



# **STATE OF NEW YORK ACTION PLAN AMENDMENT NUMBER 8: CONSOLIDATED ACTION PLAN FOR COMMUNITY DEVELOPMENT BLOCK GRANT DISASTER RECOVERY**

*Utilizing Supplemental CDBG Disaster Recovery Funding from the Allocation, Common Application, Waivers, and Alternative Requirements for Community Development Block Grant Disaster Recovery Grantees under the Department of Housing and Urban Development Appropriations Act, 2013*

(Public Law 113-2)

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## Executive Summary

On October 16, 2014, the U.S. Department of Housing and Urban Development (HUD) published a Federal Register Notice outlining the third allocation of \$420,922,000 to support New York State's continued recovery efforts from Hurricane Irene, Tropical Storm Lee, and Superstorm Sandy and \$185,000,000 to fund two Rebuild by Design (RBD) projects. This follows an initial allocation of \$1,713,960,000 in federal Community Development Block Grant Disaster Recovery (CDBG-DR) funds in March 2013 and second allocation of \$2,097,000,000 in November 2013, bringing the total allocation to the State to \$4,416,882,000.

The Appropriation Act (Public Law 113-2) requires that prior to the obligation of CDBG-DR funds, a grantee must submit a plan detailing the proposed use of funds, including criteria for eligibility and how the use of these funds will address disaster relief, long-term recovery, restoration of infrastructure and housing, and economic revitalization in the most impacted and distressed areas.

HUD has previously approved an Action Plan for each grantee receiving funds in the October 16, 2014 Notice. Each grantee must now submit a substantial Action Plan Amendment (APA) and publish it for public comment in order to access the funds provided in the October 16<sup>th</sup>, Notice (FR-5696-N-11). Additionally, in the HUD Federal Register Notice dated October 16, 2014, grantees are required to conduct public hearings for any substantial amendment to its Action Plan.

The 8<sup>th</sup> Action Plan Amendment (APA8) provides detailed updates to the Action Plan, as amended, including:

- An introduction to the RBD projects and budgets (Living Breakwaters and Living with the Bay);
- Increases in the budget for projects under the NY Rising Infrastructure Program;
- Increases in the budget for the implementation of the NY Rising Community Reconstruction Program (NYRCR);
- An adjusted unmet needs assessment which includes the most current data available from State and federal partners, revised methodology, and GOSR Program data;
- Clarifications to the NY Rising Housing Programs; and,
- Clarifications to the NY Rising Economic Development Program;

Superseding the Action Plan and all prior Amendments (APA1-APA7), APA8 consolidates all required information into a single document. The Action Plan and all Amendments are available on the State's website at <http://stormrecovery.ny.gov>.

## Proposed Distribution of Funds

Program	First and Second Allocation approved May 2014	Change in First and Second Allocation	Amended First and Second Allocation	Third Allocation	Total Allocation
<b>TOTAL</b>	<b>\$3,810,960,000</b>		<b>\$3,810,960,000</b>	<b>\$605,922,000</b>	<b>\$4,416,882,000</b>
<b>Housing</b>	<b>\$1,959,019,206</b>		<b>\$1,959,019,206</b>		<b>\$1,959,019,206</b>
NY Rising Housing Program	\$1,056,311,524		\$1,056,311,524		\$1,056,311,524
Interim Mortgage and Housing Assistance Program	\$49,000,000		\$49,000,000		\$49,000,000
NY Rising Buyout Program	\$621,207,682		\$621,207,682		\$621,207,682
NY Rising Rental Buildings Recovery Program	\$225,000,000		\$225,000,000		\$225,000,000
Public Housing Assistance Relief Program	\$7,500,000		\$7,500,000		\$7,500,000
<b>Economic Development</b>	<b>\$216,500,000</b>		<b>\$216,500,000</b>		<b>\$216,500,000</b>
Small Business Grants and Loans	\$158,500,000	\$25,000,000	\$183,500,000		\$183,500,000
Seasonal Tourism Industry	\$15,000,000	(\$15,000,000)	\$0		\$0
Coastal Fishing Industry	\$10,000,000	(\$10,000,000)	\$0		\$0
Business Mentoring Program	\$3,000,000		\$3,000,000		\$3,000,000
Tourism and Marketing	\$30,000,000		\$30,000,000		\$30,000,000
<b>Community Reconstruction Program</b>	<b>\$664,510,794</b>		<b>\$664,510,794</b>	<b>\$63,922,000</b>	<b>\$728,432,794</b>
NY Rising Community Reconstruction	\$664,510,794		\$664,510,794	\$63,922,000	\$728,432,794
<b>Infrastructure and Match</b>	<b>\$780,120,000</b>		<b>\$780,120,000</b>	<b>\$357,000,000</b>	<b>\$1,137,120,000</b>
Local Government and Critical Infrastructure	\$254,600,000	(\$109,600,000)	\$145,000,000		\$145,000,000
Suffolk County Water Quality Improvements Initiative				\$300,000,000	\$300,000,000
Non-federal Share Match Program	\$522,820,000	(\$134,400,000)	\$451,420,000	\$57,000,000	\$508,420,000
Bay Park Waste Water Treatment		\$101,000,000	\$101,000,000		\$101,000,000
Long Island Power Authority		\$80,000,000	\$80,000,000		\$80,000,000
Resiliency Institute	\$2,700,000		\$2,700,000		\$2,700,000
<b>Rebuild by Design</b>				<b>\$185,000,000</b>	<b>\$185,000,000</b>
Living with the Bay, Nassau County				\$125,000,000	\$125,000,000
Living Breakwaters Project Richmond County (Staten Island)				\$60,000,000	\$60,000,000
<b>Administration &amp; Planning</b>	<b>\$190,810,000</b>		<b>\$190,810,000</b>		<b>\$190,810,000</b>

## Public Comment

Information forthcoming after public comment period to be held in January and February 2015.

## Introduction

On October 29, 2012, the largest storm in New York's recorded history swept ashore. Superstorm Sandy's impact was devastating, causing widespread damage to residents, homes, businesses, core infrastructure, government property, and an economy just recovering from the recent financial crisis. Fourteen counties were declared federal disaster areas. Sixty New Yorkers died and two million utility customers lost power, with some blackouts lasting up to three weeks. The storm damaged or destroyed more than 164,342 housing units, affected or closed over 2,000 miles of roads, produced catastrophic flooding in subways and tunnels, and damaged major power transmission systems.

Superstorm Sandy's impact was particularly tragic coming on the heels of Hurricane Irene and Tropical Storm Lee, which in 2011 devastated many communities in upstate New York's Catskill, Adirondack, and Hudson Valley regions, and caused severe damage on Long Island. Tens of thousands of homes incurred damage in these three storms, and many were destroyed by flood waters and wind. Businesses and infrastructure suffered substantial damage as well. Communities are still working hard every day to build back from the devastations of these storms.

The Disaster Relief Appropriations Act, 2013 (Public Law 113-2, approved January 29, 2013) (Appropriations Act) made \$16,000,000,000 in CDBG-DR funds available for necessary expenses related to disaster relief, long-term recovery, restoration of infrastructure and housing, and economic revitalization in the most impacted and distressed areas resulting from a major disaster declared pursuant to the Robert T. Stafford Disaster Relief and Emergency Assistance Act of 1974 (42 U.S.C. 5121 *et seq.*) (Stafford Act), in calendar years 2011, 2012, and 2013.

On March 1, 2013, as a result of a sequestration order from the President pursuant to Section 251A of the Balanced Budget and Emergency Deficit Control Act, funding was reduced to \$15,180,000,000. On Tuesday, March 5, 2013, HUD published Federal Register Notice 5696-N-01, which established the requirements and processes for the first allocation of \$15,180,000,000 in federal CDBG-DR aid appropriated by the United States Congress. Under the first allocation, New York State was allocated \$1,713,960,000 to facilitate the recovery and long-term rebuilding of its impacted communities. The State's initial Action Plan was approved by HUD on April 25, 2013.

In June 2013, Governor Andrew M. Cuomo established the Governor's Office of Storm Recovery (GOSR) to maximize the coordination of recovery and rebuilding efforts in storm-affected areas throughout New York State. GOSR was formed under the auspices of New York State's Office of Homes and Community Renewal's Housing Trust Fund Corporation (HTFC), a public benefit corporation and subsidiary of the New York State Housing Finance Agency.

On November 23, 2013, HUD published Federal Register Notice 5696-N-06 which outlined the requirements governing the \$5,109,000,000 of the second allocation of CDBG-DR resources to continue disaster recovery efforts from Superstorm Sandy and the events of 2011. New York State was allocated an additional \$2,097,000,000 in funds under the second allocation, increasing the State's allocation to \$3,810,960,000. On May 27, 2014, HUD approved APA6, outlining GOSR's intended use for the second allocation of funds.

Federal Register Notice 5696-N-11, published October 16, 2014, outlined the requirements governing another allocation of the Disaster Relief Appropriations Act. It allocated \$416,882,000 for New York State storm recovery Programs and \$185,000,000 to provide resources for projects developed through Rebuild by Design projects. To date, New York State's allocation of CDBG-DR funds totals \$4,412,842,000.

The State's initial Action Plan addressed the immediate housing and business assistance needs in communities affected by recent storms. It also allocated funds to assist county and local governments in covering emergency expenses and the matching funds necessary to repair and mitigate key infrastructure projects. Further, it outlined the State work with storm-damaged communities to begin comprehensive

community-based planning. In APA6, GOSR added funding to existing programs and allocated funding to two “covered projects,” Bay Park Waste Water Treatment and Long Island Power Authority, to match and supplement Federal Emergency Management Agency (FEMA) investments.

This APA continues to fund active Programs, increases funding for both Community Reconstruction and the Infrastructure Program, and provides funding to implement RBD projects. The State continues to prioritize repairs to and mitigation measures for critical infrastructure, and the implementation of community-driven plans to improve resilience and drive economic growth.

The Third Allocation Notice provides funding to implement innovative projects selected in the Rebuild by Design (RBD) competition. The Notice allocates funding to New York State for the implementation of RBD projects in the Tottenville section of Richmond County (Staten Island) and Nassau County communities surrounding the Mill River.

This Amendment is prepared in accordance with the guidelines set forth by HUD in the October 16, 2014 Federal Register Notice. The State of New York will use this Amendment to guide the distribution of all CDBG-DR recovery funds made available under Public Law 113-2.

Nassau, Suffolk, Westchester, and Rockland counties are the original counties identified by HUD in the March 5, 2013 Federal Register Notice as the most impacted. The November 25, 2013, Federal Register Notice updated the counties in which a minimum of 80% of the State’s total allocation must be expended to include counties of New York, Queens, Kings, Bronx, and Richmond. Since New York City received its own allocation of CDBG-DR funds, only a few of the State’s disaster recovery programs are targeted to the five boroughs. Additionally, the November 25, 2013 Notice added four more Presidentially declared disasters (1957, 1993, 4111 and 4129) to be eligible for CDBG-DR funding. See Appendix A for eligible counties by storm.

**TABLE 1: COUNTIES WHERE 80% OF FUNDS MUST BE EXPENDED**

Counties where 80% of Allocation Must be Expended		
Bronx	New York	Rockland
Kings	Queens	Suffolk
Nassau	Richmond	Westchester

Source: FR-5696-N-06 and FR-5696-N-11

HUD requires that 51% of total allocations must be spent on persons determined to be low- and moderate-income. Additionally, the State of New York must either ensure that: (1) a portion of its allocation is used to address resiliency and local cost share requirements for damage to both the Metropolitan Transportation Authority (MTA) infrastructure in New York City and the Port Authority of New York and New Jersey (PANYNJ); or (2) must demonstrate that such resiliency needs and local cost share has otherwise been met. The requirements of the November 25, 2013 and October 16, 2014 Federal Register Notices require the State to document and assert that these entities’ recovery needs are met through working relationships with New York City and the State of New Jersey. After conducting outreach and consultations with the MTA and PANYNJ, the State obtained letters from each Authority indicating MTA and PANYNJ compliance with cost share requirements for the Public Assistance Program. The State continues to work with MTA and PANYNJ regarding the Federal Transit Administration (FTA) competitive grant program so additional assistance for these Authorities is secured. If FTA approved awards do not fund all required projects resulting in an unmet need, the State will work with these Authorities to identify non-CDBG-DR funding mechanisms to address these unmet needs. Given the size and scope of damages impacting the MTA rail system, including the Long Island Railroad and Metro North rail systems, these unmet needs are anticipated to be beyond the State’s current CDBG-DR allocation. The State will continue to work with federal, State, and City partners to ensure the recovery of the region’s transportation assets.

## Updated Impact and Unmet Needs Assessment

Grantees are required by HUD to prepare an analysis of unmet needs related to disaster recovery. This Impact and Unmet Needs Assessment updates the previous two analyses provided by New York State in the initial Action Plan and APA6. The unmet needs data in this section represent the estimated gap between identified disaster recovery, rebuilding and mitigation costs and total funding already allocated through current CDBG-DR commitments and other funding sources for which New York State has been able to access (e.g. FEMA, insurance, NY Rising Program interventions, etc.). As stated in APA6, HUD's methodology shows only a partial picture of the full unmet needs of New York State. In addition to using HUD's methodology, GOSR has factored into its analysis, to the extent feasible, updated and new data sources.

The State's updated unmet needs assessment is based on HUD's CDBG-DR Allocation Methodology as published in the October 16, 2014, Federal Register Notice FR-5696-N-11 (HUD Methodology). In addition, the State analyzed a number of different data sources relevant to each program area to identify what it determines to be the full remaining unmet need to repair and rebuild homes, businesses, and infrastructure in the most impacted communities throughout New York State (NYS Methodology). This unmet needs assessment also outlines program data to identify how the State's actions have already addressed unmet need to date through previous allocations of CDBG-DR funds.

Following HUD's methodology, it is estimated that there is approximately \$5.68 billion in unmet needs to repair and mitigate New York's housing, business, and infrastructure as a result of the damage from Hurricane Irene, Tropical Storm Lee, and Superstorm Sandy. If HUD's high construction cost multiplier is factored in, unmet needs are estimated at \$6.85 billion, an increase that reflects the likelihood that reconstruction costs will be higher in New York State than elsewhere in the United States.<sup>1</sup> These numbers are compared to the estimate of \$7.99 billion in unmet needs outlined in APA6. The State's additional analysis methodology estimates approximately \$16.64 billion in outstanding housing, business, and infrastructure repair and recovery-related mitigation needs not currently funded by federal programs, compared to \$15.74 billion in APA6. The State will continue to analyze and update its unmet needs as additional information is made available on damages as well as resources made available for rebuilding and recovery.

Similar to APA6, this analysis is divided into four sections: Housing, Economic Development, Infrastructure, and Rebuild by Design. Since New York City received a separate CDBG-DR allocation for their disaster recovery, the unmet needs for housing and economic development exclude the five counties of New York City.<sup>2</sup> As such, summary tables and statistics included for housing and business needs exclude New York City unless stated otherwise. The analysis of infrastructure unmet needs, however, includes New York City since many of the impacted systems are of statewide concern, including public transit, roads, and water management.

This updated analysis also addresses the storms' impact on HUD-assisted properties and vulnerable populations, defined as displaced low income households, substantially damaged low and moderate income areas, and households with special needs. These groups are assessed at the Census Tract level where possible and summarized by municipality within Appendix B.

The data sources used include FEMA grants to households (FEMA-IA) and public entities (FEMA-PA); SBA loans (to households and to small businesses), assumed and estimated insurance proceeds, and other federal and state funding sources (FTA, Federal Highway Administration (FHWA), and U.S. Army Corps of Engineers (USACE) storm-related projects, and the USDA Emergency Watershed Repair Program). The needs estimates are effective as of December 2014, and are subject to change as new information becomes available.

There are several differences in the unmet needs methodology for this Amendment compared to the previous versions for the initial Action Plan and APA6.<sup>3</sup> The revised methodology, combined with the availability of

new data since the April 2013 and May 2014 publications, results in new unmet need figures. The new estimates reflect the progress of New York State and federal programs to address these previously outlined unmet needs. Table 2 presents the State’s latest estimate of unmet needs as a result of Hurricane, Irene, Tropical Storm Lee, and Superstorm Sandy:

**TABLE 2: ESTIMATE OF UNMET NEEDS FOR HURRICANE IRENE, TROPICAL STORM LEE AND SUPERSTORM SANDY IN MILLIONS (EXCLUDING NEW YORK CITY)**

	APA6		APA8		APA8 (w/ HUD Construction Cost Multiplier)	
	Unmet Need (Based on HUD Allocation Methodology)	Unmet Need (Based on NYS Methodology)	Unmet Need (Based on HUD Allocation Methodology)	Unmet Need (Based on NYS Methodology)	Unmet Need (Based on HUD Allocation Methodology)	Unmet Need (Based on NYS Methodology)
<b>Housing</b>	\$3,525	\$3,525	\$2,018	\$2,018	\$2,906	\$2,906
<b>Economic Development</b>	\$702	\$702	\$624	\$624	\$898	\$898
<b>Infrastructure</b>	\$3,761	\$11,515	\$3,041	\$13,994	\$3,041	\$13,994
<b>Total</b>	<b>\$7,987</b>	<b>\$15,742</b>	<b>\$5,683</b>	<b>\$16,635</b>	<b>\$6,845</b>	<b>\$17,798</b>

**Source:** FEMA Individual Assistance data effective December 2015, Small Business Administration Business Loan data, effective December 2014, FEMA Public Assistance data effective December 2014, Dun and Bradstreet business records for 2012, FEMA Superstorm Sandy Inundation Files, NYS Department of Financial Services Insurance Data (October, 2013), Census Data (ACS, 2007-2012 5 year average), Department of Transportation (DOT), FTA, Federal Highway Administration, and U.S. Army Corps of Engineers Sandy-related projects effective, and USDA Emergency Watershed Repair Program (December 2014).

Using these updated data sources, the State is able to more accurately assess the damage and economic impact caused by the storms. In addition, where available, and applicable, data from the GOSR’s budget is used to indicate how and where programs intend to address unmet need.

A summary of the impact and unmet needs assessment is provided within the body of this Amendment. Additional county and community data is available in Appendix C.

## Housing Damage and Unmet Needs

This section is broken into a number of sub-sections covering owner-occupied housing units, rental units, HUD-assisted units, and other programs.

### Owner-occupied and Rental Units

Hurricane Irene, Tropical Storm Lee and Superstorm Sandy caused widespread damage to New York’s housing stock along the Atlantic Coast and in the central southern portion of the State, with an estimated 80,878 owner-occupied homes and 16,943 occupied rental units impacted statewide (excluding New York City).<sup>4</sup> Damage consisted of flooding from storm surge, river flooding, and heavy rains along with structural damage caused by heavy winds. The cost to repair or replace damaged homes located outside of New York City, including mitigation needs, is estimated to be \$7.20 billion (Table 3). Subtracting out the estimated FEMA grants, SBA loans, and insurance proceeds, the cost of estimated unmet need is still \$3.97 billion. When funds allocated by the NY Rising Housing Programs are accounted for, an estimated \$2.02 billion in unmet need remains.

