliance on older plants that have more emissions and environmental impacts.[3] The benefits of technologies such as fuel cells, combined heat and power, and resilient solar are indisputable: HUD, USDOE, and EPA have recognized that distributed generation – in addition to providing resilience – can reduce monthly energy costs, reduce emissions, provide stability in the face of uncertain electrical prices, and increase overall efficiency.[4]

However, because of the initial cost associated with pursuing distributed generation technologies, many critical facilities do not currently have in place energy resilience solutions. Even those critical facilities with distributed generation technology may not be equipped to "island" – an enhancement to an existing system which could add as much as ten to thirty percent to the cost of realizing an energy project but would also allow the facility to operate independent of the electrical grid. Many facilities have opted to pursue less expensive diesel-powered generators, but distributed generation is less reliant on liquid fuel supply and availability, has longer continuous run times, and has less environmental impacts. The New Jersey Energy Resilience Bank will help address unmet needs, and allow critical facilities the opportunity to pursue energy projects with resilience enhancements.

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[3] State of New Jersey, *Energy Master Plan*, 2011, available at http://nj.gov/emp/docs/pdf/2011_Final_Energy_Master_Plan.pdf.

[4] U.S. Department of Energy, U.S. Department of Housing & Urban Development, and U.S. Department of Environmental Protection Agency, *Guide to Using Combined Heat and Power for Enhancing Reliability and Resiliency in Buildings*, Sept. 2013, available at http://portal.hud.gov/hudportal/documents/huddoc?id=CHPSept2013.pdf.

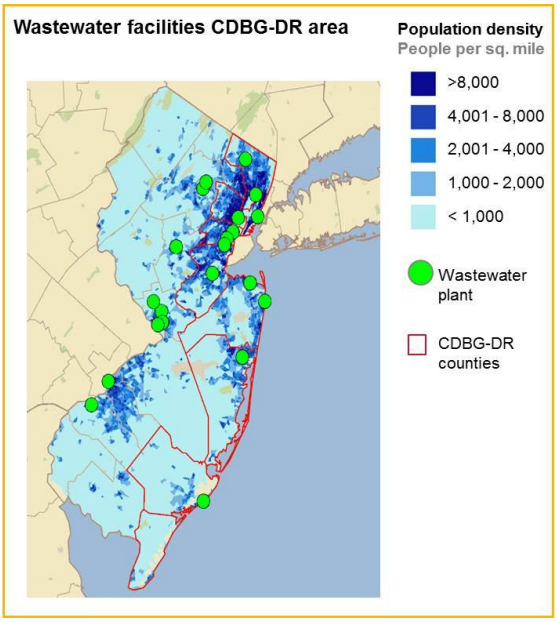

Figure 3-12: The State has been cataloging and identifying all critical facilities in the State that could be candidates for energy resilience solutions. The figure above shows the significant relative vulnerability of wastewater treatment facilities in New Jersey. Of the23 largest wastewater treatment plants in the state, 14 are located in the nine most impacted counties along the coast, with the majority concentrated near Sandy Hook and New York Bay. Together these critical facilities comprise nearly 70 percent of the State's water treatment capacity and are the focus of New Jersey's energy resilience efforts.
Source: New Jersey Board of Public Utilities

Over time, the Bank could be scaled by utilizing a portion of the CDBG-DR funds to encourage private sector investment in resilient energy projects. As a provider of a loan loss reserve, the Bank could seek financing from the private sector, to ensure that the seed funding has an expansive multiplier effect. The Bank could provide financial assistance in a variety of forms, including direct loans, loan guarantees, early stage grants and loan loss reserve coverage for private lenders. The Bank could also use grants, principal forgiveness, and other direct investment to further encourage the deployment of resilient energy technologies. The expansion of financing products is expected to build a larger, more sustainable market for distributed generation that will allow the State to extend its coverage to the maximum number of critical facilities and assets.

Realizing resilient energy solutions at water and wastewater treatment plants will be an early priority of the Bank, consistent with the State's emergency management and long-term recovery priorities. The National Infrastructure Protection Plan has recognized the importance of resilient water and wastewater treatment plants and the extent to which other infrastructure sectors depend on these critical facilities' ability to function:

> It is necessary to better protect Water Sector infrastructure to safeguard public health and the economic vitality of our Nation. . . . [N]atural disasters, and denial of service that affect the sector could result in large numbers of illnesses or casualties, as well as negative economic impacts. Critical services such as firefighting and health care (hospitals), to include other dependent and interdependent sectors such as energy, transportation, and food and agriculture, would suffer damaging effects from a denial of potable water or properly treated wastewater.[5]

As part of the planning process, the State met with the Association of Environmental Authorities of New Jersey and individual facility operators to assess energy resilience needs. Through this process, the State determined that a handful of water and wastewater treatment plants – only 7 percent of New Jersey's total wastewater

[5] U.S. Department of Homeland Security & U.S. Environmental Protection Agency, *Water Sector-Specific Plan: An Annex to the National Infrastructure Protection Plan*, 2010, available at http://www.dhs.gov/xlibrary/assets/nipp-ssp-water-2010.pdf.

capacity – have distributed generation that is capable of being islanded. Facilities without resilient technology remain highly vulnerable to energy supply issues or must otherwise rely on diesel-powered generators to sustain operations. A large number of plants in the State have no existing distributed generation, and many of these facilities are good candidates for combined heat and power or other technologies. Alternatively, these facilities can be incorporated into larger microgrid systems designed to meet the needs of a community's critical infrastructure. Other plants that already rely on distributed generation technology may need to retrofit existing technology to allow facility islanding. The Bank could assist water and wastewater treatment plants across the State in realizing distributed generation solutions unique to the needs of individual facilities.

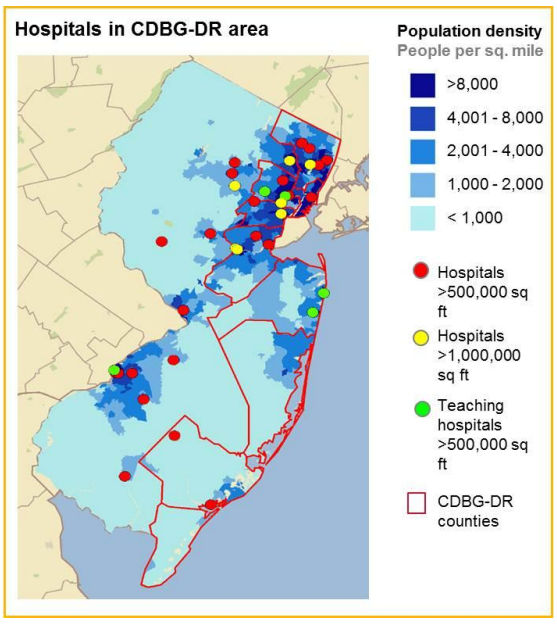

Figure 3-13: The figure above shows the significant relative energy vulnerability of hospitals in New Jersey. Twenty-two of the State's largest 35 hospitals are located in HUD-designated nine most impacted counties along the coast, including six of the eight largest counties. These hospitals are also clustered in the portion of the State with the highest population density, thus having the potential to impact on a large portion of the State's residents.
Source: New Jersey Board of Public Utilities

In addition to supporting water and wastewater treatment plants, the Bank could also provide assistance to public facilities, and some select private sector customers that own or operate facilities or assets critical to the State. High priority facilities for energy resilience projects could be those facilities directly associated with the health and safety of citizens in the State, facilities that safeguard the State's environment, or that serve other critical public facility functions. Possible critical facilities that could be served by the Bank include public housing, hospitals, emergency response facilities, municipal town centers, correctional facilities, transportation and transit networks, and regional high schools that can function as shelters in the case of any emergency. It could also include liquid fuel refineries, distribution facilities, pipelines, or other facilities that serve critical emergency functions.