**TABLE 3: OVERVIEW OF OWNER-OCCUPIED AND RENTAL HOUSING DAMAGE AND UNMET NEED**

Damage	Unmet Repair and Mitigation Need before State Programs	Unmet Repair and Mitigation Need after State Programs
\$7,198.28	\$3,969.30	\$2,017.78

**Source:** FEMA Individual Assistance data effective December 2014; SBA homeowner assistance data effective December 2014.

**Methodology**

Unmet needs are estimated for owner-occupied units and for rental units using HUD methodology, with a number of exceptions that are outlined below. There are two key steps in estimating the unmet housing need:

1. Estimate the total damage to owner-occupied and rental units.
2. Subtract the resources allocated to repair or replace the damaged units including resources allocated to improve resiliency and mitigate the effects of future storms.

*Total Damage*

To estimate the damage to the housing units, all FEMA-IA applications as of December were first classified into one of six damage categories (from 0 for no damage to 5 for severe damage) based on FEMA’s initial damage assessment and then again based on flood depth (Table 4). Because FEMA does not inspect rental units for real property damage, personal property damage is used as a proxy for real property damage to rental housing. If a unit is placed in a different damage category based on the FEMA assessment value than based on flood depth, it is assigned the higher of the two. Finally, owner units that are classified as having no damage based on the FEMA assessment and flood depth but received an SBA loan are classified based on the SBA original loan amount as reported in the U.S. Small Business Administration commercial loan applications, effective December, 2014.

TABLE 4: DAMAGE CATEGORIES FOR IMPACTED HOMES BASED ON FEMA INDIVIDUAL ASSISTANCE RECORDS

Damage Category	OWNERS: FEMA-determined real property loss	RENTERS: FEMA-determined personal property loss	Flood Depth
1 (“Minor-Low”)	\$1 - \$2,999	\$1 - \$999	N/A
2 (“Minor-High”)	\$3,000 - \$7,999	\$1,000 - \$1,999	N/A
3 (“Major-Low”)	\$8,000 - \$14,999	\$2,000 - \$3,499	1-4 feet
4 (“Major High”)	\$15,000 - \$28,799	\$3,500 - \$7,499	4-6 feet
5 (“Severe”)	≥ \$28,800	≥ \$7,500	6+ feet

Source: Damage categories developed using guidelines prescribed in HUD Federal Register Notice (FR-5696-N-06) and the exceptions outlined below.<sup>5</sup>

The damage categorization outlined above follows HUD methodology with two exceptions:

- Units with at least one foot of flooding but less than four feet are classified as having major-low damage (Category 3), even if the real property loss is less than \$8,000. The classification was also made in APA6 and is part of a previous HUD methodology outlined in the March 5<sup>th</sup>, 2013 Federal Register (Notice FR-5696-N-06).
- Units for which FEMA recorded no damage and for which recorded flood depth was less than 1 foot but which received a positive SBA original loan amount are classified based on the value of the SBA loan amount.

Using the current methodology outlined above, there were 80,878 owner-occupied units and 16,943 renter-occupied units damaged in the three storms; 70,064 of these units experienced major to severe damage and are considered, as per the HUD allocation methodology, to be “most impacted.”<sup>6</sup> The total estimate of impacted occupied units presented in this chapter is larger than in APA6 due to the updated FEMA-IA and

SBA datasets and the revised methodology. Table 5 provides an overall summary of the housing damage that occurred from these three storms, categorized by tenure (owners and renters) and severity of damage.

**TABLE 5: ESTIMATE OF DAMAGED, OCCUPIED HOUSING UNITS FROM HURRICANE IRENE, TROPICAL STORM LEE, AND SUPERSTORM SANDY (EXCLUDING NEW YORK CITY) BASED ON FEMA INDIVIDUAL ASSISTANCE APPLICANTS WITH VERIFIED DAMAGE**

Tenure	Minor Damage	Major Damage	Severe Damage	All Damage
<b>Owners</b>	25,685	44,498	10,695	80,878
<b>Renters</b>	2,072	12,802	2,069	16,943
<b>Total</b>	<b>27,757</b>	<b>57,300</b>	<b>12,764</b>	<b>97,821</b>

Source: FEMA Individual Assistance Data, effective December, 2014.

HUD defines “most-impacted” as homes with major to severe damage. Based on the current methodology, there are a total of 70,064 units classified as most-impacted in counties outside of New York City.<sup>7</sup> The counties with the greatest number of housing units with major to severe damage are presented in Table 6. Table 6 uses the most recent FEMA data to update the number of majorly- and severely-damaged housing units for both owners and renters.

**TABLE 6: ESTIMATE OF OCCUPIED HOMES WITH MAJOR AND SEVERE DAMAGE FROM HURRICANE IRENE, TROPICAL STORM LEE, AND SUPERSTORM SANDY (EXCLUDING NEW YORK CITY) BASED ON FEMA INDIVIDUAL ASSISTANCE APPLICANTS WITH VERIFIED DAMAGE**

County	Owner-Occupied	Renter-Occupied	Total
<b>Nassau</b>	30,608	9,224	<b>39,832</b>
<b>Suffolk</b>	9,047	1,636	<b>10,683</b>
<b>Broome</b>	3,863	1,667	<b>5,530</b>
<b>Orange</b>	2,156	252	<b>2,408</b>
<b>Tioga</b>	1,515	453	<b>1,968</b>
<b>Ulster</b>	1,218	249	<b>1,467</b>
<b>Westchester</b>	881	154	<b>1,035</b>
<b>Schoharie</b>	851	238	<b>1,089</b>
<b>Rockland</b>	805	134	<b>939</b>
<b>Other</b>	4,249	864	<b>5,113</b>
<b>Total</b>	<b>55,193</b>	<b>14,871</b>	<b>70,064</b>

Source: FEMA Individual Assistance Data, effective December 2014. These numbers reflect the CDBG-DR Allocation Methodology published in the Federal Register 79 FR 62182 with two exceptions outlined above.

As noted in APA6, the FEMA damage assessments, in most cases, underestimate the full cost of damage since the assessments were conducted rapidly in the period immediately after the storms. HUD acknowledged this and recommends the use of SBA household loan information to augment and adjust these figures based on averages of SBA damage estimates, derived from more thorough property inspections. Since the SBA loan requires a more detailed cost estimate, the loan value is presumed to more accurately reflect actual repair costs. However, these inspections were less widespread than the initial FEMA inspections. In total, SBA estimated the verified real estate loss for approximately 11,138 applicants outside of New York City at over \$1.3 billion. To calculate estimated damages for New York State, the analysis applies the average SBA loan amount from

the sample of SBA applicants by damage category as presented in Table 7 to each impacted home without an SBA damage assessment. In other words, if a unit was designated as a 3 (“Major-Low”) based on the methodology outlined above and it was not in receipt of a SBA loan, its damage is assumed to be the average damage sustained by SBA loan recipients who were also designated as 3 (“Major-Low”); in this example: \$51,455.

**TABLE 7: DAMAGE ESTIMATES BY DAMAGE CATEGORY BASED ON AVERAGE SBA LOAN AMOUNTS FOR NEW YORK**

<b>Damage Category</b>	<b>FEMA Sample Size</b>	<b>SBA Sample Size</b>	<b>Damage Estimate (Average SBA loan amount by Damage Category)</b>
<b>1 (“Minor-Low”)</b>	19,586	901	\$28,227
<b>2 (“Minor-High”)</b>	6,099	493	\$45,324
<b>3 (“Major-Low”)</b>	24,330	2,800	\$51,455
<b>4 (“Major High”)</b>	20,168	4,187	\$74,098
<b>5 (“Severe”)</b>	10,695	2,757	\$101,473

**Source:** FEMA Individual Assistance data effective December 2014; SBA homeowner assistance data effective December 2014, unlike APA6, this analysis excludes loans awarded in any of the five counties of New York City from the SBA sample.<sup>8</sup>

*Unmet Needs*

Unmet needs are defined as the difference between the total damage and the funds committed or allocated to date including FEMA awards, SBA loans, private insurance, and State programs. For both owner-occupied and rental units, this chapter follows HUD methodology to estimate unmet needs and then separately presents how State programs have addressed this unmet need to date.

Following HUD methodology, the unmet needs for repair of owner-occupied housing units is estimated as follows:

- For homeowners with SBA loans, the unmet need for repair is determined to be zero as per Federal Register Notice (FR-5696-N-11) because the SBA loan amount is presumed to reflect a detailed calculation of repair estimates. Note: 14% of owner-occupied housing units had received a SBA loan.
- For homeowners with flood insurance, HUD assumes insurance proceeds cover 80% of the difference between the damage and the FEMA grant. The remaining 20% is unmet need.
- For homeowners without flood insurance, the unmet need is the difference between the damage and the FEMA grant.

HUD methodology for calculating unmet needs of repair of rental units also assumes that:

- 75% of repair costs for damaged units occupied by renters earning \$30,000 or less a year can be categorized as unmet needs.
- Landlords who rent to households earning more than \$30,000 have sufficient insurance proceeds to make the necessary repairs and therefore have no unmet needs.

HUD has also identified hazard mitigation as part of recovery as an unmet need. This includes elevation of structures, elevation of HVAC systems, and other storm-proofing measures. It is difficult to provide an accurate cost estimate of hazard mitigation needs because neither FEMA nor SBA assessed these needs. For the purpose of this analysis – consistent with HUD’s methodology – hazard mitigation costs are assumed to

equal 30% of total damage costs to owner-occupied and rental housing units that experienced major or severe damage.

**Homeowners**

**TABLE 8: OWNER-OCCUPIED HOUSING NEEDS IN UNITS (EXCLUDING NEW YORK CITY)**

Storm	Unmet Need - Repair (Units Determined to Have Insufficient Funds from FEMA or SBA to Repair Damage)	Unmet Need - Mitigation (Owner-Occupied Housing with Major or Severe Damage)
<b>Lee</b>	7,942	6,285
<b>Irene</b>	20,145	10,763
<b>Sandy</b>	40,839	38,145
<b>Total</b>	<b>68,926</b>	<b>55,193</b>

Source: FEMA Individual Assistance data effective December 2014; SBA homeowner assistance data effective December 2014.

Table 8 outlines owner-occupied housing repair and mitigation needs. Hazard mitigation costs are estimated as \$1.15 billion outside of New York City (Table 9). When combined with the unmet need for repair and mitigation, the total estimated unmet need for owner-occupied homes, excluding New York City, is \$3.27 billion.

**TABLE 9: OWNER-OCCUPIED HOUSING NEEDS IN MILLIONS (EXCLUDING NEW YORK CITY)**

Storm	Unmet Need - Repair	Unmet Need – Mitigation (Owner-Occupied Units with Major or Severe Damage)	Total Need
<b>Lee</b>	\$334.74	\$124.96	\$ 459.70
<b>Irene</b>	\$697.40	\$198.09	\$ 895.48
<b>Sandy</b>	\$1,091.99	\$826.86	\$ 1,918.84
<b>Total</b>	<b>\$ 2,124.12</b>	<b>\$1,149.90</b>	<b>\$ 3,274.03</b>

Source: FEMA Individual Assistance data effective December 2014; SBA homeowner assistance data effective December 2014.

*How New York State Has Addressed Unmet Needs to Date*

The State’s efforts to assist storm-affected homeowners have focused on operating a Housing Recovery Program to facilitate home repairs, rehabilitation, mitigation, and elevation for the owners of single-family homes. Additional programs are available for the owners of multi-family rental properties, and for individual owners of co-ops and condos, as well as owners’ associations. The NY Rising Buyout and Acquisition Program was also established for homeowners whose homes were substantially damaged or destroyed during Hurricane Irene, Tropical Storm Lee, and/or Superstorm Sandy. All programs are operated by the GOSR.

The first two allocations of federal funds facilitated home repairs, rehabilitation, mitigation, and elevation for single-family homeowners. These Housing programs are intended to address those who live in areas that regularly put homes, residents, and emergency responders at high risk due to repeated flooding. As of December 2014 the Homeowner Program has 16,299 active applications.

The State also disseminated payments through the Interim Mortgage Assistance (IMA) Program. As of December 2014, the IMA program has 861 active cases. Programs are also available for individual owners of co-ops and condos, as well as owners’ associations. These programs received 100 condo/co-op association

applications, 482 condo/coop unit owner applications, and 499 condo/co-op common building elements applications. The first two allocations of funding have been spent on meeting New York’s immediate recovery and rebuilding needs. As of December 10, 2014 single-family homeowners received more than \$365.42 million to support the repairs of 9,927 applicants, 836 of which already received their final payment (totaling \$36.68 million) and 9,091 of which are still in some phase of building back or preparing to build back. In total, over \$1.06 billion in CDBG-DR funding has been allocated to this Program.

Funding from the first two allocations is also spent on investing in the long-term resiliency and growth of the State. The State is encouraging homeowners to take part in Optional Elevation and Mitigation measures, making a substantial and unprecedented investment in its homes and coastal communities. It is projected that 1,675 single family homeowners will opt to elevate their homes. As of December 2014, 1,308 homeowners requested funds to repair their damaged bulkhead and 931 to add other mitigation measures such as the elevating of electrical systems, securing of fuel tanks, using flood resistant building materials, and installing flood vents, backflow valves and roof strapping. In addition, there are 1,955 single family homeowners who are required to elevate their homes because their properties incurred substantial damage and are located within the 100-year floodplain.

As of December 2014, the IMA Program disbursed over \$9.53 million to 587 applicants and anticipates assisting many more homeowners. The State anticipated that a number of homeowners currently in the NY Housing Repair Program will be displaced by elevation and, as a result, need assistance from the IMA Program. In total, \$49 million has been allocated to the IMA Program.

As of December, 2014 there are 1,493 active cases in the Buyout and Acquisition Program. Over 800 offers have been made, with almost 500 closings completed. In total, over \$621 million has been allocated for this Program. Table 10 summarizes the total CDBG-DR proposed allocation for Homeowner Programs.

**TABLE 10: TOTAL CDBG-DR PROPOSED ALLOCATION OF FUNDS BY NEW YORK STATE IN MILLIONS (EXCLUDING NEW YORK CITY) – HOMEOWNER PROGRAMS**

<b>Program</b>	<b>Total Proposed Allocation of Funds</b>
NY Rising Homeowner Recovery Program	\$1,056.31
Interim Mortgage Assistance Program	\$49.00
NY Rising Buyout & Acquisition Program	\$621.21
<b>Total</b>	<b>\$1,726.52</b>

Source: GOSR Programmatic Data and effective December 2014

**Rental Housing**

According to FEMA’s preliminary damage estimates,<sup>9</sup> Hurricane Irene, Tropical Storm Lee, and Superstorm Sandy damaged an estimated 16,943 rental units in New York State outside of New York City. Of the 16,943 damaged occupied rental units, 14,871 (or 88 percent) are categorized as “most impacted” by having major to severe damage. The estimated cost of damage to rental housing outside of New York City is \$1,018.25 million.

Based on HUD methodology, the 8,147 damaged rental units occupied by renters with annual income below \$30,000 define the unmet needs. The total damage for this population is estimated at \$519.68 million (excluding mitigation). Therefore, the unmet need for rental repair for these units is estimated to be \$389.76 million, 75% of their total damage.

HUD’s methodology assumes that landlords of rental units with tenants earning more than \$30,000 will have adequate insurance coverage and have no unmet need. However, as stated in APA6, given the high cost of living in much of New York State, incomes of low income renters are likely higher than in most other areas of the country. Therefore, the State estimates the actual gap for landlords’ ability to repair and mitigate damaged rental stock to exceed the \$389 million. For example, in Nassau County, where the cost of living is particularly high, an individual can earn \$58,000 and be “low income” as defined by HUD. In fact, \$30,000 more closely represents Extremely Low Income households (defined as households earning less than 30% of Area Median Income) and restricts unmet needs to *deeply affordable rental housing*. And yet the majority of renters who have applied for FEMA assistance (74.5%) are estimated to be low and moderate- income but are excluded from the above calculation.<sup>10</sup>

While the State’s analysis does not take into account the needs of landlords with households earning greater than \$30,000, it estimates that the unmet needs for rental repair are likely significantly higher than this analysis indicates for the reasons noted above. As such, these estimates represent a conservative set of assumptions.

In addition to unmet need for repairs, HUD guidelines suggest that there are substantial mitigation needs for units with major to severe damage. This analysis assumes 30% of all major to severe damage costs for rental units is needed for mitigation related to the disaster events. This is equivalent to \$305.51 million. These estimates include renters earning less than \$30,000 annually who also have unmet needs for repairs and higher income renters with major to severe damage, but whose damage costs are presumed to be covered by insurance proceeds.

Combining unmet need for repair and mitigation, there is an unmet need of \$695.27 million. This includes the repair costs for rental units damaged and occupied by households earning less than \$30,000 annually, plus 30% of damage costs for all rental units that experienced major to severe damage. As stated, since the unmet need does not account for low income renters earning above \$30,000 annually, the actual unmet need likely exceeds this figure. As the State operationalizes its rental programs, it will continue to assess these unmet needs of repairing, mitigating, and increasing rental stock within the impacted communities. Tables 11 and 12 outline the unmet repair and mitigation needs for rental units (excluding New York City).

**TABLE 11: RENTAL HOUSING NEEDS IN UNITS (EXCLUDING NEW YORK CITY)**

Storm	Unmet Need – Repair (Damaged Rental Housing Occupied by Household Earning Less than \$30,000/yr.)	Unmet Need - Mitigation (Rental Housing with Major or Severe Damage)
<b>Lee</b>	1,858	2,289
<b>Irene</b>	1,393	1,871
<b>Sandy</b>	4,896	10,711
<b>Total</b>	<b>8,147</b>	<b>14,871</b>

Source: FEMA Individual Assistance data and effective December 2014.<sup>11</sup> All rental housing units with major or severe damage are used to calculate mitigation.

**TABLE 12: RENTAL HOUSING NEEDS IN MILLIONS (EXCLUDING NEW YORK CITY)**

Storm	Unmet Need – Repair (Damaged Rental Housing Occupied by Household Earning Less than \$30,000/yr.)	Unmet Need – Mitigation (Rental Housing with Major or Severe Damage)	Total Need – Rental Housing
<b>Lee</b>	\$97.96	\$50.22	<b>\$148.17</b>
<b>Irene</b>	\$62.36	\$37.31	<b>\$99.67</b>

<b>Sandy</b>	\$229.44	\$217.98	<b>\$447.43</b>
<b>Total</b>	<b>\$389.76</b>	<b>\$305.51</b>	<b>\$695.27</b>

Source: FEMA Individual Assistance data and effective December 2014.<sup>12</sup>

*How the State Has Addressed Unmet Needs to Date*

The Rental Properties Program repairs damaged properties and provide essential and affordable housing resources to New Yorkers in need. As of December 2014, the Rental Properties Program has 908 active cases and has disbursed \$474,430 to 19 property owners. In total, the State has allocated \$225 million to this program (Table 13).

TABLE 13: TOTAL CDBG-DR PROPOSED ALLOCATION OF FUNDS BY NEW YORK STATE IN MILLIONS (EXCLUDING NEW YORK CITY)– RENTAL PROGRAM

Program	Total Proposed Allocation of Funds
<b>NY Rising Rental Properties Recovery Program</b>	<b>\$225.00</b>

Source: Governor's Office of Storm Recovery Internal Program data (December 8<sup>th</sup>, 2014).<sup>13</sup>

**HUD-Assisted Properties**

*Introduction*

The Unmet Needs Assessment within the State's initial Action Plan noted that HUD had initially identified two Public Housing Authorities (PHAs) on Long Island, Long Beach and Freeport Housing Authorities. The State then initiated significant outreach mechanisms, including surveys and multiple meetings with other PHAs, to identify additional needs. That process found that Hempstead Housing Authority also had suffered significant damage. New York State has consulted and is continuing to consult with each of the three housing authorities to determine the extent of their unmet needs. As the PHAs move forward with their recovery, the State will move into a coordinating role between the PHAs and their federal partners. Leading this coordination will allow the State to work hand-in-hand with the PHAs and ensure that they are on the path to full recovery. In addition, as the State continues to assess needs throughout the recovery process, the State will continue to meet with additional PHAs as needs arise and are identified.

**Freeport Housing Authority:** The Freeport Housing Authority manages 351 apartment units at five locations within the village limits of Freeport. Of these complexes, the Moxie Rigby location, consisting of 100 units of family housing, was impacted by Hurricane Irene and Superstorm Sandy. Floodwaters inundated seven buildings, causing damage to mechanical, electrical and specialty systems. High winds blew trees down due to and power surges caused strain on the water circulation systems, burning out pumps. Both storm events significantly damaged basement systems which subsequently had to be replaced twice in two years.

Freeport Housing Authority is currently in negotiations with FEMA on their recovery and mitigations needs. It is also assessing their long term goals as a housing authority and what recovery path is best to meet these goals. The State is committed to continue to work with Freeport Housing Authority to secure the best pathway of recovery.

**Long Beach Housing Authority:** The Long Beach Housing Authority operates 374 subsidized low-rent units within five development sites. The overall occupancy rate is 100%.

Channel Park Homes, a family development, experienced the greatest damage, including flooding on the first floor of homes and community facilities. The damage required mold remediation, replacement of floors and drywall, painting, replacement of appliances and kitchen cabinets, and repair or replacement of HVAC systems. Additionally, brick façade walls on three of the residential buildings collapsed or were severely compromised.

Four senior high-rise buildings were also damaged by high winds and flooding within basements and communal areas. The damage required repairs to floors and walls, equipment, and HVAC systems. While homes were minimally impacted, damage to elevators, electrical systems and heating units emphasized the need to relocate emergency generators and heating and cooling systems. As of December 2014, no storm mitigation or other resiliency improvements had been completed.

Long Beach Housing Authority is also still in discussions with FEMA regarding the scope of their recovery needs. As mentioned, the State will take the lead to coordinate all efforts between the Housing Authorities and FEMA, clearing the pathway towards a clear recovery strategy.

**Town of Hempstead Housing Authority:** The Town of Hempstead Housing Authority operates 14 housing sites within Nassau County, five of which are located within the 100-year flood plain and were evacuated before the storm made landfall. All 14 sites sustained some level of damage, with three sites receiving significant damage.

Inwood Gardens and Mill River Gardens were damaged by flooding and high winds. Residential units and community spaces were inundated with saltwater. Repairs consisted of mold remediation, asbestos abatement, and replacement of electrical systems, boilers, sheetrock, appliances, cabinets, fixtures, and insulation. The asbestos abatement work required relocation of existing residents.

Green Acres suffered significant roof damage, requiring structural repair and the relocation of one resident.

All repairs have been made to date, using a combination of the Town of Hempstead Housing Authority’s own funds, insurance proceeds and FEMA funds. The Housing Authority has three applications to FEMA’s HMGP Program for mitigation efforts including mold remediation, electrical rewiring, and HVAC elevation. In addition, it has applications for building rehab, asbestos removal, and emergency protective measures from the FEMA PA program. The State will continue to work closely with FEMA and the Housing Authority to ensure all of the proper steps are taken to ensure recovery.

Damage assessments are outlined in Table 14.

TABLE 14: DAMAGE ASSESSMENT FOR PUBLIC HOUSING AUTHORITIES

	Repairs	Mitigation	Total
<b>Freeport PHA</b>	\$267,000	still assessing needs	\$549,000
<b>Long Beach PHA</b>	\$5,000,000	still assessing needs	\$5,000,000
<b>Town of Hempstead PHA</b>	\$6,000,000	still assessing needs	\$6,000,000

**Source:** Long Beach numbers are based on self-reported estimates derived from surveys and contacts with the PHA. Hempstead PHA numbers are derived from self-reported estimates and from applications for funds to FEMA PA and HMGP. Freeport PHA numbers include \$267,000 from FEMA PA applications. However, Freeport PHA also reports additional unmet needs that are still being assessed by the State. All numbers are current as of December, 2014.

**Emergency Housing and Homelessness**

Very low-income households, the homeless population, and individuals with physical, cognitive, and mental disabilities are particularly vulnerable after a disaster because of the limited availability of temporary housing options to meet particular needs coupled with inflated housing prices where housing supply is significantly

reduced. Long-term recovery must include an assessment of needs beyond housing, including providing permanent care providers, access to public transportation, Americans with Disabilities Act (ADA) accessibility, and in-home medical care.

Within storm-impacted areas, there were an estimated 150 transitional housing and homeless initiatives as well as 100 emergency shelters. This resulted in many vulnerable populations being evacuated or living without electricity or heat for weeks. The New York State Homeless Housing and Assistance Program (HHAP), operated by New York State Homes and Community Renewal, stated a need for mitigation measures, including a need for back-up generators, revamping electrical and heating systems, and upgrading electronic storage systems to preserve client and program data.

### **Displaced Households**

In April of 2013, more than 1,000 displaced New York households were living in emergency housing through FEMA's Temporary Shelter Assistance (TSA), while many more were living with family and friends or paying for rental units while waiting for their homes to be repaired.

Since that time, the State, through New York State Homes and Community Renewal, administered the Disaster Housing Assistance Program (DHAP-Sandy), a FEMA and HUD Program that transitioned households from emergency housing into interim housing. The Program allowed eligible families displaced from their pre-disaster home and in need of interim housing to receive rental assistance for up to 12 months. FEMA and HUD provided a DHAP-Sandy 'calculator' that determined the portion of the monthly rent that the client was responsible for paying. The client's portion was capped as a percentage of income, and was increased after each three-month DHAP re-certification period.

Between April and October of 2013, FEMA referred 304 families to HUD for DHAP-Sandy, and HUD in turn transmitted the data on those families to the State. The State's role included Program briefings for all clients, assistance to families to identify interim housing, operating a DHAP-Sandy call center, and processing monthly payments to landlords for the DHAP portion of the rent. At the time of APA6, the DHAP program was serving 232 families, the majority of which were from Nassau County (60%), with 46 of those households subsequently living in other counties. By December 2014, nine families remained in the program. The program sunsets December 31, 2014 and will have zero active clients on January 1<sup>st</sup>, 2015.<sup>14</sup>

All households participating in DHAP were required to work with the State's Disaster Case Management Program (DCM) to develop a long-term housing plan. Clients were required to submit a statement every three months on their progress toward a long-term housing plan in order to continue participation in DHAP-Sandy. For some low-income households, transition to permanent housing has been difficult due to the lack of affordable housing.<sup>15</sup>

### **Low- and Moderate- Income Communities**

In this analysis, although FEMA-IA data does not contain household size information, the State estimated average household size using American Community Survey (ACS) Census data to assign an appropriate income limit to determine low- and moderate- income households, and included it in this assessment. The analysis finds that a significant number of low- and moderate- income households were impacted by the storms (Tables 15 and 16). This is particularly true of renters, where the State estimates that over 74.5% of all rental units impacted by the storms were occupied by low- and moderate- income households. For rental units with major to severe damage the low- and moderate- income household proportion was 74.0%, by the State's definition. There are also a tremendous number of moderate-and middle-income homeowners who were impacted, equivalent to 32,472 housing units, with 21,791 units that suffered major or severe damage. In addition, the analysis highlights significant numbers of very low-income households (earning less than 30% of AMI) that likely have a more difficult time repairing their homes or finding affordable rental housing. An

estimated 16.5% households who suffered damage to their homes fall within this category; however, almost 40% of renters fall into this category.

**TABLE 15: HOUSEHOLDS WITH HOMES DETERMINED TO BE DAMAGED IN HURRICANE IRENE, TROPICAL STORM LEE, AND SUPERSTORM SANDY, BY TENURE AND INCOME (EXCLUDING NEW YORK CITY)**

Income Category	Owner-occupied Households	Renter-occupied Households	Total
<b>Below 30% AMI</b>	9,658	6,438	<b>16,096</b>
<b>30% AMI to 50% AMI</b>	10,301	3,411	<b>13,712</b>
<b>50% AMI to 80% AMI</b>	12,513	2,787	<b>15,300</b>
<b>Above 80% AMI</b>	41,833	3,107	<b>44,940</b>
<b>Unreported income</b>	6,573	1,200	<b>7,773</b>
<b>Total</b>	<b>80,878</b>	<b>16,943</b>	<b>97,821</b>

Source: FEMA Individual Assistance data and effective December, 2014 and HUD Income Limits based on Area Median Income by County, 2012 and average county household size (ACS 2008-12).

**TABLE 16: HOUSEHOLDS WHOSE HOMES WERE MAJORLY OR SEVERLY DAMAGED IN HURRICANE IRENE, TROPICAL STORM LEE, AND SUPERSTORM SANDY, BY TENURE AND INCOME (EXCLUDING NEW YORK CITY)**

Income Category	Owner-occupied households	Renter-occupied households	Total
<b>Below 30% AMI</b>	6,292	5,489	<b>11,781</b>
<b>30% AMI to 50% AMI</b>	6,897	3,010	<b>9,907</b>
<b>50% AMI to 80% AMI</b>	8,602	2,517	<b>11,119</b>
<b>Above 80% AMI</b>	28,973	2,804	<b>31,777</b>
<b>Unreported income</b>	4,429	1,051	<b>5,480</b>
<b>Total</b>	<b>55,193</b>	<b>14,871</b>	<b>70,064</b>

Source: FEMA Individual Assistance data and effective December, 2014 and HUD Income Limits based on Area Median Income by County, 2012 and average county household size (ACS 2008-12).

As noted in APA6, the impacted communities with the largest number of low- and moderate income-households with major to severe damage include Long Beach, Freeport, Oceanside, Lindenhurst, Island Park, Massapequa, Binghamton, East Rockaway, Baldwin, and Seaford.

The majority of major and severe damage (greater than 50%) was incurred by low- and moderate- income households in Nassau County (Baldwin, East Rockaway, Freeport, Island Park, and Long Beach), Suffolk County (Lindenhurst), and Broome County (Binghamton).

The State previously found that damage to low- and moderate- income renter-occupied units was particularly acute in Nassau County (Freeport, Island Park, Long Beach, and Oceanside) and Suffolk County (Lindenhurst).

This needs assessment addresses low- and moderate- income Census Tracts damaged by Hurricane Irene, Tropical Storm Lee, and Superstorm Sandy to further address impacted low- and moderate- income communities. This aligns with the unmet needs assessment conducted in April 2013 and APA6, which focused on communities with substantial low- and moderate- income populations. Middle-income and

wealthy communities may have pockets of lower income families. This analysis provides an overview of where those pockets are, regardless of the wealth of the larger community.

The analysis identifies low- and moderate- income Census Tracts with more than 100 housing units damaged, or where there was more than one foot of flooding. A Census Tract is determined to be low- and moderate- income if more than 50% of households earn less than 80% of Area Median Income. Based on this analysis, the low- and moderate- income neighborhoods in Binghamton, Babylon, Poughkeepsie, Hempstead, Middletown, Brookhaven and Blenheim were impacted by the storms.<sup>16</sup>

**Homes at Repetitive Risk**

Superstorm Sandy’s storm surge forcefully illustrated how many homes in New York are located in flood plains and will continue to be at risk after rebuilding. Housing units that are located within 100-year flood plains and were destroyed by flooding are potentially eligible for acquisition or buyout by FEMA and/or the State as a means to avoid damage and loss of life in a future storm.

When the flood damage within the entire State is overlaid with FEMA’s 100-year flood plain maps, over 9,000 housing units are located within a 100-year flood plain and were also severely damaged by the storms of 2011 and 2012 (Table 17). These housing units are at a high risk in the event of future floods and may face personal safety risks due to the powerful impact of storm surge. Residents within these communities may have needs beyond repair and mitigation, including relocation to safer areas through buyout programs.

**TABLE 17: HOUSING UNITS SEVERELY DAMAGED BY SUPERSTORM SANDY LOCATED WITHIN 100-YEAR FLOOD PLAIN**

<b>County</b>	<b>Severely Damaged Housing Units</b>
<b>Nassau</b>	6,145
<b>Suffolk</b>	1,543
<b>Broome</b>	508
<b>Tioga</b>	263
<b>Schoharie</b>	173
<b>Rockland</b>	101
<b>Delaware</b>	81
<b>Orange</b>	70
<b>Westchester</b>	68
<b>Greene</b>	61
<b>Ulster</b>	57
<b>Schenectady</b>	32
<b>Other</b>	106
<b>Total</b>	<b>9,208</b>

Sources: Flood Data: FEMA Q3 Maps effective February 2014. FEMA Individual Assistance Data, December 2014.

**Summary of Housing Unmet Needs**

With an estimated \$50 billion in damages, Hurricane Irene, Tropical Storm Lee, and Superstorm Sandy are, collectively, the second costliest storm in American history.<sup>17</sup> Over 90,000 occupied housing units were damaged outside of New York City, including 80,878 owner-occupied units and 16,943 renters. The majority of these units, approximately 70%, sustained major to severe damage.

Housing unmet needs is reflective of the estimated cost of damage and estimated mitigation needs for occupied units, minus funding received or anticipated from FEMA, SBA, and private insurance to repair damage. Unlike APA6, the State also included detailed programmatic data to indicate how the unmet need has changed as a result of its CDBG-DR allocations. The remaining estimated unmet need for housing is approximately \$2.02 billion (Table 18).

**TABLE 18: REMAINING HOUSING UNMET NEEDS FOR HURRICANE IRENE, TROPICAL STORM LEE, AND SUPERSTORM SANDY (EXCLUDING NEW YORK CITY) (IN MILLIONS)**

<b>Tenure</b>	<b>Repair</b>	<b>Mitigation</b>	<b>Total</b>
<b>Renter</b>	\$389.76	\$305.51	<b>\$695.27</b>
<b>Owner</b>	\$2,124.12	\$1,149.90	<b>\$3,274.03</b>
<b>Identified Unmet Need</b>	\$2,513.89	\$1,455.41	<b>\$3,969.30</b>
<b>Less New York State Rising Program Allocations:</b>		-	<b>\$1,951.52</b>
<b>Remaining Unmet Need</b>		-	<b>\$2,017.78</b>

**Source:** Sources outlined above and internal program data; New York Rising Program Allocations does not include funds allocated Public Housing Assistance Relief Program (PHARP)

## Economic Development

Hurricane Irene, Tropical Storm Lee, and Superstorm Sandy had widespread impacts on businesses throughout the Eastern Seaboard, affecting an area that produces 10% of America’s economic output.<sup>18</sup> While damage to property and contents was concentrated along coasts and river communities, the effects of the storms caused business disruption for tens of thousands of small businesses throughout the State.<sup>19</sup> Many businesses that did not incur physical damage but were closed as a result of loss of power or damaged roads did not receive assistance.

As noted in APA6, most communities follow a typical pattern in post-disaster economies. Many recovery-related businesses, especially construction, experience a surge in business because of post-disaster rebuilding. Once rebuilding is underway, researchers and economists see clear economic benefits to storm recovery. Households and businesses spend their own money, grant money, and insurance proceeds on rebuilding their homes and workplaces as well as the replacing the content within them. This spurs the economy, particularly for the construction industry and home-related retail.

At a macro-level, recovery spending has a positive impact on the regional economy. The Economic Impact study published recently for Superstorm Sandy follows this same logic. It acknowledges that Superstorm Sandy caused tremendous damage to businesses throughout the region, but states that it is likely short-term and, through rebuilding efforts, the storm will bolster the regional economy. The public and private dollars used to fund recovery creates approximately 88,000 new jobs per year and increase economic output.<sup>20</sup> Indeed, a recent report by the Federal Department of Commerce estimated that despite temporary business disruptions as a result of the storm, there is relatively little evidence that short-term losses were significant in either the travel or tourism sectors in New York or in other industries over the longer term.<sup>21</sup> Many of the impacts were not immediately felt by businesses because the landfall of Superstorm Sandy occurred in the off-season for tourism. Additionally, in the period immediately after the storm, the State invested significant sums in tourism campaigns to aid impacted businesses.

However, devastating effects of the event linger for businesses that experience direct physical damages or significant business interruption. In addition, the direct market for locally produced and sold items is disrupted, sometimes for months; this is particularly evident in the aftermath of Superstorm Sandy. The impact can be severe and long lasting for small and disadvantaged businesses excluded from rebuilding activity. Due to a lack of funds and limited resources, many businesses need assistance to simply maintain business operations and many take months to begin to rebuild. In particular, small businesses and seasonal businesses with limited incomes are less likely to recover without additional assistance. Further, many small businesses do not qualify for SBA disaster loans or are not financially capable to take on additional debt and are thus left to begin repairs and rebuilding with few resources.

Similar to APA6, the State's analysis of the unmet economic development recovery needs provides an estimated dollar figure for unmet business needs using the following available data: SBA business loan information from December of 2014; an assessment of storm-related business damage and economic impact, using Dun and Bradstreet business data from 2012; FEMA Superstorm Sandy flood inundation maps and census data. However, in this APA, the State employs new data sources to augment the unmet business needs analysis. These sources attempt to present the longer-term economic impact of the storms, particularly Superstorm Sandy, and to put the State's unmet business needs in the context of how the economy reacted to the storms and their aftermath. These are described in more detail below.

In APA6, the State augmented HUD allocation methodology with a lost profit analysis that classified all businesses located in a Census Tract affected by at least one foot of flooding as affected by the Superstorm Sandy. Using Flood data from the FEMA Modeling Task Force (MOTF)-Hurricane Sandy Impact Analysis, and exact business location (from the Dun and Bradstreet dataset used in APA6), the State refines its analysis to include:

- Any businesses within Census *Blocks* that had over 1 foot of flooding during Sandy; and
- Businesses that were identified as within a flood zone with more than one foot of water.

The State believes that these more geographically relevant data, along with other data sources (programmatic and broader economic indicators) outlined below, present a more refined overview of the unmet need for businesses.