The New Jersey Energy Resilience Bank represents only one aspect of the State's ongoing efforts to incorporate energy resilience into the State's long-term infrastructure recovery. The demand for resilient energy solutions by critical facilities and public buildings throughout the State is expected to far exceed the limited recovery funds available to support the Bank. The State is working with other federal funding partners to realize resilient energy projects that will benefit the region, including by working with the U.S. Department of Transportation's Federal Transit Administration and the Regional Infrastructure Resilience Coordination Initiative in the hope of identifying available funds to realize the USDOE's and Sandia National Laboratories' design of NJ TransitGrid.

Comprehensive Risk Analysis Framework for the Selection of Potential Energy Resilience Solutions

Several key principles will guide the State's selection of projects to be supported through the New Jersey Energy Resilience Bank using CDBG-DR funding, including supporting innovative energy resilience solutions through a technology-agnostic program design, considering renewable solutions where possible, and prioritizing microgrid designs. These principles are guided by the State's comprehensive planning efforts and will best harness new, resilient distributed generation opportunities. The selection of individual facilities and the identification of hazards and risks will continue to be supported by a cross-agency effort, which includes the State's emergency management and energy professionals in collaboration with federal agencies.

The following principles will be used to guide the identification and selection of energy resilience projects to be funded using CDBG-DR funding:

- **Prioritize Facilities That Protect Life or Property or Provide Other Critical Services.** Facilities that provide life-critical services on a significant scale during emergencies, or that are critical to recovery efforts following an emergency, could be prioritized. Currently, facilities that fit these criteria are water and wastewater treatment plants, hospitals, town centers, colleges and universities and regional schools capable of sheltering functions, prisons, public housing, and other critical facilities. The Bank will collaborate with OHSP to appropriately prioritize facilities that are included in the OHSP State Asset Database – a database of buildings or facilities that meet pre-established State or national asset criteria or that meet other statewide emergency planning or homeland security objectives.
- **Support Technologies and Designs That Offer Energy Resilience in the Event the Larger Grid Fails.** The New Jersey Energy Resilience Bank will be technology-agnostic and could support a wide variety of distributed generation and renewable technology. The Bank can actively monitor new technological breakthroughs and market changes that make nascent technology commercially available. Ultimately, technology decisions may be informed by a robust cost-benefit analysis that will seek to weigh the relative benefits of the technology, including energy resiliency, against the possible cost to taxpayers. To develop a cost-benefit analysis framework, the BPU collaborated with the Rutgers University Center for Energy, Economics and Environmental Policy (CEEEP) to create a comprehensive distributed generation cost-benefit model that includes the value of lost electrical load as a benefit. This model can be used to assist in determining the cost effectiveness of the selected technologies.

- **Consider Renewable Energy or Other Clean Energy Solutions Where Possible.** Through the BPU's Clean Energy Program, the State is already promoting increased efficiency and the use of renewable sources of energy including solar, wind, geothermal, and sustainable biomass as well as clean energy technologies, including combined heat and power and fuel cells. The New Jersey Energy Resilience Bank will complement the efforts of BPU's Clean Energy Program. Where possible and cost-effective, resilient energy solutions supported by the Bank could consider and incorporate the use of renewable or other clean energy sources.
- **Prioritize Microgrids or Other Designs That Maximize Investment by Addressing Resilience at Multiple Facilities or Across Different Infrastructure Sectors.** The State is working with USDOE and its national laboratories to design new microgrids – systems capable of generating highly reliable power for multiple critical facilities. In Hoboken, New Jersey, for example, Sandia National Laboratories is considering how multiple public and other buildings that provide critical services to the community can be systematically powered following a disaster. The NREL also identified critical facilities throughout the State that are capable of sharing electric or thermal loads to power core operations.
- **Require Energy Resilience Projects to Meet Minimum Resilience Performance Standards.** Resilient energy projects to be funded through CDBG-DR funding will be required to meet minimum performance standards that are capable of supporting operations in the event in of an electrical grid failure or other outage. Potential projects could be assessed on a project's ability to support, at least, minimal emergency operations during an electrical outage. Projects may also need to meet other performance standards that are infrastructure-sector specific. The Bank can work with the BPU, DEP, OHSP, OEM to define minimum resilience performance standards. Potential performance standards for projects could ON requirements that the project promote redundancy within the distribution grid and offer enhanced network connectivity, among other potential requirements.
- **Assess Individual Energy Projects for Flood Risk and Other Hazards.** Much of New Jersey's critical infrastructure that is vulnerable to electrical outages may also be located in the flood plain or otherwise subject to enhanced risk of flooding or storm surge. In prioritizing and selecting energy resilience projects for Bank support, the State will review design options that ensure that energy technology will be appropriately elevated, walled, or otherwise resilient to potential future flooding and storm surge. Consistent

with HUD Federal Register Notice FR-5696-N-06, the State will also evaluate potential sites for resilient energy technology using the National Oceanic and Atmospheric Administration's (NOAA) Sea Level Rise Tool to assess the risk of sea level rise over the useful life of the energy technology to be funded. The State anticipates continued collaboration with USDOE to also incorporate design opportunities which respond to other known risk hazards, including cyber security risks, to the extent that hazard risk reduction designs are appropriate and cost-effective.

- **Utilize Existing Technology Where Possible and Cost-Effective.** The State has mapped distributed generation and renewable assets across New Jersey. For example, there are over 22,000 solar installations in the State of New Jersey. The Bank can provide critical facilities with assistance in identifying opportunities to retrofit existing technology to make the technology more resilient, where possible, by installing dynamic off-grid inverters (special switches that can isolate or "island" the solar panel system in case of grid failure), storage, and other technology that would allow distributed generation and solar systems to continue to support the critical facility during an electricity outage.

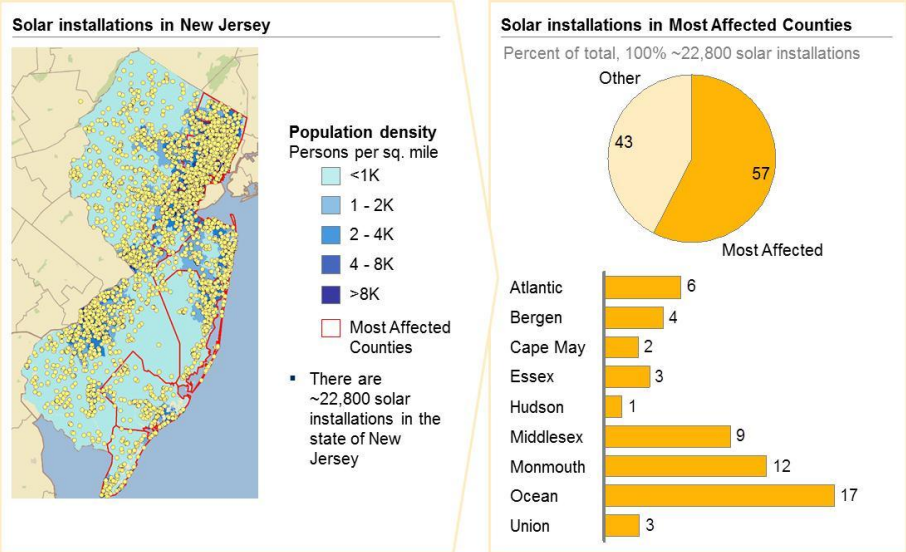

Figure 3-14: Many public buildings in the State already have solar panels or other distributed generation resources. This technology may have been originally installed for the primary purpose of maximizing energy savings without regard to resilience and risk planning. In the aftermath of Superstorm Sandy, many of these systems failed because the technology was not installed with the additional capability of "islanding," i.e., maintaining power on its own in the event that the larger electrical grid experiences a power shortage. For additional cost, solar panels can be retrofitted to add dynamic inverters and storage capacity, affording public buildings the opportunity to continue to maintain electrical power even if the electrical grid fails. The State has mapped all of the solar assets in the State to begin the process of identifying those facilities that are best candidates for resilience enhancements. The figure above shows the large proportion of New Jersey's solar installations that are located in HUD-designated nine most impacted counties. In fact, of the nearly 23,000 installations state-wide, approximately 57% are located in these nine counties. Solar installations located in Ocean, Monmouth, and Middlesex Counties represent the largest share of potential resilient enhancement opportunities, representing 17, 12, and 9% of all State solar installations, respectively.
Source: New Jersey Board of Public Utilities