#### *Methodology for Calculating Unmet Business Needs*

For the purpose of this analysis, businesses that applied for an SBA business loan but were denied have unmet business needs. This approach relies on the methodology outlined in the October 16, 2014 Federal Register Notice and is based on the SBA commercial loan application data. To calculate unmet need, the average SBA loan amount within each county is multiplied by the number of denied loan applications. As of December 2014, SBA received 5,132 loan applications for New York businesses outside of New York City, and 3,568 of these businesses (70% of all applicants) were denied a loan. The resulting calculation of unmet needs for these businesses is \$419.6 million. HUD also adjusts this number upward, using the formula (outlined below), in order to account for the businesses that didn't apply for assistance for a variety of reasons (credit, income, interest rates, etc.). The final adjusted unmet need for these businesses is estimated at \$711.31 million.

Additionally, the analysis factors in mitigation costs for substantially impacted businesses. Mitigation costs are estimated to be 30% of the damage costs. The estimated mitigation needs for businesses with major to severe damage is \$114.8 million, including businesses that incurred physical damage from the storms and businesses negatively impacted by the storms in need of mitigation assistance. As outlined in Table 19, when combined, the unmet business needs is \$826.1 million compared to \$504.2 million in APA6.

TABLE 19: ESTIMATED UNMET BUSINESS NEEDS USING SBA DATA (EXCLUDING NEW YORK CITY) (IN MILLIONS)

Damaged Businesses	Total Damage	Minus SBA Loans Received	Adjusted Unmet Need – Repair	Mitigation Costs	Unmet Business Needs
<b>5,132</b>	<b>\$610.2</b>	<b>\$ 190.6</b>	<b>\$ 711.3</b>	<b>\$ 114.8</b>	<b>\$ 826.1</b>

Source: U.S. SBA commercial loan applications, effective December 2014

Notes of explanation about the latest HUD allocation methodology:

1. SBA data indicates that between January and December 2014, the number of damaged businesses impacted by the storm grew from 4,767 to 5,132. This is likely because more applications have been processed by SBA since the APA6.
2. Damage to approved applicants AND damage to rejected applicants needs to be accounted for when estimating the *Total Damage* according to HUD allocation methodology. The former is simply the sum of all SBA loans that have been given out to the approved applicants. To calculate damage to rejected applicants, the average SBA loan amount in each county is used as a proxy for estimating the damage to an average rejected applicant and then multiplied by the total number of rejected applications in that county. The sum of all those values provides the total damage estimate to the rejected applicants. According to HUD allocation methodology, damage to the rejected applicants needs to be adjusted upward, using the formula below, to account for the need of those businesses that didn’t apply for SBA assistance:

$$Adjusted\ Unmet\ Repair\ Needs = Total\ Damage\ to\ Rejected\ Applicants * (1 + Rejected/Total)$$

In the updated calculations, the number of rejected applications is 3,568.

3. Mitigation costs are calculated as 30% of the repair cost for “severely damaged” businesses. According to HUD allocation methodology, all properties with overall damage in excess of \$30,000 are classified as “severely damaged.” Therefore, the sum of all SBA loans above \$30,000 AND damages of that amount to the rejected applicants must be accounted for. Using updated SBA data, this analysis finds that severely damaged properties account for 63% of the businesses.<sup>22</sup>

HUD’s allocation methodology has been updated to reflect a broader estimate of business damage. However, the SBA data for unmet business needs does not reflect the total number of businesses damaged by the storms and in need of assistance because many impacted businesses do not qualify for SBA loans or cannot afford additional loans. To qualify, businesses must have good credit and assets to guarantee the loan, excluding a majority of small businesses and micro-enterprises, often the businesses with limited resources and therefore greatest need. Many of these business owners were aware that they would not qualify and therefore did not apply to the Program. Thus, their needs may not be reflected in the calculation of unmet needs. In addition, per SBA Loan Guidelines, SBA interest rates could be as high as 8% for business that qualify for the Program and have a credit rating high enough to allow them to access other financing. These high interest rates have the effect of discouraging some small businesses from applying for SBA loans.

*Additional Data to Assess Unmet Business Needs*

The unmet needs for economic development also include an assessment of interrupted business operations. The goal is to account for businesses that may not have applied for an SBA loan but have unmet needs due to business interruption and lack of infrastructure to support ongoing operations. This issue was particularly acute after Superstorm Sandy, where power outages were widespread and lasted for weeks. Communities

expressed concern that small businesses may struggle and fail without additional support beyond commercial loans.<sup>23</sup>

For purposes of this analysis, lost profit due to interrupted business operations is used as a proxy for estimating unmet business needs beyond repair. However, unlike in APA6, the State recognizes that the most recent HUD allocation methodology more broadly reflects the economic disruptions associated with the Storms. Therefore, this analysis presents a more geographically specific estimate of damage to small businesses. Specifically, in APA6 the State included any small business within a *Census Tract* that had at least one foot of flooding recorded anywhere in its boundaries. This resulted in a total of almost 78,000 businesses for lost-profit analysis. In recognizing HUD’s broader assessment, this analysis is first restricted to those small businesses within the same *Census Block* and those small businesses identified within flood zones inundated with at least a foot of water. Census Blocks are the smallest publicly available geographical Census area and in denser areas may cover areas as small as a city block or a large apartment building. As such, they are very localized estimates of the neighborhood that a business is in. Census Tracts, on the other hand, are larger areas designed to have between 2,500-8,000 residents each and an optimum size of 4,000 residents. After presenting these results, the analysis further restricts the number of small businesses to only those with geocoded business addresses within the flood zone. Both of these additions to the methodology allow for a more nuanced and pinpointed analysis of whether a small business was directly impacted or in a neighborhood that was directly impacted.<sup>24</sup>

Like APA6, the analysis assumes that impacted small businesses were closed for two weeks. The tables below present the updated APA6 estimated profit loss due to Superstorm Sandy and then the comparable profit loss for the more restricted geographical areas.

This analysis includes small businesses located within Census Tracts that had at least one foot of flooding.<sup>25</sup> To estimate lost profit, the analysis assumes these businesses were closed for two weeks, impacting an estimated 77,902 small businesses and resulting in a loss of an estimated \$197.6 million.<sup>26</sup> Approximately 75% of this loss occurred within Nassau and Suffolk counties (Table 20).

**TABLE 20: ESTIMATED UNMET BUSINESS NEED BASED ON BUSINESS INTERRUPTION DUE TO SUPERSTORM SANDY (EXCLUDING NEW YORK CITY) (IN MILLIONS)**

County	Small Businesses in Census Tracts with ≥ 1’ of Flooding	Annual Revenue	Estimated Profit Loss Due to Superstorm Sandy
<b>Nassau</b>	28,943	\$ 21,097.2	\$ 58.3
<b>Suffolk</b>	35,529	\$ 32,667.2	\$ 90.2
<b>Westchester</b>	10,265	\$ 14,383.6	\$ 39.7
<b>Orange</b>	1,588	\$ 2,688.9	\$ 7.4
<b>Rockland</b>	1,287	\$ 549.1	\$ 1.5
<b>Ulster</b>	290	\$ 165.5	\$ 0.5
<b>Total</b>	<b>77,902</b>	<b>\$71,551.4</b>	<b>\$ 197.6</b>

Source: GOSR using business data provided by Dun and Bradstreet and FEMA Inundation Files for Superstorm Sandy April 18, 2013<sup>27</sup>

**TABLE 21: ESTIMATED UNMET BUSINESS NEED BASED ON BUSINESS INTERRUPTION DUE TO SUPERSTORM SANDY (EXCLUDING NEW YORK CITY) (IN MILLIONS) –CENSUS BLOCK ANALYSIS**

County	Small Businesses in Census Blocks with ≥ 1’ of Flooding	Annual Revenue	Estimated Profit Loss Due to Superstorm
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			Sandy
<b>Nassau</b>	23,004	\$16,856.6	\$46.6
<b>Suffolk</b>	992	\$2,510.9	\$6.9
<b>Westchester</b>	1,774	\$2,769.4	\$7.6
<b>Orange</b>	26,388	\$26,171.8	\$72.3
<b>Rockland</b>	291	\$164.5	\$0.5
<b>Ulster</b>	7746	\$7,587.8	\$20.9
<b>Total</b>	<b>60,195</b>	<b>\$56,061.0</b>	<b>\$154.8</b>

Source: GOSR using business data provided by Dun and Bradstreet and FEMA Inundation Files for Superstorm Sandy April 18, 2013

TABLE 22: ESTIMATED UNMET BUSINESS NEED BASED ON BUSINESS INTERRUPTION DUE TO SUPERSTORM SANDY (EXCLUDING NEW YORK CITY) –FLOOD ZONE ANALYSIS

County	Small Businesses in Census Blocks with ≥ 1' of Flooding	Annual Revenue	Estimated Profit Loss Due to Superstorm Sandy
<b>Nassau</b>	6,752	\$4,251.5	\$11.74
<b>Suffolk</b>	15	\$12.4	\$0.03
<b>Westchester</b>	132	\$32.5	\$0.09
<b>Orange</b>	2,244	\$670.2	\$1.85
<b>Rockland</b>	1	\$1.0	< \$0.01
<b>Ulster</b>	226	\$184.1	\$0.51
<b>Total</b>	<b>9,370</b>	<b>\$5,151.7</b>	<b>\$14.3</b>

Source: GOSR using business data provided by Dun and Bradstreet and FEMA Inundation Files for Superstorm Sandy April 18, 2013

These approaches substantially reduce the estimated lost-profit within each county and reduce the estimated overall lost-profit for businesses in the State. Shifting the focus from the Census Tract level to more precise locations, in tandem with the new HUD allocation methodology, may offer a more accurate way to classify impacted businesses, rather than assuming all businesses in affected Census Tracts were equally affected. This analysis indicates that there were at least 9,370 businesses in the heavily impacted flood zones (any area with more than one foot of water). This is a conservative estimate as there were additional businesses disrupted and/or were in flood zones with less than one foot of flooding. The Census Block analysis indicates that there were just over 60,000 businesses in the immediate vicinity of the flood zones, accounting for an estimated \$155 million in lost profit (Table 21). The update to HUD’s allocation methodology and the likelihood that many businesses utilized business interruption insurance<sup>28</sup> supports the State’s conservative estimate of \$14.28 million in lost profit to augment the estimated unmet need arising from HUD allocation methodology (Table 22).

*The Economic Environment in Impacted Communities*

Many of these businesses recouped a portion of this loss once power was returned and business operations resumed. Some businesses exceeded sales revenue post-storm due to storm-related business activities, particularly within the construction industry. Other businesses were more vulnerable to storm-related revenue loss, particularly small retail establishments, the fishing industry, and service-oriented micro-businesses outside of the construction industry.<sup>29</sup> It is assumed that the jobless claim returned to normal due to businesses repairing facilities along with new jobs being created from rebuilding and clean-up efforts. While

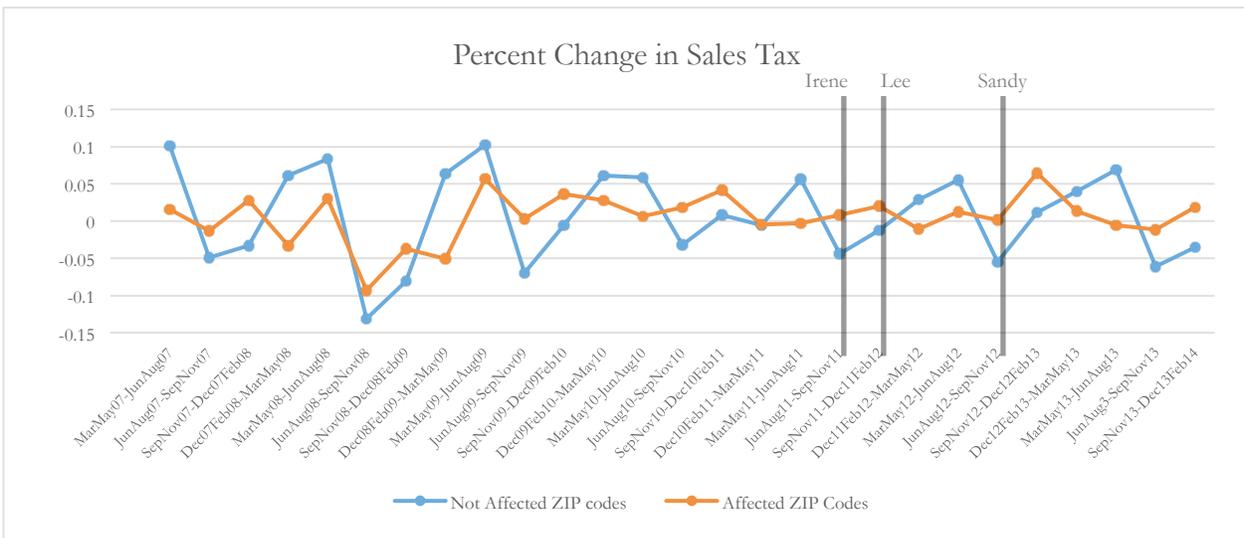
the macro-analysis portrays a recovering economy, it does not account for the individual business perspective. Many businesses were unable to fully restore their operations or rebuild due to depleted resources, limited access to capital, and insufficient insurance. In addition to the analysis conducted for APA6, the State highlights a number of key economic indicators of recovery in the impacted areas.

### 1. Sales Tax Revenue

APA6 used lost profits during a two-week period as a proxy for estimating business needs beyond repair, using average weekly revenues and an estimated ratio of profit to revenues. This analysis examines sales tax revenue data from the New York State Department of Taxation and Finance (NYSDTF) to understand the decrease in revenues for businesses collecting sales tax both in terms of the magnitude and duration in the period immediately after Superstorm Sandy.

The impact of Hurricane Irene, Tropical Storm Lee and Superstorm Sandy is analyzed by New York State’s revenue from small business sales tax. For this purpose, the “affected” and “unaffected” groups are constructed using FEMA maps overlaid with New York State ZIP codes’ map. After identifying the affected and unaffected ZIP codes, Figure 1 shows changes in sales tax revenue from each group graphed over time.

FIGURE 1: PERCENT CHANGE IN SALES TAX BETWEEN AFFECTED AND NOT AFFECTED ZIP CODES



Sources: SBA Business Assistance Universe (as of 12/04/2013); New York State Department of Taxation and Finance Sales Tax Data (as of Aug 2014); FEMA Affected Areas’ map for Hurricane Irene and Superstorm Sandy; NYS map of ZIP codes from NYS Data Clearinghouse (obtained Aug 2014).

Out of about 1,800 ZIP codes across the State, sales tax data was available for 1,306 ZIP codes, 466 of which were affected by at least one of the three disasters. The analysis focuses on the storm impact on sales tax revenue from two perspectives: (1) businesses of different size (identified by the size of their revenue), and (2) businesses in different industries.<sup>30</sup>

All the industry- and revenue-specific graphs, along with detailed data tables, are available in the Appendix D. However, the analysis indicates that, in general, there was not a significant effect on sales tax in the time period following Hurricane Irene, Tropical Storm Lee, and Superstorm Sandy. Some more important findings are outlined below:

- Businesses in the affected areas, although smaller in number (466 ZIP codes out of a total of about 1,300), generate about 3.27 times the tax generated by the unaffected areas. These findings are mainly a result of the location of affected businesses in wealthier ZIP codes generating more revenue.

- For businesses with revenues between \$10,000 and \$100,000 (groups 4 and 5), the drop in sales tax revenue in the quarters after the storms is generally steeper than the similar quarters in the previous years.
- The transportation and warehousing industry shows a large drop in sales tax right after Superstorm Sandy, more than 200% over two quarters, unprecedented in the previous years.
- The healthcare and social assistance industry reveals an 80 percent drop compared to the preceding quarter right after Superstorm Sandy.

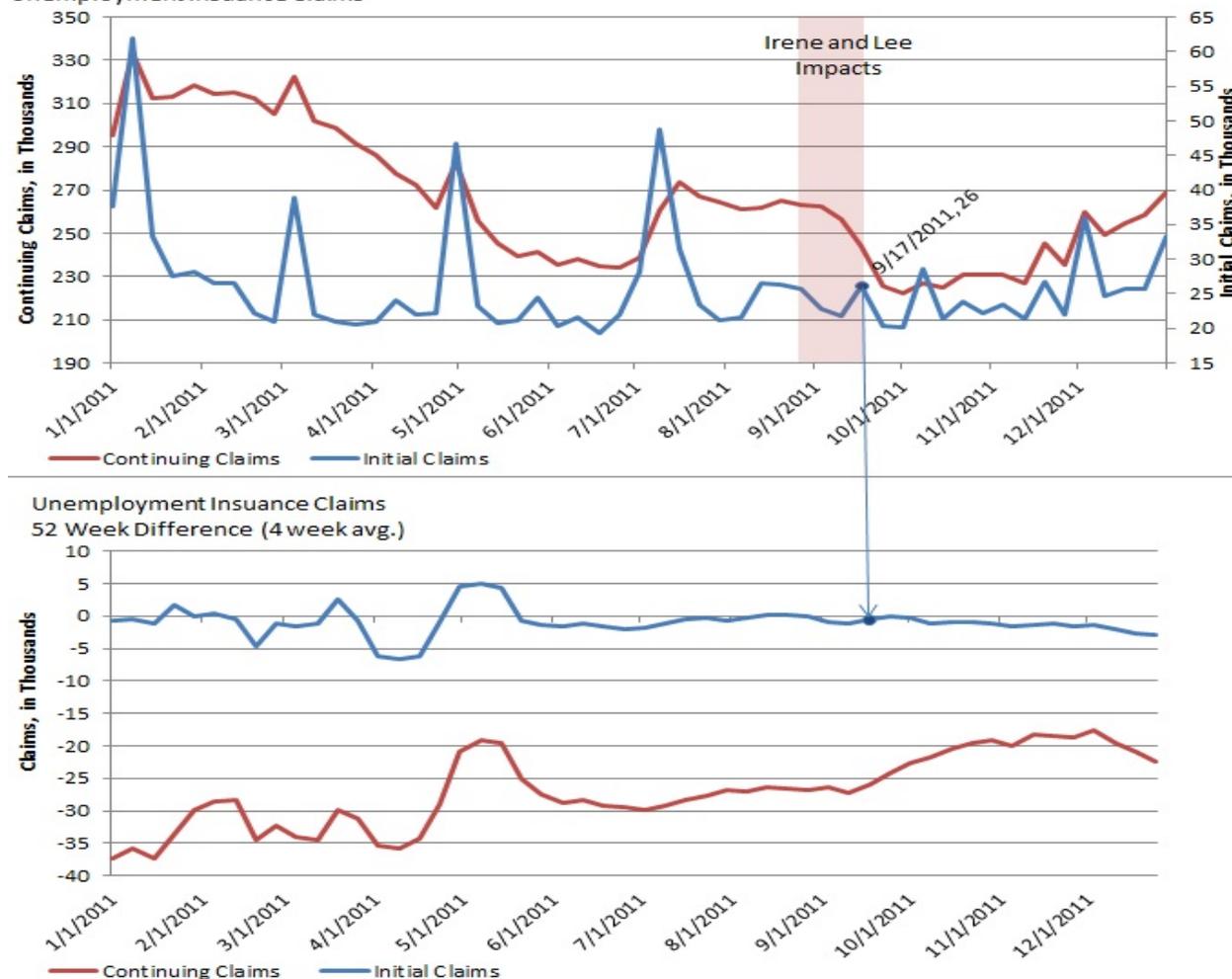
## **2. Unemployment Insurance Claims as a Proxy to Business Disruption.**

APA6 analysis assumed a business disruption period of two weeks and used an estimate of lost-profit as a proxy of for its effect. This analysis uses New York State's unemployment insurance claims data for the periods of Hurricane Irene, Tropical Storm Lee, and Superstorm Sandy to assess their impacts on New York State's small business labor market in terms of duration and magnitude. It can be reasonably assumed that spikes in the initial unemployment insurance claims and sustained growth in continuing claims are an indication of employment disruption. Although not all unemployed file for unemployment benefits, spikes in the unemployment claims are considered a good proxy for disruptions in the broader business cycle.