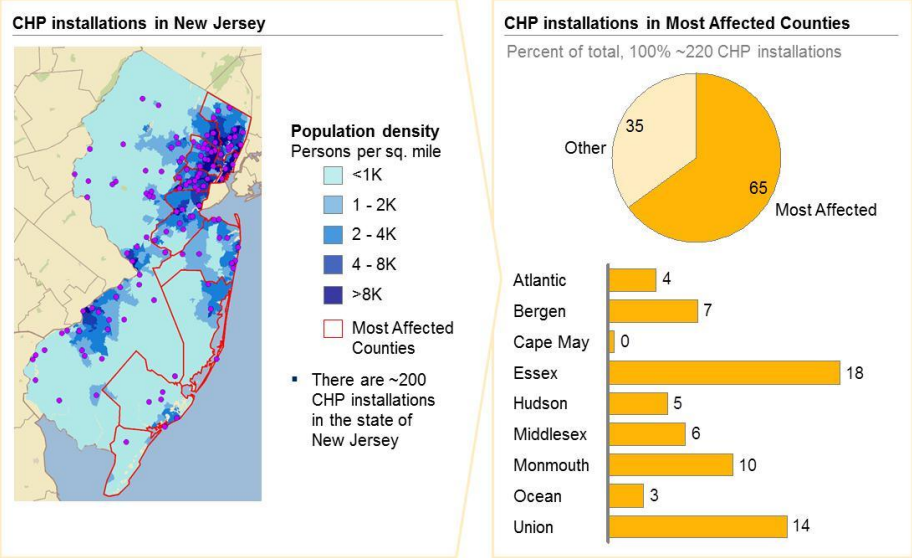

Figure 3-15: In addition to mapping solar assets to identify opportunities to incorporate dynamic inverters, storage, and other resilience enhancements, the State has actively mapped other existing distributed generation resources that could be candidates to retrofit with "islanding" capabilities. For example, combined heat and power (CHP) systems – which provide highly reliable, on-site electricity and thermal energy – were already constructed at many municipal, county, and other facilities throughout the State. Depending on the criticality of infrastructure, these systems can and should be retrofitted to include "islanding" capability, to continue to operate even if the electrical grid fails. Nearly two-thirds of New Jersey's 200 CHP installations are located in HUD-designated nine most impacted counties. Combined heat and power installations located in Essex, Union, and Monmouth Counties represent the largest share of vulnerable installations at the county-level, representing 18, 14, and 10% of all State CHP installations, respectively.
Source: New Jersey Board of Public Utilities

Allocation for Activity: $210,000,000

Maximum Award: Funded awards will be determined based on projected cost estimates, taking into account project benefits.

Eligible Applicants: Initially, water and wastewater treatment facilities will be prioritized given that infrastructure sector's particular vulnerability to energy interruptions, as assessed through the State's comprehensive planning effort. The New Jersey Energy Resilience Bank could also serve other public critical facilities and assets, including hospitals, emergency response facilities, municipal town centers, correctional facilities, transportation and transit networks, public housing and regional high schools that can function as shelters in the case of any emergency. Depending on HUD's eligibility criteria, for-profit hospitals, liquid fuel refineries, distribution facilities, pipelines, and other private facilities and assets that provide critical services could also be considered.

Eligibility Criteria: Must be an eligible applicant pursuing a project that will build energy resilience by ensuring the availability of a highly reliable power supply in the

event that the larger electrical grid fails (due to a storm, or any other incapacitating event).

Criteria for Selection: Individual projects will be ranked and prioritized based on metrics in three categories: technical feasibility, criticality and resiliency, and credit/economics. Technical feasibility will be assessed based on the technical specifications of the project including the technology used, size and scale, feasibility, environmental review, and cost and revenue estimates. Criticality and resiliency will be assessed based on the criticality and resiliency impact of the project in establishing an "island of power" that has potential to benefit vulnerable populations and decrease dependency on diesel fuel sources. A project's credit and economics will be assessed based on the credit worthiness of the sponsor and the economics of the project to ensure it is cost effective and that Bank risk exposure is managed. Priority will be given to applicants who maximize funding opportunities by pursuing microgrids or other designs that can address energy resilience at multiple critical facilities or across different infrastructure sectors. Applicants need not meet all criteria to be eligible.

Eligibility for CDBG-DR: Section 105(a)(2); Section 105(a)(8); Section 105(a)(11); Section 105(a)(12); Section 105(a)(14); Section 105(a)(15); Section 105(a)(22)

National Objective: Low and moderate income area and/or job creation/retention; alleviate slums and blight; urgent need.

3.5.3 State and Local Non-Federal Cost Shares (Match)

Numerous federal funding streams used in the recovery effort carry non-federal cost shares, also known as "match" or "local share obligation." The "match" portion of the project is that portion of the total cost of a project or program that the State, county, municipality or other entity benefitting from the project or program is responsible to satisfy, as opposed to a federal agency. Different federal funding streams can have different non-federal cost shares. Many funding streams target infrastructure-related recovery initiatives, as described below.

The State's Action Plan committed $50 million of first tranche CDBG-DR funds to a FEMA match program, primarily to address non-federal cost shares associated with projects like debris removal undertaken in the immediate aftermath of the storm. As recovery has progressed and other infrastructure projects have begun, additional non-federal match obligations have been incurred by the State, counties, municipalities, and other entities. Given the costs associated with the long-term recovery effort, many jurisdictions and entities in New Jersey are fiscally constrained and require enhanced financial support to meet these federal program match obligations.

The State will use $225,000,000 in second tranche CDBG-DR funds to address many of these match obligations. To arrive at that figure, the State looked to existing recovery commitments that require a match as well as other federal funding reasonably expected to be used in the State's recovery that will require a match. Specifically:

- The current non-federal cost share for projects authorized by the Army Corps and which have not received construction funds in the last three years is 35 or 50 percent, depending on the type of project. These projects include the construction of sand dunes, berms, engineered beaches, and other gray and nature-based infrastructure. However, federal regulations cap the amount of CDBG-DR funds that can be used to match the Army Corps projects at $250,000 per project. The State presently projects that there will be fourteen (14) Army Corps projects authorized in New Jersey for Sandy recovery.
- EPA announced that it will award New Jersey $229 million of its Sandy Supplemental funds to improve water quality following the storm. The State plans to leverage EPA funds through the State's Environmental Infrastructure Trust and will then target those resources to address storm impacts on water and wastewater systems and associated resilience measures. The EPA funds carry a 20 percent non-federal cost share obligation.
- Projects authorized by the FHWA using Sandy Supplemental funding currently carry a 10 or 20 percent non-federal cost share, depending on the project. These funds are used to repair damage caused by the storm, particularly to roadways, and to build back more resiliency. The ongoing Route 35 project on the Barrier Island – where the State highway is being reconstructed with flood vents, pump stations, and other "best practice" mitigation measures – is one example of a road project primarily funded through FHWA Sandy Supplemental funds in partnership with the New Jersey Department of Transportation. Based on present projections, the State currently estimates that the non-federal cost share for FHWA projects will approach $66 million.
- FEMA-funded projects and programs currently carry a 10 percent, and in some cases, 25 percent, non-federal cost share. The State currently projects that the total cost of FEMA projects and program investments for Sandy Recovery between the State of New Jersey, municipalities and other eligible FEMA recipients will exceed $2 billion, creating at least a $200 million match obligation.

These figures are estimates of unmet needs arising from known non-federal cost share obligations. As recovery progresses, it is likely that some projections may understate or overstate the New Jersey's actual non-federal cost share needs across all federal funding sources. Additionally, it is possible that other federal funding programs not currently identified may include cost share obligations that will be addressed through this program. Given other critical unmet recovery needs, the State will not be able to cover all cost shares incurred in the recovery by counties, municipalities or other entities that received federal funding that carries match obligations.

The State may use the CDBG-DR funds as a match to repair or construct a wide range of eligible infrastructure projects, including: emergency protective measures such as demolition and removal of health and safety hazards; roads and bridges; dams and reservoirs, and levees; debris removal; public buildings; water treatment plants and delivery systems; power generation and distribution facilities; sewage collection systems and treatment plants; water lines and systems; telecommunication systems; and parks/beaches/recreational facilities.