Initial claims are requests for weekly unemployment payments, whether or not benefits are actually paid. This analysis reviewed changes in the unemployment claims on a year over year basis because weekly unemployment claims are volatile and can often reflect seasonal shifts in employment (layoffs for seasonal purposes along shore areas, etc.). This includes analyzing the changes in the 52 week time span and then smoothing the changes with a moving monthly (four week) average.

The impacts of Hurricane Irene and Tropical Storm Lee are illustrated in Figure 2. The initial unemployment claims following the storm events were very low, showing that the overall labor market was not negatively impacted from the storms. On a year over year change basis, the initial claims showed no increase while the continuing claims decreased. This is partly due to the growth of the economy during this period.

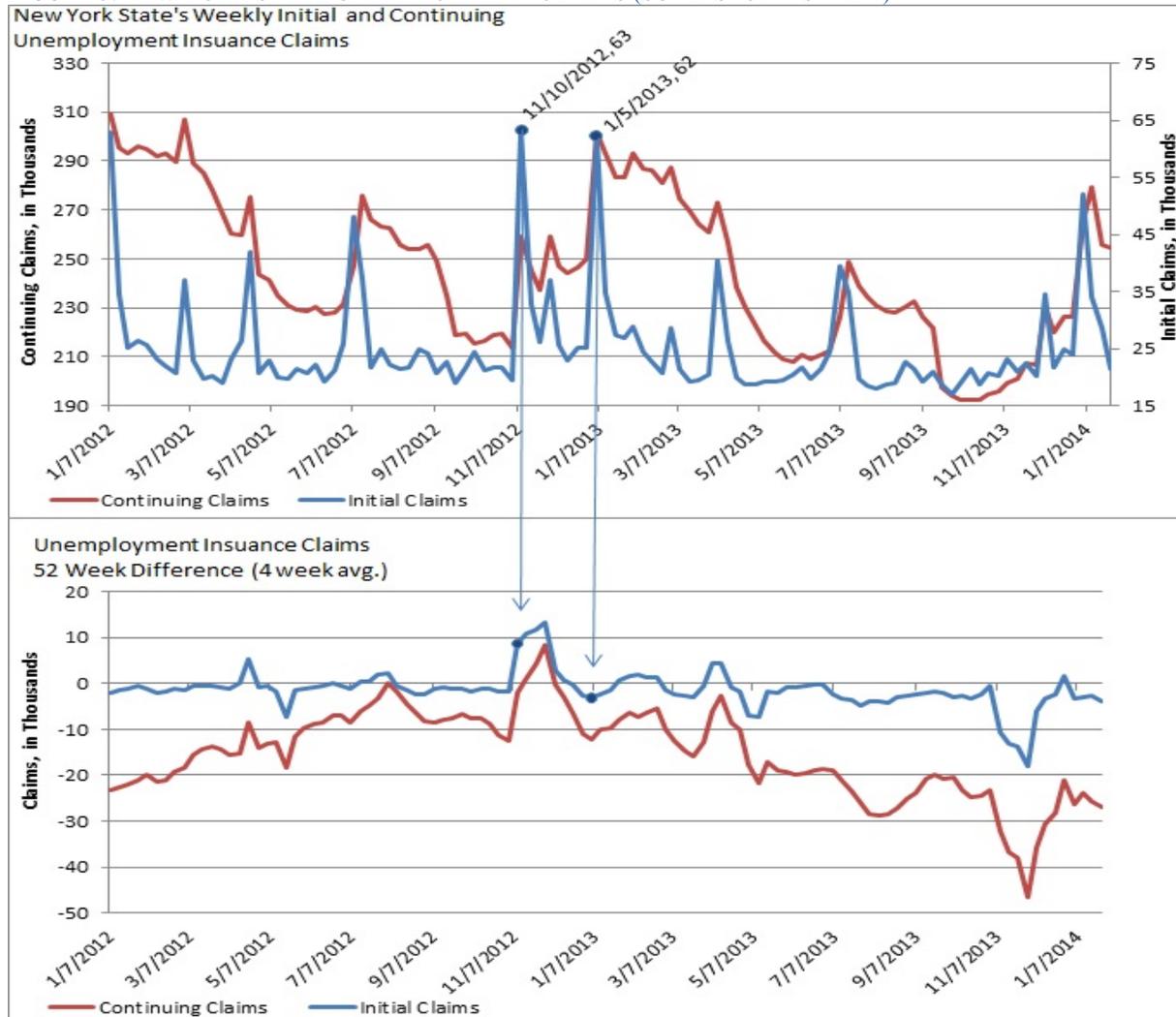
FIGURE 2: NEW YORK STATE UNEMPLOYMENT CLAIMS (HURRICANE IRENE AND TROPICAL STORM LEE)  
 New York State's Weekly Initial and Continuing Unemployment Insurance Claims



The amount of damage wrought by Superstorm Sandy was the second largest in history. Therefore, it had a stronger impact on the economy compared to Hurricane Irene and Tropical Storm Lee. Figure 3 presents the weekly unemployment claims during Superstorm Sandy and periods before and after for comparison.

There is a noticeable spike within one week after Superstorm Sandy. It is assumed that there was a delay in unemployment insurance filings during this period because people may have been unable to apply for unemployment benefits for various reasons. Unlike the first week of January, which often sees “Post-Christmas Layoffs,” the Sandy claims were out-of-character for the season. This is shown in the year-over-year comparison. The comparison displays a significant and sustained spike that lasts nearly one month, accounted for by the additional, but smaller, second spike in the weekly claims beginning in December.

FIGURE 3: NEW YORK STATE UNEMPLOYMENT CLAIMS (SUPERSTORM SANDY)



Some claims are denied or people find work immediately after filing a claim. Therefore, although the initial claim spikes occur, they do not readily translate into continuing claims. During the Sandy, initial claims seem to translate into continuing claims reflecting the fact that a good portion of the initial claims were accepted into the system. The spike in the continuing claims in the year-over-year comparison show that the Storm did have a temporary impact on the labor market, but it was brief and roughly the same duration of the initial claims sustained peak.

*Findings:* The unemployment insurance claims data indicates that not all of the storm events had an equal impact on the labor market. Job losses were not significant after Hurricane Irene and Tropical Storm Lee. Superstorm Sandy had a slight impact on the labor market, but remained relatively low compared to seasonal labor patterns such as the January and July claims. In addition, the duration and translation of the initial claims into longer-term unemployment (continuing claims) is not apparent. The impact of Sandy on unemployment lasts approximately four weeks. This is due to the additional, second round, of claims that occurred early in December. This may reflect that some establishments may have waited to lay off employees after they fully appraised their damage and feasibility of re-opening.

Overall, the results seem to indicate that while there was evidence of negative impacts arising from Superstorm Sandy, those impacts were reasonably short-lived, at least at the macro-level.

*How New York State Has Addressed Unmet Needs to Date*

The Small Business Recovery Program was launched in the Spring of 2013. In its original design, the Program proposed to offer both grant and/or loan assistance to businesses that were directly impacted by Hurricane Irene, Tropical Storm Lee and/or Superstorm Sandy. The Program’s underwriting criteria and review processes was designed in the most prudent and effective manner at the time. Since the initial launch of the program, GOSR revised the Program policies and procedures.

Small Business Recovery Program

The Small Business Recovery Program began accepting applications from businesses in the first quarter of 2013. As of December 2014, over 3,000 businesses submitted applications to the Program and are at various stages of review or approval in the application process. As of December 2014, the Program has awarded 696 businesses a total of \$25.5 million and has disbursed \$19.2 million to 665 businesses. In total, the State has proposed to use \$216.5 million of allocated CDBG-DR funds to economic development. The Small Business Grant and Loans Program accounts for \$183.5 million of this. The remaining funds are for the Business Mentoring Program and for Tourism and Marketing.

After CDBG-DR allocations, the remaining unmet need in Small Business is estimated at \$623 million (Table 23).

TABLE 23: UNMET BUSINESS NEEDS (IN MILLIONS)

Damaged Businesses	Total Damage	Minus SBA Loans Received	Adjusted Unmet Need- Repair	Mitigation Costs	Unmet Business Needs
<b>Damaged Businesses (HUD Methodology)</b>	\$ 610.2	\$ 190.6	\$ 711.3	\$ 114.8	\$ 826.1
<b>+ Estimated Loss in Profits in Flood Zones</b>					\$14.2
<b>Less New York State Rising Program Allocation:</b>					\$216.5
<b>Remaining Unmet Need</b>					<b>\$623.80</b>

Source: U.S. SBA commercial loan applications, effective December 2014, Program Data, US Census Data, FEMA Inundation Maps.

*Impacted Communities*

The State anticipates that heavily impacted communities will have long-term economic impacts to their tax base as a result of depreciated property values, hence ad valorem tax revenue, due to the storms. FEMA is still in the process of adjusting their Advisory Base Flood Elevation maps that determine flood zones, and ultimately determine insurance requirements and implied flood risk. These changes, coupled with evidence of prior flooding, will lower property values in many coastal areas.

Additionally, many businesses within heavily impacted communities still struggle to rebuild. Based on an analysis of Dun and Bradstreet data and SBA loan information, small businesses in Long Island, Staten Island, the Rockaways, Red Hook, and Catskill communities like Prattsville and Windham were significantly impacted and have not secured the funding necessary to rebuild or recover to pre-storm levels. The State will continue to monitor these communities closely.

*Economic Revitalization Needs*

Superstorm Sandy, Hurricane Irene, and Tropical Storm Lee caused widespread damage across New York, with devastating damage occurring in parts of Queens, Brooklyn, Long Island, Staten Island and lower

Manhattan. Tens of thousands of businesses were located in flooded areas. These businesses suffered physical damage to their business operations, or at minimum, were closed for extended periods of time due to power outages and limited transportation networks.

Even businesses that did not flood were impacted in a variety of ways, including damage to structures and contents, wind damage and business interruptions due to power loss, closed roads, and flooding in the vicinity of the business. The damages incurred by businesses cannot be fully captured as not all businesses applied for federal assistance; however, SBA loan application data suggests that over 5,000 businesses outside of New York City applied for a loan to repair their operations, and roughly two thirds of those who applied were denied.

The businesses denied assistance from the SBA, located outside of New York City, are determined to have unmet needs of \$826 million (including the estimated cost of mitigation). This figure represents the unmet need as outlined in HUD-allocation methodology. The analysis also includes an update on the estimate of unmet need due to lost business operations for small businesses located in heavily impacted areas that were without power for an extended period of time, resulting in lost operations, revenue, and profit. Using the more conservative assumptions outlined above, the State identifies at least another \$14 million in lost profit from heavily impacted small businesses in the flood zone. While many industries were able to recoup this loss during the reconstruction period, and overall the economy grew as part of the rebuilding process, many small businesses were negatively impacted by business interruption and physical damages, some even closing operations permanently due to this loss.<sup>31</sup> Once, the allocated CDBG-DR funds are accounted for, the State estimates that the remaining unmet need is in the region of \$624 million.

## Infrastructure

As stated in APA6, the State's infrastructure unmet needs are significantly higher than the unmet needs assessment, defined by the HUD allocation methodology. HUD's calculation of unmet needs only accounts for projects already identified and budgeted for from the FEMA Public Assistance (FEMA PA) Program and other federal Sandy-related match programs. Moreover, the number of infrastructure projects will continually increase as more physical needs assessments are completed. The State continues to develop projects that address storm recovery-related mitigation unmet needs, increasing resiliency in storm-impacted areas. The State also continues to assess large-scale infrastructure and recovery related mitigation project costs. These projects may not yet have an identified financial resource to address them.

Using the HUD allocation methodology, infrastructure unmet need is estimated at \$3.04 billion (compared to \$3.76 billion in APA6). However, the State has also updated its estimate of true unmet need, and through various new data sources, estimates a new figure of \$13.99 billion. This estimate has increased since APA6's estimate of approximately \$11.5 billion. This number is estimated to rise as new infrastructure unmet needs are identified and outreach, repair, reconstruction, and resilience efforts continue.

To determine unmet infrastructure needs as per HUD allocation methodology, this analysis first focuses on five public repair programs. The first of the five public repair programs, the FEMA PA Program, provides the basis for most of the unmet need in the State, as determined by HUD. This Program allows communities and public entities to apply for FEMA assistance to repair their roads, water treatment facilities, transit systems, utilities, schools, public buildings, and recreational spaces such as parks and playgrounds. In the Program, FEMA pays 75% to 90% of the project eligible costs and the applicant pays for any ineligible costs, along with 10% to 25% of the costs, depending on the disaster.

The portion paid by the applicant is called the "local match." The local match requirements are oftentimes overly burdensome on communities with limited resources. Therefore, the unmet needs assessment calculation associated with the FEMA PA Program is based on total estimated local match. The State's funding of the local match facilitates reconstruction efforts that may not have happened without the State's

assistance. The additional four programs included in HUD allocation methodology for unmet needs assessment are federal initiatives specific to Superstorm Sandy:

- USACE Infrastructure Resilience projects;
- FHWA Sandy Recovery Grants;
- FTA Transit Emergency Relief projects; and
- USDA Emergency Watershed Repair Program data (extracted in May 2014): In addition to these three programs, the October 16, 2014 Federal Register Notice indicated that HUD also estimated unmet needs repair calculations using the USDA Emergency Watershed Repair Program. The State contacted the applicants to this program to also estimate unmet needs.

In most cases, the programs mentioned above have match requirements that can be paid for with CDBG-DR funds. However, as highlighted in APA6, this does not account for the full gap State agencies and other stakeholders reported necessary to repair damaged transportation systems, energy infrastructure, water treatment facilities, community buildings, and other critical repairs. It also does not take full account of hazard mitigation projects related to damaged infrastructure needed to protect recovery-related investments against future hazards. The State's estimate of unmet needs accounts for data collected from State agencies about the needs beyond the match requirements.

The State only funds projects that address a recovery need arising from one of the declared disasters, meet a CDBG national objective, and constitute an eligible CDBG activity. Superstorm Sandy, Hurricane Irene, and Tropical Storm Lee caused unforeseen damages to major infrastructure and equipment throughout the State impacting both State residents and physical geography. To safeguard federal recovery dollars invested in New York to repair these systems, the State, in collaboration with transit agencies, adjacent states, and federal partners, plans to repair, rebuild, and restore these assets to their pre-storm condition. When possible, collaborators will put mitigation actions in place that make these assets more resilient to future storm events, safeguarding lives, and communities in the process.

This infrastructure section is outlined as follows: first, each of the unmet needs is calculated using the latest HUD allocation methodology; second, the analysis outlines other sources of unmet needs that the State has identified; third and finally, the analysis outlines the unmet need arising from the RBD projects outlined in the October 16<sup>th</sup> 2014 Federal Register Notice.

#### *FEMA Public Assistance*

The FEMA PA Program is designed to assist communities in repairing or rebuilding damaged public facilities and infrastructure after a Presidentially-declared national disaster and to implement resiliency measures to safeguard these facilities against future storm events. The Program is categorized into seven project types, as follows:

**Category A: Debris Removal** - Clearance, removal, and/or disposal of items such as trees, woody debris, sand, mud, silt, gravel, building components, wreckage, vehicles, and personal property.

**Category B: Emergency Protective Measures** - Actions taken by applicants before, during, and after a disaster to save lives, protect public health and safety, and prevent damage to improved public and private property.

**Category C: Roads and Bridges** - Repair of roads, bridges, and associated features, such as shoulders, ditches, culverts, lighting, and signs.

**Category D: Water Control Facilities** - Repair of drainage channels, pumping facilities, and some irrigation facilities. Repair of levees, dams, and flood control channels fall under Category D, but the eligibility of these facilities is restricted.

**Category E: Buildings and Equipment** - Repair or replacement of buildings, including their contents and systems; heavy equipment; and vehicles.

**Category F: Utilities** - Repair of water treatment and delivery systems; power generation facilities and distribution facilities; sewage collection and treatment facilities; and communications.

**Category G: Parks, Recreational Facilities, and Other Facilities** - Repair and restoration of parks, playgrounds, pools, cemeteries, mass transit facilities, and beaches. This category also is used for any work or facility that cannot be characterized adequately by Categories A-F.

However, because CDBG-DR funds are dedicated to long-term recovery, HUD assumes Category A and B projects (debris removal and emergency protective measures) have already taken place and therefore are excluded from any unmet needs assessment.<sup>32</sup>

Unmet need is calculated as the cost of damage within Categories C-G, minus other funds received (FEMA-obligated amount, etc.), plus estimated mitigation costs. As outlined in Table 24, the total unmet need associated with the FEMA PA Program is estimated at \$2.58 billion, reduced from the \$3.38 billion estimate in APA6. In this case, unmet needs are defined as the gap between the sum of FEMA estimated damage minus the funds already obligated with an additional estimate for hazard mitigation. While the estimated damage has increased, as defined by HUD allocation methodology, the amount obligated has also increased significantly from APA6 as projects move through the pipeline.

**TABLE 24: ESTIMATED UNMET INFRASTRUCTURE NEEDS – FEMA PUBLIC ASSISTANCE PROJECTS (IN MILLIONS)**

Damage Category	Estimated Damage	Amount Obligated	Gap	Plus Mitigation	HUD Allocation Methodology: Unmet Need
<b>Roads and Bridges (C)</b>	\$346.91	\$273.57	\$73.33	\$79.68	\$153.01
<b>Water Control Facilities (D)</b>	\$84.40	\$63.67	\$20.73	\$24.58	\$45.31
<b>Public Buildings (E)</b>	\$1,641.87	\$1,453.26	\$188.61	\$667.54	\$856.15
<b>Public Utilities (F)</b>	\$2,488.04	\$2,210.10	\$277.93	\$1,178.95	\$1,456.88
<b>Recreational (G)</b>	\$248.89	\$216.79	\$32.09	\$41.03	\$73.12
<b>Total</b>	<b>\$4,810.11</b>	<b>\$4,217.41</b>	<b>\$592.70</b>	<b>\$1,991.77</b>	<b>\$2,584.47</b>

**Source:** FEMA PA Data effective December, 2014; these data include the 30% hazard mitigation factor for Hurricane Irene and Lee but use data Mitigation data from the FEMA-PA worksheet database for Hurricane Sandy. This is done because (1) the data are more complete for Sandy and (2) there are a number of large projects present that would be underestimated in cost if the standard 30% factor was applied.