Allocation for Activity: $225,000,000

Maximum Award: Up to the maximum amount of CDBG-DR funds that can be applied to the match for a particular project or program.

Eligible Applicants: New Jersey state departments, agencies, and authorities; counties; municipalities; and other entities subject to non-federal cost shares.

Eligibility Criteria: Project or program for which CDBG-DR funds will be used as the non-federal cost share must be a CDBG-DR eligible activity.

Criteria for Selection: For State non-federal cost shares, the underlying project or program must carry a non-federal cost share, and must be an eligible CDBG-DR activity. For counties, municipalities or other entities subject to non-federal cost share obligations, the underlying project must carry a non-federal cost share, and must be an eligible CDBG-DR activity. The county, municipality, or other entities subject to non-federal cost shares also must show significant financial hardship if CDBG-DR assistance is not provided for all, or some portion of, the total match obligations.

Eligibility for CDBG-DR: Section 105(a)(1); Section 105(a)(2); Section 105(a)(4); Section 105(a)(9); Federal Register Notice FR-5696-N-01 and FR-5696-N-06

National Objective: Low and moderate income; alleviate slums and blight; urgent need.

3.6 Support for State and Local Government Entities

3.6.1 Essential Services Grant Program

FEMA's Community Disaster Loan (CDL) program is the primary source of direct funding for municipalities and other government entities with budget challenges following a natural disaster, including challenges created by unanticipated storm-related expenses and losses of ratables or other revenues. However, the regulations presently governing the CDL program result in its not being sufficient to ensure all affected entities are able to continue providing essential public services to residents within the constraints of existing local government and school district budgets.

Recognizing this, the State established the Essential Services Grant Program. Using $60 million of first tranche CDBG-DR funds, the program provided funding to counties, municipalities, school districts and other government entities to ensure continued funding of essential public services for residents. As of January 2014, more than $36 million has been disbursed to local governments and school districts under this program.

The State's analysis shows that, over the next two years, government entities in particularly hard hit communities will require further financial support to ensure delivery of essential services. Based on that analysis, the State will allocate $90 million of second tranche CDBG-DR funds to support these communities in 2014 and 2015. Leveraging the State's authority to approve local government and school district budgets, the State's programmatic eligibility requirements will continue to ensure that Essential Services Program funding is only provided to those impacted municipalities in need of support.

DCA, through its Division of Local Government Services, will also provide guidance explaining the program objective of ensuring essential services and setting forth program parameters to ensure transparency. In addition, DCA will work with the New Jersey Department of Education to provide appropriate guidance to school districts.

The State incorporates the description of the Essential Services Program in its Action Plan, as amended, as well as all eligibility and other criteria, including the modifications to the program provided below:

Allocation for Activity: $90,000,000

Maximum Award: Awards will be based upon need as determined by a financial review by DCA's Division of Local Government Services. Staff will review requests and ensure that only the necessary amount will be granted.

Eligible Applicants: Counties, municipalities, authorities, fire districts, school districts and other local government agencies providing essential services.

Eligibility Criteria: Applications must:

- Demonstrate a financial need resulting from the impact of Sandy that will compromise the delivery of one or more public service functions.
- Facilitate the short- and long-term recovery of those local government entities and school districts greatly impacted by Superstorm Sandy by seeking appropriate budget capacity to deliver (1) existing services that, because of the effects of Superstorm Sandy on their baseline budget, would be eliminated or severely curtailed were it not for the grant; and/or (2) additional services necessitated by Superstorm Sandy.
- Discuss what steps are being taken to contain costs and implement sound fiscal and managerial practices, including but not limited to: personnel cost restraints, nonessential service reductions, procurement initiatives, as well as efforts at identifying opportunities to share services and capital assets with neighboring communities.
- Discuss actions being undertaken to facilitate reconstruction of public and private property, and enhance preparedness for, and resiliency in the face of, future storms.

Criteria for Selection: Eligible applicants will be selected based on the following criteria:

- Whether the applicant has insufficient budget capacity to provide essential services, including public safety-related services such as fire, emergency dispatch, security services, policing/law enforcement; health and welfare-oriented services including public works, garbage collection/disposal, water/sewer, health and social services; planning/permitting services; and education-related services.
- DCA has determined through a review of financial information (including but not necessarily limited to FEMA Community Disaster Loan applications, introduced budgets, and annual financial statements) that there exists hardship such that the applicant will have to eliminate or severely curtail existing services due to the effects of Superstorm Sandy on its baseline budget and/or will be unable to provide those additional services necessitated by Superstorm Sandy.

Eligibility for CDBG-DR: Section 105(a)(8)

National Objective: Low and moderate income; alleviate slums and blight; urgent need.

3.6.2 Unsafe Structures Demolition Program

Because of Sandy, numerous homes were knocked off their foundations, were left in a state of dilapidation or disrepair, or were made a fire hazard or danger to public health or welfare (collectively, "unsafe structures"). Remediating these threats to health or public safety is of utmost importance. Moreover, these homes present a significant risk of blight that, left unaddressed, undermines community and State recovery efforts.

Municipalities have been responsible for addressing unsafe structures within their borders. In many cases, property owners have taken steps to remediate or demolish Sandy-impacted unsafe structures on their properties. Some municipalities also have offered programs to impacted property owners whereby, with the consent of the property owner, the town will incur all costs of demolition, provided that the structure being demolished is considered by FEMA to be in "imminent danger of partial or total collapse." Under FEMA's Private Property Debris Removal (PPDR) program, FEMA will reimburse 90 percent of eligible costs to demolish these structures. The philanthropic community also has provided assistance to some impacted property owners needing to demolish unsafe structures. By these combined efforts, substantial strides have been made toward addressing unsafe structures.

Nevertheless, a number of unsafe structures remain to be addressed. Many, though not all, are vacant or abandoned, such that the methods that have commonly used to address Sandy-impacted unsafe structures – property owner remediation/demolition or PPDR-eligible demolition by the municipality with property owner consent – are unavailable. These structures continue to pose significant risks to communities and undermine recovery efforts.

This program provides funding to be used by state agencies to obtain resources to identify unsafe structures in need of demolition, to demolish unsafe structures, to remove debris, and to perform any additional activities or address other costs ancillary or related to demolitions. Where applicable, demolition and debris removal activities under this program will comply with the New Jersey Superstorm Sandy Demolition Guidance Document issued in April 2013, which incorporates the federal requirements imposed by the National Emission Standards for Hazardous Air Pollutants.

In January 2014, HUD approved a substantial amendment to New Jersey's Action Plan that transferred $15 million in funding allocated to an economic recovery program to a new Unsafe Structures Demolition Program. That investment was expected to fund between 500 and 750 demolitions. As State agencies have continued to work with affected municipalities to identify homes that require demolition, it has become apparent that initial investment likely will be insufficient

to address communities' need for demolitions. Nearly 1,300 homes have been identified so far as potential targets for demolition under the program. Therefore, the State will commit additional funds to support this program.

The State incorporates the description of the Unsafe Structures Demolition Program in its Action Plan, as incorporated by Substantial Amendment No. 4, as amended, as well as all eligibility and other criteria, except to the extent modified by the language below.

Allocation for Activity: $10,000,000

Eligibility Criteria:

- Property must be damaged by Superstorm Sandy.
- Property must be identified as an "unsafe structure" as defined by the New Jersey Department of Community Affairs, Division of Codes.

Eligibility for CDBG-DR: Section 105(a)(3); Section 105(a)(4); Section 105(a)(11)

National Objective: Low and moderate income area, housing and/or limited clientele; alleviate slums and blight; urgent need.

3.6.3 Code Enforcement & Zoning Program

Ensuring that homes are built safer and up to code is necessary to repair and rebuild the housing sector effectively. The State allocated $6,000,000 of first tranche CDBG-DR funds to support code enforcement and zoning initiatives. Going forward, the State plans to continue to use CDBG-DR funds to supplement local code enforcement offices with additional personnel for tasks relating to the storm, as well as to address other costs ancillary or related to those tasks. In addition, DCA may seek to enhance its continuing education curriculum for code officials to include training in flood hazard mitigation practices and other storm-related code issues to increase capacity and expertise.

The State incorporates the description of the Code Enforcement and Zoning Program in its Action Plan, as amended, as well as all eligibility and other criteria, except to the extent modified by the language below:

Allocation for Activity: $5,000,000

Maximum Award: Awards to municipalities will take the form of (i) state staff supplementing local building code officials, and/or (ii) grants to secure additional zoning office personnel directly according to assessed needs.

Eligibility Criteria: To be eligible for a zoning code enforcement grant, a municipality must be in one of the nine most impacted counties and (i) have had at least one hundred property assessments reduced under N.J.S.A. 54:4-35.1 as a result

of the storm, or (ii) have seen a 10 percent increase in zoning application filings since November 2012 that can be ascribed to Superstorm Sandy. To be eligible for building code enforcement assistance, a municipality must demonstrate a backlog or code enforcement assistance need arising from Superstorm Sandy.

Eligibility for CDBG-DR: Section 105(a)(3)

National Objective: Low and moderate income area and/or housing; alleviate slums and blight; urgent need.

3.7 Planning, Oversight, and Monitoring

DCA as the State-designated grantee will oversee all activities and expenditures of the CDBG-DR funds through the Sandy Recovery Division. Existing State employees will be used and additional personnel and contractors have been hired to aid in the administration of, and to carry out, recovery programs. Not only will these personnel remain involved in ensuring that there are layers of financial control, they also will undertake administrative and monitoring activities to better assure compliance with applicable requirements, including, but not limited to, meeting the disaster threshold, eligibility, national objective compliance, fair housing, nondiscrimination, labor standards, environmental regulations, and procurement regulations at 24 CFR Part 85.

As with first tranche CDBG-DR funds, New Jersey has implemented the following oversight and monitoring processes, among others: proficient financial controls and procurement processes; adequate procedures to prevent any duplication of benefits as defined by Section 312 of the Stafford Act; processes to ensure timely expenditure of funds; comprehensive websites regarding all disaster recovery activities assisted with these funds; processes to detect and prevent waste, fraud, and abuse of funds; environmental and historic reviews on applicable projects; and processes ensuring all projects are compliant with the Uniform Act (relocation), Davis-Bacon and other labor standards, fair housing, Section 3, uniform administrative requirements at 24 CFR Part 85, and other applicable federal laws. The State also incorporates all of the oversight and monitoring processes and procedures described in the Action Plan.

DCA will maintain a high level of transparency and accountability by using a combination of risk analysis of programs and activities, desk reviews, site visits, and checklists modeled after HUD's Disaster Recovery Monitoring Checklists and existing monitoring checklists used in monitoring regular program activities. DCA will determine appropriate monitoring of grants, taking into account prior CDBG-DR grant administration performance, audit findings, as well as factors such as the complexity of the project. In accordance with New Jersey Executive Order No. 125, Accountability Officers have been appointed to oversee the responsible disbursement and utilization of federal reconstruction resources allocated by or

through each department. Internal auditors will monitor and review for compliance with federal and state laws and regulations, and will report directly to the Commissioner of DCA. Additional transparency and accountability measures are described in the Action Plan.

Some of the CDBG-DR funding will also be utilized to provide technical assistance to staff and subrecipients receiving CDBG-DR funds so that recovery programs will be implemented efficiently, effectively and in compliance with the federal, state and local regulations.

In response to ongoing needs for planning activities, second tranche funding has been allocated in order to guide long-term recovery and redevelopment at the local/regional level. Examples of planning studies include but are not limited to: community resiliency plans, enhanced GIS mapping as part of a municipal planning program, environmental design studies, sustainable designs for construction and reconstruction in flood hazard areas, economic development plans, zoning ordinances, and land development codes.

3.7.1 Planning Activities

The Post Sandy Planning Assistance Grant Program addresses ongoing planning needs resulting from Superstorm Sandy. These include allowing communities to develop community recovery plans that strategically address vulnerabilities exposed by the storm.

In furtherance of its mission to provide local government officials with the tools needed to help manage recovery plans and recovery planning projects, DCA created a local planning assistance program that supplements the ongoing efforts of storm-impacted local and county governments to rebuild and revitalize. This program is specifically designed to augment, not conflict with, other planning programs that units of local government may be utilizing as a result of Superstorm Sandy. Communities lacking pre-existing planning resources are particularly encouraged to participate in the program.

Based on demand, the State will dedicate second tranche CDBG-DR funds to provide additional support for this planning program. In addition to the funding currently being provided to municipalities, the State will set aside funding to enable communities facing unique or significant challenges to undertake more in-depth planning to find creative, practical solutions for more challenging issues. These planning activities may include, without limitation:

- Input from expert land use professionals;
- Insights regarding innovative solutions to the most complex real estate development challenges;

- Guidance for the future investment of CDBG-DR and other funds to address recovery; and
- Investigating the feasibility of mapping information that is needed to strategically plan for evacuations, locate emergency services, shelters and other disaster-related prerequisites.

In addition to the Post Sandy Planning Assistance Grant Program, the State has identified other statewide and regional planning needs relating to the recovery, including: (i) mapping of critical infrastructure; and (ii) flood risk reduction initiatives. Second tranche CDBG-DR funds dedicated to planning also will be used for these and similar types of statewide and regional planning initiatives.

As one example, the State is considering creating Virtual New Jersey (vNJ), a singular situational awareness and common operative picture platform for the State of New Jersey. Developed with forward-looking technology, vNJ could function as a cloud-based collaboration platform with a seamless mechanism to visualize and analyze disparate geographical information system (GIS) data layers maintained by both the private and public sectors.

Virtual New Jersey will enhance preparedness, planning, mitigation and response efforts by allowing access to and analysis of the same types of data sets (GIS; infrastructure; etc.) by a multitude of agencies. This data helps drive preparedness efforts, recommended mitigation actions, risk assessments and scenario-specific planning for events in an all hazards context. Creation of the vNJ platform would also significantly enhance the State's ability to prepare, respond and recover relative to a myriad of events in a coordinated manner. This will enable leadership to have the most comprehensive situational awareness to support accelerated short- and long-term problem solving.

Allocation for Activity: $10,000,000

Maximum Award: Up to $200,000 for individual municipal Post-Sandy Planning Assistance Grants; up to $5,000,000 for statewide and regional planning activities.

Eligible Applicants: Municipalities; New Jersey departments, agencies and authorities; nonprofit organizations; universities and colleges.

(Note: DCA reserves the option to assist communities through direct contracts with nonprofit organizations and educational institutions who will work directly with communities under DCA Local Planning Services direction.)

Eligibility Criteria:

- Post Sandy Planning Assistance Program: Communities in the nine most-impacted counties. If demand, based on applications received, exceeds

funding, preference will be given to communities with limited professional planning capacity on staff and communities with high ratable losses.

- Other Planning Activities: A governmental unit, nonprofit organization or university determined to be in need of planning support for statewide or regional recovery-related activities.

Criteria for Selection:

- Post Sandy Planning Assistance Program
  - Community's interest in pursuing planning activities to address post-Sandy issues
  - Ratable losses
  - Availability of other local resources to support planning efforts
  - Capacity of community to undertake planning activities without additional support.
- Other Planning Activities:
  - Coordinated statewide and/or regional planning activities to address unmet recovery-related planning needs.

Eligibility for CDBG-DR: Section 105(a)(12)

National Objective: Planning activity

3.7.2 Oversight and Monitoring Activities

DCA will continue to administer its programs following policies and procedures outlined in the Action Plan with respect to receipt of CDBG-DR funds. As the designated CDBG-DR funds grantee, DCA also will continue to oversee all activities and expenditures of the CDBG-DR funds. Existing state employees are providing this function, with support of other personnel and contractors hired specifically to aid in the administration of, and to carry out, recovery programs. These efforts ensure layers of financial control are in place, provide technical assistance to the State, and undertake administrative and monitoring activities to better assure compliance with applicable federal requirements, including without limitation: meeting the disaster threshold; eligibility; national objective compliance; fair housing; nondiscrimination; labor standards; environmental regulations; and procurement regulations at 24 CFR Part 85.