Three areas of critical infrastructure bore the greatest impact from Hurricane Irene, Tropical Storm Lee, and Superstorm Sandy: public transportation facilities, energy systems, and wastewater management.

*Transportation - FTA*

New York’s transportation infrastructure is renowned throughout the world and is among the most complex and heavily used in the nation. Its airports, train stations, rail lines, road systems, and tunnels drive a large percentage of the nation’s economy and almost all rank among the largest systems in the country. New York’s economy is fundamentally tied to its infrastructure and most forms of New York’s transportation infrastructure were significantly damaged by the storms. New York’s train and light rail system provide daily benefits to residents of the tristate area, beyond those who commute and work in New York City. New York State’s airports are among the busiest in the world and act as key national and international gateways. The rail system, located both above and below ground, tunnels, and stations were among the hardest hit

infrastructure components. The State is working with FEMA, DOT-FHWA, and DOT-FTA to ensure the rail system and its related components are rebuilt to pre-storm conditions at a minimum and, wherever possible, are rebuilt more resilient and less likely to fail in future events.

The public transportation systems operated by the MTA, PANYNJ, and the Long Island Railroad (LIRR) suffered significant damage during Superstorm Sandy. This included flooding of facilities and equipment and damage to critical operating systems. Additionally, the Superstorm illustrated the necessity of rebuilding systems in a more resilient manner, mitigating against future damage.

FTA received \$10.9 billion to repair areas impacted by Superstorm Sandy<sup>33</sup> and has allocated \$5.65 billion to assist in rebuilding public transit systems.<sup>34</sup> Similar to the other federal programs, there is a local match requirement for this program; it is assumed to be 10%. As per HUD’s allocation methodology, this local match is considered to be the unmet needs arising from this Program. Based on Agency information as of December 2014, total allocated FTA Emergency Relief (FTA-ER) funds amounted to \$3.79 billion. This is equivalent to a local share (and unmet need) of \$379.5 million (Table 25); an increase of almost \$40 million over the estimate in APA6.

**TABLE 25: FEDERAL TRANSIT ADMINISTRATION EMERGENCY RELIEF PROJECT ALLOCATION (IN MILLIONS)**

	Damage	Mitigation	Total Costs	HUD Allocation Methodology: Unmet Need (10% Local Cost Share)
<b>Statewide</b>	\$2,896.8	\$897.8	\$3,794.6	\$379.5

Source: Federal Transit Administration Emergency Relief Projects, effective December, 2014

The FTA also made awards through their competitive grant program. Thus, the State includes the remaining repair, resiliency, and mitigation needs of the MTA and PANYNJ remaining after those awards. For the MTA, an analysis of the broader unmet needs of the MTA indicates that documented repair and resiliency needs exceed \$9 billion dollars. After deducting funding from the FTA (both through the FTA-ER Program and the FTA-ER competition grant program) the remaining unmet need is in excess of \$4 billion.

*Resiliency Needs and Requirements and Local Cost Share for the MTA and PANYNJ*

The requirements of the November 25, 2013 and October 16, 2014 Federal Register Notices call for the State to ensure that a portion of its allocation is used to address resiliency and local cost share requirements for damage to the MTA in New York City and the PANYNJ or demonstrate that such resiliency needs and local cost share has otherwise been met. After conducting outreach and consultations with the MTA and PANYNJ, the State obtained letters from each Authority indicating the MTA and PANYNJ compliance with cost share requirements for the Public Assistance Program. As such, the State determines that their resiliency needs are currently being otherwise met. The State continues to work with the MTA and PANYNJ regarding the FTA competitive grant program so additional assistance for these Authorities is secured. At this time, the State is also working with the MTA and PANYNJ to ensure match funding needed for FTA projects are secured. If FTA approved awards do not fund all required projects resulting in an unmet need, the State will work with these Authorities to identify non-CDBG-DR funding mechanisms to address these unmet needs. Given the size and scope of damages impacting the MTA rail system, including the Long Island Railroad and Metro North rail systems, these unmet needs are anticipated to be beyond the State’s current CDBG-DR allocation. The State will continue to work with federal, State, and city partners to ensure the recovery of the region’s transportation assets.

*Transportation - FHWA*

The Federal Highway Administration (FHWA) administers the Emergency Relief Program to assist communities with repairing roads and bridges funded with federal aid. The Emergency Relief Program provides assistance for most public roads, except those functionally classified as rural or minor collector routes.

The highways are excluded from FEMA PA Program because they are under the authority of the FHWA. As a result, FHWA is responsible for funding the repair of these highways. The FHWA Emergency Relief Program also requires a local match for all projects. This Program’s match requirement is 20%. CDBG-DR is eligible to contribute towards this match – this local match is the unmet need as defined by the HUD methodology. As of December 2014, the eligible match amounted to \$59.4 million (Table 26); an increase of approximately \$20 million over APA6, as additional projects were approved. However, the FHWA Program currently identifies over \$657 million in emergency and permanent damage arising from the storms. The \$297.1 million highlighted below - along with the local match - represents only the total dollar amount obligated by the FHWA to date. As such, the unmet need is likely to increase.

**TABLE 26: FEDERAL HIGHWAY ADMINISTRATION EMERGENCY RELIEF PROJECTS (IN MILLIONS)**

	Obligated	HUD Allocation Methodology: Unmet Need (Local Cost Share 20%)
<b>FHWA Emergency Relief</b>	<b>\$297.1</b>	<b>\$59.4</b>

Source: FHWA Emergency Relief projects, effective December, 2014

*Energy Systems*

Superstorm Sandy caused widespread damage to the publicly operated utility systems and revealed the vulnerability of the electric grid. The State has embarked on a repair, recovery and resilience project with the Long Island Power Authority (LIPA) to repair damage incurred and to avoid future events where at least 800,000 households were without power.<sup>35</sup> LIPA provides electric service to more than 1.1 million customers in Nassau and Suffolk counties and the Rockaway Peninsula in Queens. Superstorm Sandy left tens of thousands of those customers without power for weeks. All 12 of LIPA’s substations on the South Shore of Long Island sustained some degree of flood damage.

After the Superstorm, LIPA undertook substantial reconstruction and resilience efforts (e.g. storm hardening measures, including installation of flood prevention barriers, elevation of equipment and adjustments to switching systems etc.) The State, through GOSR will provide an 80 million match to FEMA’s \$1.4 billion in funds to upgrade LIPA’s network. Planned improvements include a new outage management system and other technology upgrades to identify power outages and restore power faster. Funding will also be used to repair substations and electronic distribution systems.

The State does not currently recognize any additional unmet energy systems needs beyond what is already budgeted.

*Wastewater Systems*

Water and wastewater treatment facilities were also significantly damaged, resulting in many communities without proper sewerage systems or clean water. Damage included loss of electrical systems and damage to pumping facilities and treatment plants due to saltwater and storm surge. Millions of gallons of untreated sewage were released into public waters after treatment facilities became inoperable. The situation is particularly acute in Long Island. Nitrogen and other pollutants remain a constant concern throughout Long Island, as the drinking water for almost three million residents is drawn from sensitive groundwater aquifers recharged from the surface. The New York State Department of Environmental Conservation (DEC) has undertaken an intensive consultation process with key scientists and stakeholders concerning the impact of nitrogen pollution on storm resiliency and water quality on Long Island.

In Suffolk County, over 70% of the wastewater is managed through on-site disposal systems. Many of these on-site systems are located only a short depth to groundwater, and are compromised during flood events. This allows effluent to enter groundwater and surface waters. Even under normal conditions, on-site septic systems do not treat nitrogen effectively, leading large quantities of nitrogen-enriched effluent to flow into the county's groundwater, which then travels to surface waters or infiltrates drinking water aquifers.<sup>36</sup> Suffolk County recently released an executive summary of its *Comprehensive Water Resources Management Plan Report*.<sup>37</sup> The State identified \$383 million for the Suffolk County Water Quality Improvement Initiative which proposes to extend sewers in Suffolk County in four areas, advanced by the county. Subject to federal approval, the State identified up to \$300 million in CDBG-DR funding and \$83 million to be financed through low-interest loans from the Clean Water State Revolving Fund administered by the New York State Environmental Facilities Corporation (EFC) and the DEC.

The Suffolk County Water Quality Improvement Initiative is a major step forward in addressing unmet need for sewage systems and improvements to public health and water quality. There are over 53,000 unsewered parcels in the Great South Bay watershed; the Initiative proposes to sewer over 10,000 of these parcels. In unsewered areas, flooding from Superstorm Sandy caused significant but unquantifiable damages. For instance, sewage overflows from residential cesspools introduced untreated materials into drinking water systems and water bodies, causing harm to public health and environmental assets. In addition, infiltration of seawater damaged residential septic tanks and cesspools and will cause corrosion and increasing risk of failure of septic systems and cesspools over time.

The Bergen Point Wastewater Treatment Plant serves the largest sewer district in Suffolk County. During Superstorm Sandy, the plant's final effluent pump station (FEPS) was stressed and was at a risk of failure due to the high flow volumes. The Bergen Point FEPS has been allocated \$14,510,000 for pump station replacements and installation of a new pump for redundancy through the Storm Mitigation Loan Program (SMLP) administered by the EFC through its Clean Water State Revolving Fund (CWSRF). GOSR is providing \$3,175,000 in CDBG-DR funding for the match portion of the Bergen Point FEPS project.

Although the county's Bergen Point Wastewater Treatment Plant was not damaged, there was extensive flooding in the service area of Bergen Point, damaging four pumping stations, numerous homes, and causing discharges from septic tanks and cesspools to enter residential areas.

The State continues the process to identify its unmet needs in the wastewater area. For this analysis, no additional unmet needs are currently identified beyond what is already funded and budgeted.

Another critical water quality concern on Long Island is the lack of an ocean outfall pipe at Bay Park Sewage Treatment Plant. The State has requested FEMA-PA funding for an ocean outfall pipe (total cost approximately \$546 million) and a mid-stage level of nitrogen treatment of 8 milligrams per liter (mg/l) at the Nassau County's Bay Park plant.<sup>38</sup> FEMA has already allocated approximately \$810 million in funding to help repair and mitigate the plant but that award does not cover the outfall pipe. GOSR will match 10% of the FEMA assistance and currently does not identify any additional unmet needs for this project beyond what has already been funded. As such, in addition to HUD allocation methodology figure, the State estimates at least a \$546 million unmet need associated with the ocean outfall pipe.

#### *United States Army Corps of Engineers (USACE)*

In its allocation methodology, HUD also includes USACE projects for Sandy Infrastructure Resilience Coordination. These projects require large local matches; however, for the purposes of the allocation methodology, only \$250,000 of CDBG-DR funds can be applied to the match for each project and are counted towards unmet need for infrastructure. Based on the projects listed as of December 2014, there is a need for \$2,500,000 in CDBG-DR funds to be applied to the local match. The qualified match requirement has fallen by \$250,000 since APA6. However, the overall estimated project cost for these projects has

increased from \$523 million to over \$660 million, requiring a local match of \$226 million (Table 27). This represents an additional \$47 million in local match funds over APA6 (\$179 million).

**TABLE 27: ESTIMATED UNMET NEED FOR U.S. ARMY CORPS OF ENGINEERS SANDY INFRASTRUCTURE RESILIENCE PROJECTS (IN MILLIONS)**

Project Name	Estimated Project Cost	Local Match Requirement	CDBG Qualified Match (Unmet Need)
<b>Total</b>	<b>\$660.37</b>	<b>\$226.37</b>	<b>\$2.50</b>

Source: U.S. Army Corps of Engineers Sandy-Related Recovery Projects, effective December, 2014

Beyond the estimates for these 10 USACE projects, there are 19 projects that are currently authorized, unconstructed, or ongoing. In total, these 29 projects have a total project cost of over \$4.98 billion, requiring an overall local match of \$226 million. This is much larger than the CDBG-DR qualified match defined above. The State includes this larger match figure in its estimate of broader unmet needs beyond those identified by HUD allocation methodology.

*USDA Emergency Watershed Repair Program*

HUD estimated unmet needs repair calculations using USDA Emergency Watershed Repair Program data extracted in May 2014. GOSR, on behalf of the State, was one of a number of applicants for this Program in efforts to help communities address watershed impairments that could pose imminent threats to lives and property. Other applications came from Suffolk County, the Town of East Hampton, and the Peconic Land Trust.

The USDA received over 179 applications totaling \$96.61 million in requested funds from over two phases of the Program. Of the 179 applications, 131 were selected for tentative funding, amounting to approximately \$81 million. The USDA and the State are continuing to work with governmental entities and property owners to further the Program and spread information to other potentially interested entities. Initial outreach at the outset of the Program identified unmet needs well in excess of the subsequently applied for funds. As such, the gap in funding of \$15.61 million represents a very conservative figure for unmet repair needs associated with watershed repair. Given further time and effort, the State expects to identify significantly larger sources of unmet repair need.<sup>39</sup>

*Infrastructure Unmet Needs Summary*

HUD’s methodology for unmet need calculation restricts these needs to federally-funded projects already accounted for through FEMA, USACE, FTA, FHWA, and USDA. The methodology also only counts local match requirements from USACE, FTA and FHWA as gap. Using this calculation, the unmet needs for infrastructure is \$3.04 billion, a reduction of approximately \$750 million as compared to APA6. However, the State believes that this does not account for the full gap. State agencies have reported repair to damaged transportation systems, energy infrastructure, water treatment facilities, community buildings, and other critical repairs beyond what is accounted in the HUD allocation methodology. It also does not take full account of the hazard mitigation projects related to damaged infrastructure needed to protect recovery-related investments against future hazards. Based on information collected from State agencies, the State’s estimate of unmet needs includes an additional \$11.41 billion of recovery-related infrastructure projects. This is an additional \$3.6 billion over what was estimated in APA6 because the State has continued to assess the repair and resiliency costs of recovery-related infrastructure projects. Therefore, the State estimates that the full unmet need for infrastructure exceeds \$13.99 billion based on current information.

## Rebuild By Design

As noted in the October 16, 2014, Federal Register Notice, HUD allocated a portion of the funds for each awarded RBD project. The Notice requires grantees to identify any potential gap or shortfall in the RBD funding and provide a strategy and description of funds anticipated to be generated or secured in leveraging the CDBG-DR allocation for RBD project completion as well as any additional CDBG-DR funds the grantee anticipates dedicating to the RBD project. Based on the estimated budgets provided in the RBD plans, the State identified a total preliminary funding gap of \$52.36 million for the Slow Streams project in Nassau County and \$13.1 million for the Tottenville Pilot Project in Staten Island. The State is currently undergoing a two pronged approach to review and fill these gaps.

First, the State is analyzing the budgets provided by the RBD teams and calculating any additional planning and program delivery required to fully execute the projects and meet the requirements set out by HUD. The planning and scoping through the environmental review process will help shape the needs of the project not outlined in the current plan. The State understands that the gap could range from \$66.0 million to \$104.0 million. The State includes the \$66 million dollar gap in its broader estimate of remaining infrastructure needs (Table 28).

Once a firm cost for the project is clear, the State will begin to execute the strategy outlined in this APA to leverage funds to fill the gap left in the budget. As the State moves through the leveraging process, the State will reassess each project as needed to identify areas where funding is secured and where funding gaps still remain. The State will work together with stakeholders and federal partners to ensure the strategies in place lead successful implementation of the projects.

TABLE 28: UNMET NEEDS FOR THE STATE’S 2 RBD PROJECTS

RBD Project	Total Budget from RBD Plan	October 16th Allocation	Unmet Need
<b>Living with the Bay</b>	\$177.4	\$125.0	\$52.4
<b>Living Breakwaters</b>	\$73.9	\$60.0	\$13.9
<b>Total</b>	<b>\$251.3</b>	<b>\$185.0</b>	<b>\$66.3</b>

Source: Programmatic Data

### Mitigation Needs

Much of the damage and interruption of basic services like power and clean water caused by Hurricane Irene, Tropical Storm Lee, and Superstorm Sandy could have been avoided with mitigation measures. These measures include elevating electrical systems, shoring structures, coastal restoration, relocations of repetitive flood loss properties, and flood control. The true cost of mitigation is still unknown, but HUD estimates that mitigation costs will be roughly equivalent to 30% of damage costs for homes, businesses, and infrastructure with major to severe damage. These costs are reflected in the unmet needs figures.

### Housing and Small Business Construction Cost Adjustment

In its October 16, 2014 Federal Register Notice, HUD noted that its staff had observed that higher construction costs in New York and New Jersey were not being adequately accounted for in its base allocation methodology. As a result, HUD used the same Marshall & Swift regional cost adjustment multipliers used for HUD’s annual calculation of Total Development Costs for HUD’s public housing repair programs. For New York State the multiplier is 1.44 for housing and small business. In the summary of estimated remaining unmet needs, New York State also includes estimates of unmet needs, including the multiplier applied by HUD, for the housing and small business estimates based on HUD methodology. These are presented below.

### Impact and Unmet Needs Conclusion

Hurricane Irene, Tropical Storm Lee, and Superstorm Sandy caused unprecedented damage to New York State, exposing the risks coastal and river communities face in future storm events. The Table below presents New York State’s estimated unmet need as outlined in APA6 and the updated estimate unmet needs as outlined in this APA. Discounting the HUD construction cost multiplier, estimated unmet needs decreased (using HUD allocation methodology) from \$7.86 billion to \$5.68 billion. If the high construction cost multiplier is factored in, unmet needs are estimated at \$6.85 billion, an increase that reflects the likelihood that reconstruction costs will be higher in New York State than elsewhere in the country. However, these figures do not account for infrastructure needs not currently funded by federal programs; this figure is likely to continue to rise as the State identifies more needs and as more communities assess their needed resiliency projects. For example, Round I of the NYRCR Program Planning Committees developed over \$883 million in priority projects (“Proposed Projects”) proposed for CDBG-DR funding. CDBG-DR funding has only been identified for \$557 million, leaving a gap of over \$320 million, a figure included in the State’s broader assessment of infrastructure unmet needs. In addition to the priority projects proposed, NYRCR Planning Committees selected 275 additional unfunded projects (“Featured Projects”), estimated to cost roughly \$1.6 billion. As of now, no funding sources have been identified for these projects.

Based on the State’s updated assessment of its unmet needs, there exists \$17.80 billion of unmet need, assuming the HUD construction cost multiplier is applied to housing and small business. Many of these additional infrastructure projects may not be eligible for CDBG-DR funding, but have been identified nonetheless by State agencies as an unmet recovery-related need. The State continues to assess these unmet needs for CDBG-DR eligibility. Therefore, unmet need is likely to continue rising. This excludes the housing and business needs of New York City.