Allocation for Activity: $73,000,000

Administration: DCA has established a Sandy Recovery Division (SRD) with more than 50 departmental and contracted staff. The SRD coordinates with existing DCA divisions and other state agencies to administer recovery programs. Tasks include

providing overall program direction, financial controls, procurement, outreach and communications, compliance, information management, and recovery subject matter expertise. DCA has developed process maps and program guidelines to direct the work of all staff and subrecipients for each program. Written procedures address cross-cutting topics such as Davis Bacon, fair housing, Section 3, financial management, and file management for disaster recovery. The recovery staff also provides technical assistance to grantees, and undertakes monitoring activities to ensure regulatory compliance.

Monitoring: The primary purpose of the State's monitoring strategy is to ensure that all projects comply with applicable federal and state regulations and are effectively meeting stated goals and projected timelines. DCA staff will continue to perform monitoring in accordance with its CDBG-DR monitoring plan, maintaining a high level of transparency and accountability through a combination of risk analysis of programs and activities, desk reviews, site visits, and checklists modeled after HUD's Disaster Recovery Monitoring Checklists and existing monitoring checklists used in monitoring regular program activities. All projects will be monitored on a schedule determined by the risk analysis, but at least once on-site during the life of the activity. The results of monitoring and audit activities will be reported to the Commissioner of DCA, and status of the grant programs are reported on two public websites: http://nj.gov/comptroller/sandytransparency/ and https://www.newjerseyrebuild.org/. Both are updated regularly.

Monitoring will continue to address compliance with:

- CDBG-DR and other applicable regulations, such as fair housing, environmental, wage rates, and others
- Floodplain restrictions
- Applicant eligibility
- Restrictions on duplication of benefits.

Moreover, the State will continue to follow all monitoring processes identified in the Action Plan, including those created in response to New Jersey Executive Order 125 as well as state legislation.

Reporting: Each awarded applicant will continue to report information necessary and relevant to the status of its activities, and other information as required by HUD. Additional reporting requirements (e.g., annual audits, contractual obligations, labor and minority business enterprise reports, as applicable) are specified in contract documents.

Additional Steps to Avoid Occurrence of Fraud, Abuse and Mismanagement:
The State will continue to follow all of the processes and procedures described in Section 6 of the Action Plan with respect to preventing and detecting waste, fraud and abuse, including those steps required pursuant to New Jersey Executive Order 125 as well as state legislation.

3.8 Pre-Agreement Costs and Reimbursement

New Jersey will follow provisions of 24 CFR 570.489(b), and the Pre-Award CPD Guidance issued by HUD in July 2013, which permit the State to reimburse itself for otherwise allowable costs incurred by itself or its recipients, subgrantees, or subrecipients (including PHAs), or grantees on or after the incident date of the covered disaster.

SECTION 4: PERFORMANCE SCHEDULE

To satisfy HUD guidance in Federal Register Notice FR-5696-N-06, New Jersey will issue another proposed substantial amendment to provide detailed performance metrics regarding the allocation of second tranche CDBG-DR funds. The performance metrics will be based on quarterly expected expenditures and outcomes. Consistent with the Notice, this amendment will be prepared within 90 days of the date that New Jersey's proposed uses of second tranche CDBG-DR funds are approved by HUD.

To the extent that estimated and quantifiable performance outcome factors must be provided as part of this Substantial Amendment, Table 4-1 below sets out current estimated outcomes by second tranche funding category. These estimates are preliminary and likely will change. Factors that may affect performance measures include completing federally-required environmental and historical reviews, contractor availability, weather, and availability of other funding sources. These and other potential factors will be important in finalizing and meeting proposed performance metrics. The State anticipates that HUD will provide flexibility to extend timelines based on these and other relevant factors.

The State will also work closely with HUD to determine fund draw schedules consistent with implementation and construction schedules identified in the Action Plan. At this time, the State of New Jersey is committing 100 percent of its allocation from this tranche of CDBG-DR funding for the programs listed in this substantial amendment. The State is requesting that HUD obligate 55 percent of those funds as of the approval date of this Substantial Amendment.

Table 4-1: Projected Performance Metrics for CDBG-DR Second Tranche Programs

Program Category	Total Funding	Estimated Outcomes
Homeowner Housing	$490,000,000	3200 Homeowners Assisted
Rental Housing	$245,000,000	2200 Rental Units Assisted
Economic Development	$5,000,000	70 Towns Assisted
Infrastructure	$545,000,000	369 Infrastructure Projects
Support for Government Entities	$95,000,000	55 Entities Assisted
Planning	$10,000,000	70 Entities Assisted
Oversight, Monitoring, Technical Assistance	$73,000,000	N/A
Total	**$1,463,000,000**	

SECTION 5: OUTREACH AND PUBLIC COMMENT

Citizen participation through extensive public outreach is an essential component of the State's disaster recovery efforts. The State engages on a daily basis with citizens, stakeholder groups, local officials, non-profit groups, the federal government and other recovery partners about issues relating to the recovery.

The State undertook a coordinated outreach approach in order to determine how to best use second tranche CDBG-DR funds to identify and address unmet needs. These steps have included meetings between state government leaders and local elected officials, more than 40 meetings and conference calls with stakeholder groups held by the Governor's Office of Recovery and Rebuilding (GORR), the New Jersey Department of Community Affairs (DCA), the New Jersey Economic Development Authority (EDA), the New Jersey Department of Environmental Protection (DEP), the New Jersey Board of Public Utilities (BPU), the New Jersey Department of Transportation or other state agencies. GORR also briefed state legislative leadership staff and New Jersey Congressional delegation staff regarding remaining recovery needs and the use of second tranche CDBG-DR funds. Many of these efforts are described in more detail below.

Additionally, consistent with the requirements in Federal Register Notice FR-5696-N-06, the State will hold public hearings after making this Substantial Amendment available for public comment. The State has sought to partner with public universities and nonprofit groups in order to realize the objective and transparent public hearing process that encourages citizen engagement.

While HUD has required the State to hold at least one public hearing to solicit comments on this Substantial Amendment, the State plans to hold three public hearings at locations across the State. Tentatively, the dates, times and locations of the hearings are:

- February 11, 2014; Stockton University (Atlantic County); 101 Vera King Farris Drive, Galloway, NJ 08205; Performing Arts Center; 4–7 pm
- February 12, 2014; New Jersey Institute of Technology (Essex County); 150 Bleeker Street, Newark, NJ 07102; Campus Center; 5:30–8:30 pm
- February 13, 2014; Brookdale Community College (Monmouth County); Robert J. Collins Arena; 765 Newman Springs Road, Lincroft, NJ 07738; 4–7 pm

Additional information about the public hearings will be disseminated as the hearing dates approach.

Comments on the Substantial Amendment also can be submitted on DCA's website (http://www.state.nj.us/dca/announcements/approved/sandy.html) and citizens also will have the opportunity to make comments at the State's public hearings. Separately, the State incorporates all other criteria referenced in Section 6 of the Action Plan. In addition, certifications remain the same as the Action Plan submission.

5.1 Citizen Participation Plan Requirements

In developing this Substantial Amendment, the State has complied with all citizen participation plan requirements, including those new requirements in Federal Register Notice FR-5696-N-06. These steps have included:

- The State has issued this Substantial Amendment and will make it available to the public for a comment period of no less than thirty days prior to its submission to HUD. DCA posted this Substantial Amendment prominently on its official website to afford citizens, affected local governments, and other interested parties a reasonable opportunity to examine the Substantial Amendment's contents.
- The State has conducted outreach to community groups, including those that serve minority populations, persons with limited English proficiency, and persons with disabilities.
- The State will convene three public hearings regarding this Substantial Amendment to the Action Plan. Citizens and other stakeholders will be provided reasonable and timely access to information about the public hearings and to the hearings themselves.

Certain elements of the citizen participation requirements remain unchanged since the issuance of the State's Action Plan. In preparing this Substantial Amendment, the State has complied with these elements of the citizen participation requirements as well, which include the following:

- The State will notify the public that the Substantial Amendment is available for review and comment through electronic mailings, press releases, statements by public officials, media advertisements, public service announcements, and/or contacts with community-based organizations.
- The State will make these documents available in a form accessible to persons with disabilities and persons of limited English proficiency (LEP). As a part of the updates to the Citizen Participation Plan, the State updated its LEP analysis using the most recent Census data.

- The State will reach out to local nonprofit and civic organizations to disseminate information about and make available a copy of this Substantial Amendment.
- The State has considered, and will consider, all oral and written comments it has received on this Substantial Amendment.
- The State continues to make the Action Plan, all amendments, and all performance reports available to the public on its website and upon request.

The State shall provide citizens, local officials, and other stakeholders with reasonable and timely access to information and records relating to the Action Plan, this Substantial Amendment and the State's use of CDBG-DR funds. Notably, the text in Section 6 of the Action Plan that is not updated or replaced by this amendment remains valid.

5.2 Action Plan Amendment Outreach

As referenced above, the State remains engaged on a daily basis with citizens, stakeholder groups, local officials, non-profit groups, the federal government and other recovery partners about issues relating to the recovery. That said, with HUD's announcement of a second allocation of CDBG-DR funds to New Jersey, the State, consistent with federal requirements, outlined and executed an outreach plan specifically intended to address unmet needs remaining after Superstorm Sandy and determine how second tranche funds might be used to meet those needs.

The second tranche outreach began with four separate meetings in late November with mayors and other local officials across the nine most impacted counties as determined by HUD. The meetings included an open dialogue between State cabinet officers and local government leaders about unmet needs across all impacted sectors. The discussions underscored the reality that unmet storm-related needs in New Jersey far exceed available recovery resources to address those needs.

In December and January, the State's departments and agencies held numerous meetings and conferences calls with stakeholder groups focused on how to best use second tranche CDBG-DR funds.

These meetings, held in December 2013 and January 2014, brought together groups representing a diverse array of organizations, government entities, nonprofit groups, advocates, and trade associations with either statewide presence, wide-ranging memberships or representing large networks of stakeholders. The list of stakeholder groups that engaged in the process is set forth below; a number of other groups were invited to participated but declined:

New Jersey Department of Community Affairs

- A Future With Hope
- American Red Cross
- Atlantic County Long Term Recovery Group
- Bayonne Economic Opportunity Foundation
- Bergen County Long Term Recovery Group
- Big Brothers and Big Sisters of Essex, Hudson, and Union Counties
- Cape May County Long Term Recovery Group
- Catholic Charities of Trenton
- Citadel Wellwood Urban Renewal LLC
- Community Investment Strategies
- Conifer Realty, LLC
- Cooperative Housing Corporation
- Cumberland County Long Term Recovery Group
- Diocesan Housing, Diocese of Camden
- East Orange Public Housing Authority
- Fair Share Housing Alliance
- Gateway Community Action Partnership
- Gil Berry & Associates, Inc.
- Holly City Development Corporation
- Housing and Community Development Network of New Jersey
- IMPACT Community Development Corporation
- Ironbound Community Corporation
- Irvington Public Housing Authority
- Jersey City Public Housing Authority
- La Casa de Don Pedro
- La Casa de Education y Cultura Latina
- Latino Action Network
- Legal Services of New Jersey
- Loving Care Homes
- Michaels Development
- Middlesex County Long Term Recovery Group
- Monmouth County Long Term Recovery Group
- New Jersey Apartment Association
- New Jersey Associations of REALTORS®
- New Jersey Community Capital
- New Jersey Property Owners Association
- New Jersey Urban Mayors' Association
- NJ HAND, Inc.
- North Ward Center

- Occupy Sandy
- Ocean County Long Term Recovery Group
- Pennrose Properties
- Plan Smart NJ
- Pleasantville Public Housing Authority
- Puertorriqueños Asociados for Community Organization, Inc.
- Regan Development
- Rehabco, Inc.
- RPM Development
- Servicos Latinos De Burlington County
- The Affordable Housing Alliance
- The American Institute of Architects New Jersey chapter
- The American Planning Association, New Jersey chapter
- The Corporation for Supportive Housing
- The Ingerman Group
- The Metro Company, LLC
- The New Jersey Country Planners Association
- The New Jersey Planning Officials
- The People's Pantry Relief Center in Toms River
- Trenton Public Housing Authority
- Urban League Affordable Housing & Community Development Corporation
- Urban Verde, Inc.
- Visitation Church Relief Center of Brick

New Jersey Economic Development Authority

- African American Chamber of Commerce
- Chamber of Commerce of Southern New Jersey
- Commerce and Industry Association
- Community Development Financial Institutions (CDFIs)
- Monmouth-Ocean Development Council
- National Federation of Independent Business (NFIB)
- New Jersey Bankers Association
- New Jersey Business and Industry Association
- New Jersey Restaurant Association
- New Jersey State Chamber of Commerce
- Statewide Hispanic Chamber of Commerce

New Jersey Department of Environmental Protection

- American Engineering Association
- Association of NJ Environmental Commissions
- Chemistry Council of New Jersey

- Clean Ocean Action
- Future City, Inc.
- Littoral Society
- Marine Trade Association
- Middlesex County Utilities Authority
- NJ Future
- NJ Society of Professional Engineers
- NY/NJ Baykeepers
- Professional Engineers Board

New Jersey Board of Public Utilities

- Association of Environmental Authorities
- Environmental Defense Fund
- First Energy Corporation/JCP&L
- Health Care Association of NJ
- NJ Hospital Association
- NJ Natural Gas
- NJ Resources
- SJ Industries

New Jersey Department of Transportation

- American Council of Engineering Companies
- Associated Construction Contractors of New Jersey
- New Jersey Alliance for Action
- Utility Transportation Contractors Association

GORR also met with the Association of Counties, League of Municipalities, and the Conference of Mayors, as the interests of those stakeholder groups crossed all state agencies engaged in outreach. In addition to these stakeholder outreach sessions, GORR briefed key state legislative staff on January 23, 2013, and as with the meetings with the mayors, the briefing with state legislative leadership staff focused on the State's unmet needs and how the State has leveraged available resources to meet those needs. GORR held a similar briefing on January 16, 2014 for members of the staff of New Jersey's Congressional delegation.

The State also will hold public hearings during the thirty-day public comment period for this Substantial Amendment. The State is committed to a robust and transparent public hearing process that emphasizes public engagement.

These CDBG-DR funding-specific outreach efforts augment other means used by the State to inform and engage the public on Sandy recovery issues. For example, the State routinely engages the media on recovery issues as a mechanism to keep the public informed. The Governor's monthly radio program, "Ask the Governor," is one

example of this effort. The State also has conducted mobile cabinets in many of the most impacted communities. During the recovery, State departments and agencies also have made public service announcements over radio. Additionally, the State has issued dozens of Sandy-related press releases about recovery-related issues across all impacted sectors. Notably, press releases through the Governor's Office include distribution of fact sheets and press releases to Spanish language media outlets (e.g., Telemundo, Univision, News12 Spanish, etc.,), three Asian language media outlets, one statewide African American magazine, and eight Jewish media outlets, which cover several affected counties. These are just some examples of ongoing outreach efforts. Additional examples of outreach efforts in connection with Sandy recovery are described in the Action Plan.