Using both the HUD allocation methodology and the State’s additional data sources highlights that, despite the progress made to date, there remains large unmet needs arising from the storms (Table 29). This is true even when the proposed CDBG-DR allocations to New York State are accounted for. The largest unmet need remains in the infrastructure sector - \$3 billion when using HUD allocation methodology and almost \$14 billion when all identified unmet needs in this sector are accounted for. Even when HUD’s high construction cost multiplier for housing and small business repair is applied, this latter number accounts for almost 79% of all unmet needs in the State. The State’s proposed distribution of CDBG-DR funds is, as a result, focused on the NYRCR Program, the Infrastructure and Match Programs, and the RBD Program. All are aimed at helping improving the State’s recovery and resiliency efforts.

TABLE 29: ESTIMATE OF UNMET NEEDS FOR HURRICANE IRENE, TROPICAL STORM LEE AND SUPERSTORM SANDY (EXCLUDING NEW YORK CITY) (IN MILLIONS)

	APA6		APA8		APA8 (W/ HUD Construction Cost Multiplier)	
	Unmet Need (Based on HUD Allocation Methodology)	Unmet Need (Based on NYS Methodology)	Unmet Need (Based on HUD Allocation Methodology)	Unmet Need (Based on NYS Methodology)	Unmet Need (Based on HUD Allocation Methodology)	Unmet Need (Based on NYS Methodology)
<b>Housing</b>	\$3,525	\$3,525	\$2,018	\$2,018	\$2,906	\$2,906
<b>Economic Development</b>	\$702	\$702	\$624	\$624	\$898	\$898
<b>Infrastructure</b>	\$3,761	\$11,515	\$3,041	\$13,994	\$3,041	\$13,994
<b>Total</b>	<b>\$7,987</b>	<b>\$15,742</b>	<b>\$5,683</b>	<b>\$16,635</b>	<b>\$6,845</b>	<b>\$17,798</b>

Source: FEMA Individual Assistance data effective December 2015, SBA Business Loan data, effective December 2014, FEMA PA data effective December 2014, Dun and Bradstreet business records for 2012, FEMA Hurricane Sandy Inundation Files, NYS Department of Financial Services Insurance Data (October, 2013), Census Data (ACS, 2007-2012 5 year average), DOT, FTA, FHWA, and USACE Sandy-related projects effective, and USDA Emergency Watershed Repair Program (December 2014).

## Comprehensive Risk Analysis

*This section has been updated to reflect recent State legislation.*

In September 2014, Governor Cuomo signed the Community Risk and Resiliency Act (CRRA) into law. The Act bolsters New York State's preparedness for the effects of climate change and helps protect communities against severe weather and sea level rise. It contains a comprehensive package of actions to help strengthen and reimagine the State's infrastructure with the next storm in mind. The Act furthers the goals of the New York State 2100 Commission, appointed by Governor Cuomo after Superstorm Sandy. The 2100 Commission offered recommendations for making critical infrastructure systems more resilient, offering recommendations in the areas of energy, transportation, land use, insurance, and infrastructure financing.

CRRA requires State agencies to consider future physical climate risks caused by storm surges, sea level rise, or flooding in certain permitting, funding, and regulatory decisions. In addition, it directs the DEC and the Department of State (DOS) to prepare model local laws to help communities incorporate measures related to physical climate risks into local laws, as well as provide guidance on the use of resiliency measures that utilize natural resources and natural processes to reduce risk. It also requires DEC to adopt regulations by January 1, 2016 establishing science-based state sea level rise projections, and to update such regulations every five years. As a whole, the Act enhances the role of State agencies in helping communities in vulnerable coastal areas and across the State implement long-term, science-based resiliency strategies. GOSR will coordinate with State partner agencies in implementing the provisions of the Act.

The State's overall response to infrastructure resilience is driven by the State's Hazard Mitigation Plan. The 2014 Hazard Mitigation Plan identifies natural, technological, and human-caused hazards which have impacted, or have the potential to impact, New York State. It then focuses on 15 natural hazards considered most likely to affect New York residents. The plan meets the requirement that a state receiving FEMA Hazard Mitigation Grant Program (HMGP) assistance have an approved mitigation plan containing a broad risk assessment. The Statewide risk assessment characterizes and analyzes hazards and risks, allows the State to determine priorities for implementing mitigation measures, and provides jurisdictions with technical and financial support to develop more detailed local risk and vulnerability assessments. It includes:

- An overview of the location of all natural hazards that can affect the State, including information on previous occurrences of hazard events, as well as the probability of future hazard events.
- A description of the jurisdictions most threatened by the identified hazards, and most vulnerable to damage and loss associated with hazard events. State-owned critical or operated facilities located in the identified hazard areas are also addressed.
- An overview and analysis of potential losses to the identified vulnerable structures, based on estimates provided in local risk assessments as well as the State risk assessment, and estimates the potential dollar losses to State-owned or operated buildings, infrastructure, and critical facilities located in the identified hazard areas.

To complement the Hazard Mitigation Plan, GOSR enlisted the assistance of the New York State Resiliency Institute for Storms and Emergencies (RISE) and the DOS. These partners developed a science-based comprehensive risk analysis to guide the State in determining which infrastructure projects to implement. Led by Stony Brook University and NYU Polytechnic, RISE is a consortium of New York institutions of higher education that acts as a hub for cutting-edge research on climate science, storm preparedness, and mitigation.

To the extent feasible and appropriate, projects are reviewed for their social impact, with a focus on vulnerable populations. The State has contracts for such research in place with The Nelson A. Rockefeller Institute of Government at the State University of New York.

The leadership of the RISE consortium and scientific team were intimately involved with developing the Intergovernmental Panel on Climate Change (IPCC) and the New York City Panel on Climate Change (NPCC) processes. At the request of the State, RISE agreed to undertake additional research activity extending the climate forecasting developed for New York City to inform the State's comprehensive risk analysis. Drawing on their experience with the NPCC efforts, RISE replicated the methodology used in the development of climate change projections for New York City and incorporated it into the City's post-Sandy Special Initiative for Rebuilding and Resiliency (SIRR) report. For the State, RISE scientists analyzed forecasts of coastal and inland flooding from storm surge and sea level rise and severe weather events, and used advanced climate models to predict sea level rise and future storm intensity.

RISE developed a science-based climate forecast model that projects future changes of temperature, precipitation, and sea level rise using model simulations from global general circulation models (GCMs). These simulations are obtained from the Coupled Model Inter-comparison Project Version 5 (CMIP5), the basis for the Fifth Assessment (AR5) by the IPCC and NPCC. These models calculate atmospheric winds, temperature, air pressure, precipitation, atmospheric radiation, clouds, ocean currents and temperature, salinity, land surface temperature, soil moisture, and a suite of other meteorological variables. These models use the seasonal variation of solar radiation, surface topography and vegetation, emissions of greenhouse gases and aerosols as input to calculate the evolution of the global climate. The risk assessment includes future coastal and inter-coastal flood risk maps under different scenarios of climate change, over different time periods (2020-2030, 2050-2060, and 2090-2100). Given uncertainties inherent in complex climate modeling, RISE developed ensemble forecasting techniques which compare and integrate multiple forecast models. The State makes RISE flood maps, which reflect the latest information on past climate and projections of future weather events, available to the public.

The RISE analysis considers a broad range of information and best available data, forward-looking analyses of risks to infrastructure sectors, including climate change and other hazards. The State uses this methodology to analyze and guide the selection of infrastructure investment options that maximize risk reduction for community-based planning and State prioritized project proposals. However, when a prioritized recovery need is identified, the State may approve particular infrastructure despite the project having a lower risk reduction value.

For considering specific projects, GOSR has two complementary risk assessments. The first is for projects advanced within the NYRCR program, a grass-roots planning process. The second is for covered projects.

For the NYRCR Program, the State assesses risk using a model created by the DOS. The model incorporates predictions of sea level rise and the likelihood of different storm hazard levels, and analyzes the likelihood that an infrastructure asset will be exposed to various levels of storm hazards in the one-hundred year planning time frame.

Community plans reflecting the application of the model are posted for public review on the GOSR website. They illustrate the model's utility in a wide range of project and program settings.

The exposure score is calculated by using location-specific information of an infrastructure asset and the likelihood that it will be impacted when a hazard type occurs. Factors affecting exposure include elevation, soil types, vegetation, drainage, and engineering design. These factors are obtained from information systems such as building design standards and the ArcGIS in the Sea Level Rise Tool for Sandy Recovery. When a project is spread across multiple locations, the infrastructure at each location is calculated separately and aggregated.

For infrastructure projects undertaken outside the NYRCR Program, including Covered Projects, the State assesses risk using an existing federal risk assessment framework and information developed by RISE. Most covered projects under consideration are large infrastructure projects where the State provides a 10-25% of the cost as a non-federal match to another federal source. FEMA, for instance, conducts a risk

assessment in allocating hazard mitigation resources including 404 and 406 mitigation. The State relies on FEMA's risk assessment of these projects, and advocates for maximum 406 mitigation to address resiliency within the FEMA-PA program. The State also reviews benefit cost analyses developed for these projects.

In addition to any federal risk assessment, GOSR reviews information provided by RISE. At GOSR's request, RISE has developed an analysis based on their NYC work that analyzes the risk factors in a geographic location at the county level. The State uses the RISE maps, models, and additional analysis resulting from the State's Hazard Mitigation Plan, qualitative data, and technical consultants to identify vulnerabilities of critical infrastructure, public facilities, and systems including energy, communications, transportation, water and wastewater management systems, coastal protection, and green infrastructure. In addition, RISE evaluates, and to the extent relevant, incorporates risk assessment data developed as part of the RBD competition and project implementation.

To the extent feasible and practical, the risk model provides a numerical risk score for each of the five risk classes: public health, public safety, economic impacts, social impacts, and environmental impacts.

The State considers the RISE risk reduction ratio in making investment decisions. Risk assessments employed by other State agencies are also considered where available. In some cases, the risk reduction method does not fully capture the importance of a project to particular communities. Projects determined to be critical community assets through the NYRCR or State priorities are categorized separately and evaluated using relevant information from community planning processes, State and local agency data/information, and public sources.

HUD also suggests that grantees should consider the costs and benefits of alternative investment strategies. To the extent practicable, New York State develops a cost-benefit analysis for each project based on the benefit normalized to the investment cost. The benefit is calculated from the anticipated reduction of risk in the different benefit classes: economic, social, environmental, public health and safety assets.

## Overview of Method of Distribution and Allocation of Funds

Funds will be utilized for eligible disaster related activities to support housing repair, rebuilding, mitigation, economic revitalization, community planning, and infrastructure repair and improvements related to Hurricane Irene, Tropical Storm Lee, and Superstorm Sandy. GOSR will use discretion when deciding the eligibility of Programs for CDBG-DR funding under Major Declared Disasters DR-1957, DR-1993, DR-4111, and DR-4129.

Following consultation with local governments, the State opts to implement most programs in accordance with a waiver of 42 U.S.C.5306, requiring states under the standard CDBG Program to grant funds to units of local governments. As such, the State will implement most programs directly. In some cases, the State will also work directly with local governments and nonprofits in the implementation of its Programs.

Each Program area within this Amendment describes the details and method of fund distribution including eligibility, application instructions, use of funds, time frames for funding, and terms of assistance.

The method of distribution is subject to change in order to ensure an efficient and timely distribution and expenditure of funds. Any such changes will be subject to the terms of HUD's APA process as detailed in the most recent Federal Register Notice (FR 5696-N-06).

While a grantee may expend up to 5% of the total CDBG-DR grant on general administration costs, GOSR has chosen to apply the full amount of new funding under this third allocation to direct program cost. Accordingly, the Administration and Planning budget line remains unchanged.

## Proposed Allocation of Funds

Program	First and Second Allocation approved May 2014	Change in First and Second Allocation	Amended First and Second Allocation	Third Allocation	Total Allocation
	\$3,810,960,000		\$3,810,960,000	\$605,922,000	\$4,416,882,000
<b>Housing</b>	<b>\$1,959,019,206</b>		<b>\$1,959,019,206</b>		<b>\$1,959,019,206</b>
NY Rising Housing Program	\$1,056,311,524		\$1,056,311,524		\$1,056,311,524
Interim Mortgage and Housing Assistance Program	\$49,000,000		\$49,000,000		\$49,000,000
NY Rising Buyout Program	\$621,207,682		\$621,207,682		\$621,207,682
NY Rising Rental Buildings Recovery Program	\$225,000,000		\$225,000,000		\$225,000,000
Public Housing Assistance Relief Program	\$7,500,000		\$7,500,000		\$7,500,000
<b>Economic Development</b>	<b>\$216,500,000</b>		<b>\$216,500,000</b>		<b>\$216,500,000</b>
Small Business Grants and Loans	\$158,500,000	\$25,000,000	\$183,500,000		\$183,500,000
Seasonal Tourism Industry	\$15,000,000	(\$15,000,000)	\$0		\$0
Coastal Fishing Industry	\$10,000,000	(\$10,000,000)	\$0		\$0
Business Mentoring Program	\$3,000,000		\$3,000,000		\$3,000,000
Tourism and Marketing	\$30,000,000		\$30,000,000		\$30,000,000
<b>Community Reconstruction Program</b>	<b>\$664,510,794</b>		<b>\$664,510,794</b>	<b>\$63,922,000</b>	<b>\$728,432,794</b>
NY Rising Community Reconstruction	\$664,510,794		\$664,510,794	\$63,922,000	\$728,432,794
<b>Infrastructure and Match</b>	<b>\$780,120,000</b>		<b>\$780,120,000</b>	<b>\$357,000,000</b>	<b>\$1,137,120,000</b>
Local Government and Critical Infrastructure	\$254,600,000	(\$109,600,000)	\$145,000,000		\$145,000,000
Suffolk County Water Quality Improvements Initiative				\$300,000,000	\$300,000,000
Non-federal Share Match Program	\$522,820,000	(\$134,400,000)	\$451,420,000	\$57,000,000	\$508,420,000
Bay Park Waste Water Treatment		\$101,000,000	\$101,000,000		\$101,000,000
Long Island Power Authority		\$80,000,000	\$80,000,000		\$80,000,000
Resiliency Institute	\$2,700,000		\$2,700,000		\$2,700,000
<b>Rebuild by Design</b>				<b>\$185,000,000</b>	<b>\$185,000,000</b>
Living with the Bay, Nassau County				\$125,000,000	\$125,000,000
Living Breakwaters Project, Richmond County (Staten Island)				\$60,000,000	\$60,000,000
<b>Administration &amp; Planning</b>	<b>\$190,810,000</b>		<b>\$190,810,000</b>		<b>\$190,810,000</b>

## Proposed Use of Funds

This section details the Programs that are currently in place as well as new Programs implemented by GOSR. Programs and budgets are adjusted herein based on the State's revised impact and unmet needs assessment for Housing, Economic Development, and Infrastructure Programs. Additionally, this APA includes the Rebuild by Design projects. Overall, the allocations are largely reflective of the estimated unmet needs.

The Infrastructure Program and NYRCR Program account for over half of the unmet needs using the base allocation methodology. Once the high construction multiplier is included, that falls to approximately 38% (as HUD does not include a cost inflator for infrastructure in its methodology). The proposed budget allocates approximately 48% of CDBG-DR funds to this sector (NYRCR). Housing programs account for approximately one third of the remaining unmet need in the State. The proposed budget for Housing Programs, unchanged from APA6, allocates approximately 46% of funds to this area. In absolute terms, Economic Development has the smallest remaining unmet needs. This is reflected in the proposed use of fund where approximately 5% of funds are allocated to these Programs. Unmet needs and program implementation will continue to be assessed as Programs continue to be implemented. The State remains committed to both homeowners and renters and is working diligently in both Programs to address the needs of the community as they recover. The State will continue to make adjustments as needed in further APAs, to ensure that, to the extent feasible, unmet needs of these communities are addressed.

While the State continues to have outstanding unmet needs, its current resources are allocated to address the priorities of the State's communities in repairing and hardening storm-damaged residential units, creating additional affordable housing, reviving businesses, and rebuilding critical infrastructure throughout the State.

## NY Rising Housing Recovery Programs

*The Housing Programs outlined in the initial Action Plan are currently operational. Prior versions of the Action Plan utilized inconsistent terminology and naming conventions in describing the Housing Programs. This Action Plan Amendment replaces all references to Housing Programs in previous Action Plans and Action Plan Amendments to provide a consolidated description of the State's Housing Programs that cohesively reflects current implementation and policy updates.*

The State initially allocated \$838,000,000 to a slate of Housing Recovery Programs including homeowner reimbursement, mitigation, repair and reconstruction, and acquisitions and buyouts. In APA6, GOSR increased the budget to \$1,959,019,206. Based on the unmet needs assessment, the State will maintain this budget for Housing.

In adherence to HUD's guidelines, all reconstructed and substantially damaged/substantially improved residential properties that are located in a 100-year floodplain must be elevated pursuant to New York State Building Code minimum elevation requirements, which exceeds HUD mandated minimum elevation standards. All reconstructed and substantially damaged/substantially improved residential properties must also incorporate Green Building Standards through the New York State Energy Conservation Construction Code of 2010. Due to the highly regulated nature of construction activities in New York State, compliance with the aforementioned requirements is determined through inspection and approval by the local code official that is vested with the authority to determine compliance with local and State requirements.

The State will also institute controls to conservatively identify substantially damaged or potential substantially approved homes, and require that these homes have been rehabilitated to the satisfaction of the appropriate local floodplain official, as evidenced by appropriate documentation showing compliance with applicable requirements. Documented substantially damaged or improved homes will not be closed out of the Program until they meet this requirement.

Residential properties that are not reconstructed or substantially damaged/substantially improved will receive a mandatory prospective scope of work that incorporates the HUD Green Building Retrofit Checklist to the extent feasible.

In addition, all the Housing Programs include an opportunity to rebuild in a more resilient manner through elevation and/or mitigation efforts where appropriate.

The State is committed to assisting the unmet needs of PHA. As outlined in the unmet needs section of this Amendment, the State, along with the PHAs and FEMA, are still in the process of assessing their unmet needs. As these needs are identified, the State has committed up to \$10 million dollars as outlined in the initial Action Plan to assist these Authorities. The State identified areas in the following programs which are available to address these needs: Multi-Family/Affordable Housing Fund; the State Housing Assistance Relief Program; the Community Reconstruction Program; and the Non-Federal Share Match Program under the Infrastructure Program.

### NY Rising Homeowner Recovery Program

*The NY Rising Homeowner Recovery Program was approved in the State's initial Action Plan. Programmatic changes were made in APA 6. The NY Rising Homeowner Recovery Program is now closed to new applications. This Amendment will serve to consolidate all prior changes and to cohesively reflect current implementation and policy updates.*

**Activity Type:** Repair, reconstruction, and mitigation of residential owner-occupied structures

**National Objective:** Low- and Moderate- Income or Urgent Need

**Geographic Eligibility:** Disaster-declared counties outside of New York City

**Eligible Activity:** Sec. 105 (a) (4) (8) 42 U.S.C. 5305(a)(4)

**Eligible Applicants:** This Program is available to owners of one- and two-unit owner-occupied homes, including condominiums, co-ops, and garden apartments, that are located outside of New York City with damage from Hurricane Irene, Tropical Storm Lee, and/or Superstorm Sandy.