Furthermore many state departments and agencies maintain websites with information specific to Sandy recovery. Examples include:

- The Governor's Office of Recovery and Rebuilding website (http://nj.gov/gorr/) contains information about recovery across impacted sectors and demonstrates the State's commitment to a holistic recovery approach that seeks to utilize all available recovery funding streams in a coordinated way.
- The New Jersey Department of Community Affairs website with a specific Sandy Recovery section (http://www.nj.gov/dca/divisions/sandyrecovery/), which also has a link to a companion Spanish-language website, provides a direct link to Sandy-related recovery resources and is regularly updated with CDBG-DR information. Both websites are routinely updated with information related to programs, housing recovery centers, etc. Moreover, DCA maintains the Sandy.Recovery@dca.state.nj.us email address that is one mechanism for citizens to ask questions, make comments, or provide other input regarding recovery programs. DCA is able to provide answers in multiple languages as appropriate and necessary.
- The New Jersey Economic Development Authority maintains a website (http://application.njeda.com/strongernjbusiness/default.aspx) dedicated to information about the State's CDBG-DR funded economic programs.
- The New Jersey Department of Environmental Protection maintains a website (http://www.state.nj.us/dep/special/hurricane-sandy/) primarily dedicated to environmental issues and initiatives that arise in the recovery.

- Per New Jersey Executive Order 125, the New Jersey State Comptroller maintains a website (http://nj.gov/comptroller/sandytransparency/) that, among other things, provides information about Sandy-related government contracts and how federal Sandy recovery funds are expended.

Accessibility to Programs

New Jersey has taken measures to ensure that individuals with disabilities have access to programs and can provide comments on this Substantial Amendment. Moreover, program materials and outreach efforts follow prescribed guidelines to ensure access for individuals with disabilities. The State's Housing Recovery Centers are accessible to persons with physical impairments. Individuals may request auxiliary aids and service necessary for participation by contacting 1-855-SANDYHM (1-855-7263946). They may also request materials in Braille and other formats for persons with visual impairments. The centers also provide remote (web- or phone-based) counseling for potential applicants who cannot reach the housing recovery centers due to their disability. The centers are equipped with personnel who can be deployed for home visits, particularly for elderly and disabled.

Limited English Proficiency Outreach

The State's outreach has included various communities that, based on Census tract data, have a significant proportion of minority residents and non-English speaking residents. As noted above, DCA updated its LEP analysis in January 2014 using more recent data available from the U.S. Census's American Communities Survey (ACS). The only population that exceeds 5 percent in the nine affected counties continues to be Spanish-speaking. This was the same population indicated in the State's original LEP analysis and noted in the original Action Plan.

Based on the results of the State's LEP Analysis, DCA has launched a language assistance plan (LAP) that involves the following components which provide a range of outreach services in Spanish. Translation into other languages is available upon request using the email address sandy.recovery@dca.state.nj.org. To briefly summarize the LAP plan:

- Translation of materials: the Action Plan, this and other amendments, essential program materials, and press releases are translated into Spanish and can be translated into other languages upon request. The following website provides the Spanish version of this Substantial Amendment: www.state.nj.us/dca/announcements/pdf/NewJerseyActionPlan-EnEspanol.pdf
- Launch of a companion Spanish-language website to the DCA one. "Real time" updates will be available on this website;

- Procurement of translators for public meetings;
- Provision of specific LEP outreach through public/stakeholder meetings and household recovery centers;
- Provision of Public Service Announcements (PSAs) on TV and radio to disburse program information;
- Training staff on LEP as well as what is required under the LAP;
- Provision of multi-lingual phone lines as appropriate;
- Referrals to liaison groups who provide services to LEP populations; and
- Monitoring and updating LAP as appropriate given updated U.S. Census and programmatic information on LEP populations.

5.2.1 Summary of Public Comment

Consistent with HUD requirements, this Substantial Amendment will be made available for public comment for a period of at least thirty (30) days. Written comments may be submitted to the Department of Community Affairs via email at sandy.Publiccomment@dca.state.nj.us or to Post Office Box 800, Trenton, New Jersey 08625-0800. The State also will hold three public hearings to solicit public comments on this Substantial Amendment.

Once the public comment period closes, the State will summarize and respond to the comments received and publish those summaries and responses as part of the Substantial Amendment submitted to HUD for approval.

APPENDIX A: ALLOCATION OF FIRST AND SECOND TRANCHE CDBG-DR FUNDS BY PROGRAM

Category	Total Amount	Program	Allocation Level
Homeowner Assistance Programs	$1,415,000,000	Reconstruction, Rehabilitation, Elevation & Mitigation	$1,100,000,000
		Blue Acres Buyout Program	$100,000,000
		Housing Resettlement Program	$215,000,000
Rental Housing and Renter Programs	$624,520,000	Fund for Restoration of Multi-Family Housing	$379,520,000
		Landlord Rental Repair Program (Small Rental)	$70,000,000
		Pre-Development Fund	$10,000,000
		Neighborhood Enhancement Program (Blight Reduction Pilot Program)	$50,000,000
		Incentives for Landlords	$40,000,000
		Sandy Homebuyer Assistance Program	$25,000,000
		Sandy Special Needs Housing Fund	$50,000,000
Economic Development	$305,000,000	Grants/Forgivable Loans to Business	$100,000,000
		Direct Loans for Small Business	$100,000,000
		Neighborhood & Community Revitalization	$75,000,000
		Tourism Marketing Campaign	$30,000,000
Infrastructure Programs	$585,000,000	New Jersey Energy Resilience Bank	$210,000,000
		Flood Hazard Risk Reduction Program	$100,000,000
		Non Federal Cost Share (Match)	$275,000,000
Support for Government Entities	$186,000,000	Unsafe Structures Demolition Program	$25,000,000
		Essential Services Program	$150,000,000
		Zoning/Code Enforcement	$11,000,000
Supportive Services	$10,000,000	Supportive Services Program	$10,000,000
TOTAL	**$3,125,520,000**	**TOTAL FUNDED PROGRAMS**	**$3,125,520,000**
Planning and Administration	$167,000,000	Planning Grants	$15,000,000
		Administration	$152,000,000
TOTAL	**$3,292,520,000**		

APPENDIX B: PERCENTAGE OF AGGREGATE CDBG-DR FUNDS RECEIVED TARGETED TO MOST IMPACTED COUNTIES

Category	Program	Allocation Level	Portion of Allocation Benefiting Most Impacted and Distressed Counties	Estimated Percentage to Benefit Most Impacted and Distressed Counties
Homeowner Assistance Programs	Reconstruction, Rehabilitation, Elevation & Mitigation	$1,100,000,000	$1,100,000,000	100%
	Blue Acres Buyout Program	$100,000,000	$85,000,000	85%
	Housing Resettlement Program	$215,000,000	$215,000,000	100%
Rental Housing and Renter Programs	Fund for Restoration of Multi-Family Housing	$379,520,000	$265,664,000	70%
	Landlord Rental Repair Program (Small Rental)	$70,000,000	$49,000,000	70%
	Pre-Development Fund	$10,000,000	$8,000,000	80%
	Neighborhood Enhancement Program (Blight Reduction Pilot Program)	$50,000,000	$40,000,000	80%
	Incentives for Landlords	$40,000,000	$30,000,000	75%
	Sandy Homebuyer Assistance	$25,000,000	$24,500,000	98%
	Sandy Special Needs Housing Fund	$50,000,000	$37,500,000	75%
Economic Development	Grants/Forgivable Loans to Business	$100,000,000	$75,000,000	75%
	Direct Loans to Small Business	$100,000,000	$75,000,000	75%
	Neighborhood & Community Revitalization Program	$75,000,000	$56,250,000	75%
	Tourism Marketing Campaign	$30,000,000	$22,500,000	75%
Infrastructure Programs	New Jersey Energy Resilience Bank	$210,000,000	$105,000,000	50%
	Flood Hazard Risk Reduction Program	$100,000,000	$80,000,000	80%
	Non Federal Cost Share (Match)	$275,000,000	$137,500,000	50%
Support for Government Entities	Unsafe Structures Demolition Program	$25,000,000	$23,750,000	95%
	Essential Services Program	$150,000,000	$142,500,000	95%
	Zoning/Code Enforcement	$11,000,000	$9,900,000	90%
Supportive Services	Supportive Services	$10,000,000	$9,000,000	90%
TOTAL	**TOTAL FUNDED PROGRAMS**	**$3,125,520,000**	**$2,591,064,000**	**83%**
Planning and Administration	Planning Grants	$15,000,000	NA	NA
	Administration	$152,000,000	NA	NA
TOTAL		**$3,292,520,000**		