**Program Description:** The NY Rising Homeowner Recovery Program includes the following components:

- Reimbursement: The Program provides reimbursement for eligible costs incurred by homeowners for completed home repair or reconstruction activities.
- Repair: The Program pays for approved and eligible costs to complete repairs to homes that have not yet been completed.
- Reconstruction: The Program pays for approved and eligible costs of reconstruction when a home is destroyed or determined not feasible to repair.

The Program covers costs for the repair or replacement of damage to real property including mold remediation, replacement of disaster-impacted non-luxury residential appliances, and environmental and health hazard mitigation costs related to the repair or reconstruction of the disaster-impacted property.

Elevation to New York State Building Code minimum elevation requirements is required for reconstructed or substantially damaged/improved properties located in the 100-year floodplain. For homeowners that are not required to elevate, but who are interested in this protective measure, the Program implemented an optional elevation component. In addition, the Program also offers optional mitigation measures which include, but are not limited to, the following:

- Elevation of electrical systems and components;
- Securing of fuel tanks;
- Use of flood resistant building materials below base flood elevation (retrofits to be limited in scope to be cost effective);
- Installation of flood vents;
- Installation of backflow valves; and,
- Installation of roof strapping.

**Maximum Award:** Following the analysis of the needs of the affected communities and the availability of funding, the Program set the following cap amounts and allowances:

- Base Cap: The base cap amount for single-family repair and/or reconstruction coverage is \$300,000.
- Low- and Moderate- Income Allowance: Homeowners who are identified to be low- or moderate-income (total household income is less than or equal to 80% of area median income) will qualify for an increase of \$50,000 in the cap amount. (\$300,000 Base + \$50,000 low- and moderate- income= \$350,000 base cap).
- Elevation Allowance: Homeowners with damaged properties within the 100-year floodplain and which are substantially damaged/improved are eligible for up to a \$50,000 increase in the base cap amount.

**Eligibility Criteria:**

- Homes must be the primary residence of the applicant.
- Applicants must have owned the home prior to the disaster event subject to specific exceptions such as the death of the original owner.

- Applicants must complete a process to verify previously received disaster recovery benefits. Unmet need is determined after accounting for all federal, State, local and/or private sources of disaster-related assistance, including, but not limited to, homeowners and/or flood insurance proceeds per the Stafford Act.

**Program Changes and Clarifications:**

- During implementation, the NY Rising Housing Program combined the previously named Recreate New York Smart Home Repair and Reconstruction Program and the New York Smart Home Resilience Program into one Program.
- The Program is no longer prioritizing applications and is delivered on a first come, first serve basis. However, the State is committed to providing additional assistance needed for processing applications of all homeowners including low-and moderate-income, those with a disability, elderly households, households currently enrolled in DHAP, and those with Limited English Proficiency.
- The State does not require continued ownership or occupancy by the assisted homeowner after construction is complete and final disbursement is made.

In administering this Program, the State provides funding assistance to service providers who provide critical resources necessary for housing recovery. Municipalities are allocated funding to expand code enforcement capacity in order to expedite repair, rebuilding, and reconstruction under the Municipal Support Program. Additionally, legal services are allocated funding to assist low- and moderate- income homeowners and applicants in overcoming storm-related legal obstacles to obtaining necessary recovery assistance under the Legal Services Program. Specific information regarding each Program is outlined below.

1. Municipal Support Program

**Eligible Activity:** Public services 105(a)(8)

**National Objective:** Low- and Moderate- Income or Urgent Need

**Budget:** \$6,000,000 (as part of the Home Repair and Reconstruction Program)

**Project Description:** The majority of applicants under the New York State Rising Housing Recovery Program are concentrated in specific counties. The State understands that municipalities within these counties bear part of the costs tied to the rebuilding effort. Further, municipalities may require substantial assistance in their permitting offices in order to process and produce an increased number of inspections and permits. Therefore, New York State developed the Municipal Support Program as part of the Homeowner Program to provide grant funds for the reimbursement of storm-related costs to municipalities in damaged counties. Reimbursements include, but are not limited to, salaries, permitting costs, and inspection costs as they relate to applicable storm-damaged homes. This funding may help eliminate impediments municipalities might face in processing permits and completing inspections that are necessary for homeowner recovery projects to proceed.

2. Legal Services Program

**Eligible Activity:** Public services 105(a)(8)

**National Objective:** Low- and Moderate- Income or Urgent Need

**Budget:** \$4,500,000 (as part of the Home Repair and Reconstruction Program)

**Program Description:** The State has entered into sub-recipient agreements with Hofstra University and New York Legal Assistance Group (NYLAG) to provide pro bono legal services to residents and potential applicants of NY Rising Housing Programs in eligible counties outside of New York City affected by Hurricane Irene, Tropical Storm Lee, and/or Superstorm Sandy. These entities provide legal counsel and/or

representation to storm victims to eliminate barriers for entry into NY Rising Housing Programs and to aid in rebuilding efforts using CDBG-DR funding or other resources. Legal services are provided to residents with storm-related legal issues including but not limited to the following: FEMA benefits, insurance claims, landlord/tenant disputes, eviction, mortgage and foreclosure issues, contractor issues, consumer fraud, real estate issues, and debt/financial and counseling. In addition, legal and business counseling services are provided to small businesses and not-for-profit organizations that suffered storm-related losses including small businesses in planning or start-up stages at the time of Hurricane Irene, Tropical Storm Lee, and/or Superstorm Sandy.

Both legal assistance sub-recipients place particular emphasis on outreach to immigrant communities, low-income communities, and other vulnerable populations. The NYLAG Storm Response Unit staff speaks 16 languages and has the ability to arrange translators for additional languages if needed. NYLAG continues to offer services at community outreach events.

### Interim Mortgage Assistance Program (IMA)

**Activity Type:** Homeowner assistance

**National Objective:** Low- and Moderate- Income or Urgent Need

**Geographic Eligibility:** Disaster-declared counties outside of New York City

**Eligible Activity:** Sec. 105 (a) (8) 42 U.S.C. 5305(a)(8), as amended FR-5696-N-01 (VI) (B) (30)

**Program Description:** A substantial number of households remain unable to inhabit their primary residences as a result of Hurricane Irene, Tropical Storm Lee and/or Superstorm Sandy. Many of these displaced families are struggling to pay mortgages on damaged homes and simultaneously pay interim housing costs. Many have expended FEMA resources, exhausted available mortgage forbearances, and utilized any rental assistance provided by insurance companies. New York State developed this Program to assist homeowners with short-term mortgage costs or equivalent housing costs so that homeowners do not lose their home.

In November 2013, as a result of HUD approved APA4, the State developed the Interim Mortgage Assistance Program to meet the needs of displaced homeowners. Based upon analysis of current applicants, it is anticipated that approximately 4,000 households have been or will be both displaced and forced to pay the costs of their primary mortgage, or an equivalent housing cost such as property taxes, and simultaneously pay the costs for their temporary living residences.

This Action Plan Amendment modifies the Program to include the following:

- GOSR clarifies that a property owner participating in the Rental Property Program may be eligible for IMA payments if the owner is displaced from his or her storm-damaged owner-occupied primary residence in a multi-family building and occupies a rental unit in that building while displaced.

### NY Rising Buyout and Acquisition Program

*This Program was approved in the State's initial Action Plan and is currently operational. This amendment clarifies Program eligibility and benefits and adds disposition as an eligible activity.*

**Activity Type:** Voluntary Buyout or Acquisition of one- and two-unit homes

**National Objective:** Low and Moderate Income, Slum and Blight or Urgent Need

**Eligible Activity:** Sec. 105 (a) (1) (2) (4) (7) (11) (24), 42 U.S.C. 5305(a) (1) (2) (4) (7) (11) (24) **FR-5696-N-01 (VI) (B) (31)**

**Eligibility Applicants:** Eligible applicants to the Buyout component are owners of one-family or two-family homes and/or vacant land located in an Enhanced Buyout Area who owned the property at the time of

Hurricane Irene, Tropical Storm Lee, and/or Superstorm Sandy. Eligible applicants to the Acquisition component are owners of substantially damaged one-family or two-family homes and/or vacant land located within the 500-year floodplain in a disaster-declared county who owned the property at the time of one of the above storms.

**Program Description:** The NY Rising Buyout and Acquisition Program include State purchase of storm-damaged properties in Enhanced Buyout Areas and the acquisition of substantially damaged properties within the 500-year floodplain but outside of an Enhanced Buyout Areas. Enhanced Buyout Areas are areas within the floodplain at highest risk, most susceptible to future disasters, and presenting the greatest risk to people and property, as determined by the State. In these highly vulnerable areas, the State seeks to purchase land and buildings through Buyout for the purpose of returning the land to nature.

Outside of Enhanced Buyout Areas, the State seeks to give owners of substantially damaged homes in vulnerable areas the opportunity to relocate to more suitable housing. The State will purchase substantially damaged homes within the 500-year floodplain from willing sellers through Acquisition.

In accordance with the notice governing the use of these funds, properties purchased as a “Buyout” are maintained in perpetuity as coastal buffer zones, while properties purchased as “Acquisitions” are eligible for redevelopment in the future in a resilient manner to protect future occupants of this property.

The disposition of acquired properties is determined by the State, in consultation with local officials, to ensure these properties best serve the future goals of the community. In most cases, properties will be redeveloped pursuant to a HUD approved disposition plan. The final disposition plans are further detailed by the State in the Acquisition Program guidelines, and may include: the sale of property at fair market value through a competitive process; the conversion of the property into public green space; and/or the donation of property to an eligible recipient to carry out eligible activities.

The State uses the 2013 FHA loan limits as the ceiling for the purchase price for properties that participate in this Program.

#### 1. Buyouts

The State may purchase property from owners in “Enhanced Buyout Areas,” through voluntary sale. The purchase price is 100% of the property’s pre-storm Fair Market Value (FMV), plus available incentive(s) ranging from 5%-15%. Reconstruction does not occur on lots in these areas. Lots are maintained as coastal buffer zones or other non-residential/commercial uses. This Program may also include buyout of vacant or undeveloped land in these targeted areas.

The following five factors are considered by the State when defining “Enhanced Buyout Areas”:

- A documented history of flooding and/or damage caused by extreme weather events, including damage by Hurricane Irene, Tropical Storm Lee and/or Superstorm Sandy;
- All the properties in the “enhanced buyout area” sustained damage documented by FEMA and/or the Department of State;
- A determination made by the Department of State, based on analysis of trends in coastal erosion and future flood risk, that the area is in Extreme or High risk areas of the floodplain;
- Multiple, contiguous parcels in the flood plain where Homeowners collectively voiced interest in relocation; the interest must be documented in a manner that allows the State to identify the individual parcels, and the number and location of the parcels; and,
- The State and the respective municipal officials (local/county) will have mutual understanding of the benefit of permanently removing residents/homes from the floodplain.

#### *Buyout Incentives*

- *5% Relocation Incentive:* The State provides a Relocation Incentive to residents who participate in a buyout inside an Enhanced Buyout Area if they permanently relocate and provide evidence of the purchase of a new primary residence within the same county in which their storm-damaged property is located. Residents of New York City are eligible for this incentive if they permanently relocate and purchase a new primary residence anywhere within the five boroughs of the City. The motivation for such an incentive is to protect and preserve the community while facilitating the reclamation of land in high risk areas for natural protection against future damage.

The State recognizes that, because of extenuating circumstances, the storm may prevent households from returning to their pre-storm county. In the event a homeowner receives CDBR-DR buyout funding and relocates to a residence outside the county in which their storm-damaged property is located, but within New York State, the homeowner can file a hardship request to receive a 5% Relocation Incentive. Homeowners must submit a statement outlining the challenges of relocating within their county of origin. They must also sign a Declaration of Hardship form that documents the submission of a statement of hardship. All Declaration of Hardship Forms are reviewed and approved by Program staff on a case-by-case basis.

- *10% Enhanced Buyout Incentive:* The State seeks the maximum level of homeowner participation in relocating homeowners out of high risk Enhanced Buyout Areas to protect as many households as possible from future disasters. The State offers the 10% Enhanced Buyout Incentive to individual homeowners so a significant number of properties are involved and as much land as possible within these areas can be returned to and reclaimed by nature.
- *10% Group Buyout Incentive:* The State recognizes that in rare circumstances, the purchase of a group of properties is the most effective way to re-purpose the area and graduated incentives are essential components. Therefore, the State may provide a 10% Group Buyout Incentive to a very limited cluster of homeowners (i.e., two to ten consecutively located properties) whose properties are located inside the floodplain but not inside an identified Enhanced Buyout Area. This incentive may be necessary in certain cases to facilitate the reclamation of a concentrated area of high risk properties and to avoid the patchwork effect of purchasing all but one or two properties inside such a cluster of properties.

For all Buyout Incentives, assistance is determined by property purchased after accounting for all federal, State, local and/or private sources of disaster-related assistance, including, but not limited to, homeowners and/or flood insurance proceeds.

## 2. Acquisitions

The State seeks to give the owners of substantially damaged primary residences in vulnerable areas the opportunity to relocate to more suitable housing. These owners require financial assistance to relocate to a safer, less flood-prone area within the county. The high costs associated with relocating to another equivalent living situation may deter homeowners from moving. The Acquisition Program includes the purchase of eligible substantially damaged properties inside the 100 to 500-year floodplain but outside “Enhanced Buyout Areas” in storm-impacted areas.

Purchase offers must begin with the post-storm fair market value of the property. The State may also provide incentives in the form of optional relocation assistance and rehousing assistance if necessary and justified. The amount of incentive payments offered is determined by formula developed in consultation with HUD.

The incentive payment structure recognizes the wide variation in post-storm home values, relative to the high costs associated with relocation. Incentives are intended to offer homeowners the assistance necessary to make this life-altering change

As approved in the initial Action Plan and APA3, the Program provided for a relocation incentive to homeowners in the Acquisition Program that covered the difference between pre- and post-storm value. Under APA6, the State replaced the relocation incentive with homeownership assistance to ensure that homeowners can relocate into an equivalent circumstance. The State now offers a combination of optional relocation assistance and rehousing assistance if necessary and justified. The amount of incentive payments offered is determined by formula developed in consultation with HUD.

For existing transactions where a contractual offer has been made under the Acquisition Program approved by HUD in APA3 or APA6, the State may continue to follow the process in effect at the time of the offer. However, once APA8 is approved and codified in an updated grant agreement from HUD, the State will take the necessary steps to transition to the changes in the Program outlined below. All transactions moving forward will follow that process.

Assistance may include:

- Subsidized interest rates and mortgage principal amounts, including making a grant to reduce the effective interest rate on the amount needed by the purchaser to an affordable level. (The funds granted would have to be applied towards the purchase price.)
- Finance the cost of acquiring property already occupied by the household at terms needed to make the purchase affordable.
- Pay all or part of the premium (on behalf of the purchaser) for mortgage insurance required up-front by a private mortgagee. (This would include the cost for private mortgage insurance.)
- Pay any or all of the reasonable closing costs associated with the home purchase on behalf of the purchaser.
- Pay up to 100% of the down payment required by the mortgagee for the purchase on behalf of the purchaser.
- Additional relocation expenses such as moving or storage costs
- The state will also explore other options of assistance such as mortgage guarantees

All customary costs associated with the acquisition of private property, including appraisal, legal, survey, title preparation and insurance, may be paid using this source of funds.

Demolition costs may also be paid using this source of funds.

Site work and property maintenance costs, including environmental remediation, grading and security, may also be paid using this source of funds.

Households earning less than 80% of the area median income will be prioritized in the order of processing applications for assistance.

#### *Disposition*

Acquisition activity will qualify under one of the CDBG national objectives depending on the use of the acquired real property following its acquisition. A preliminary determination of compliance may be based on the planned use. Most Acquisition properties will be acquired for a general purpose, such as housing or economic development. Actual specific projects have not yet been identified. The final determination of national objectives compliance will be based on the actual use of the property, excluding any short-term, temporary use. Where the acquisition is for the purpose of clearance that will eliminate specific conditions of blight or physical decay, the clearance activity may be considered the actual use of the property.

The program will document the general use intended for each property and the national objective expected to be met in the Policies and Procedures.

Any subsequent use or disposition of the cleared property will be treated as a “change of use,” under 24 CFR 570.489(j), as applicable. If the disposition constitutes a change of use, the State will give reasonable notice to affected citizens and allows them an opportunity to comment, and ensure that the new use meets one of the national objectives. If the new use will not meet one of the National Objectives, the program will reimburse to the CDBG-DR program the proceeds from sale of the property at the fair market value, less transactional costs.

## NY Rising Rental Buildings Recovery Program

*The New York Rental Buildings Recovery Program was approved in the State's initial Action Plan. Programmatic changes were made in APA 6. This Amendment will serve to consolidate all prior changes and to cohesively reflect current implementation and policy updates.*

**Activity Type:** Rental Repair/Reconstruction

**National Objective:** Low- and Moderate- Income, Urgent Need, or Slum and Blight

**Geographic Eligibility:** Disaster-declared counties outside of New York City

**Eligible Activity:** Sec. 105 (a) (1) (4) 42 U.S.C. 5305(a) (4) New Construction: FR-5696-N-01(VI) (B) (28)

**Program Description:** The New York State Rental Housing Recovery Initiatives are now broken into two major Programs:

- The Rental Properties Program, formerly named the Small Rental Properties Program, is designed to assist storm-damaged rental properties. To promote efficient administration, separate program components for one-four unit properties and five-seven unit properties have been merged into one. The Rental Properties Program may also serve storm-damaged properties with 8 more units. Davis Bacon wages and other labor standards provisions apply where CDBG-DR is used for construction in properties of eight or more units.
- The Multi-Family/Affordable Housing Program is designed to assist larger rental housing properties (i.e. projects of eight or more units). This Program supports the preservation (i.e. reconstruction/repair/mitigation) of governmentally assisted affordable housing and other rental housing developments damaged by Hurricane Irene, Tropical Storm Lee, and/or Superstorm Sandy, as well as the production of new affordable housing developments designed to help replace the rental units lost through the storms.

Owner-occupied properties with two-units (those with one homeowner unit and one rental unit) will continue to be assisted through the Homeowner Program.

The State continues to provide assistance for rehabilitation, reconstruction, and assistance for mitigation in a coordinated fashion through the same program component rather than through separate initiatives as originally outlined.

### 1. The Rental Properties Program

This Program is designed to restore residential rental properties located outside of New York City that were damaged by Hurricane Irene, Tropical Storm Lee, and/or Superstorm Sandy. The Program is intended to assist owners of damaged small and larger residential rental properties.

The Program operates under the following guidelines:

- The Program covers costs for reimbursement of eligible repair/replacement costs; the repair/replacement of damaged real property; replacement of disaster-impacted non-luxury residential

appliances; and environmental and health hazard mitigation costs related to the repair of disaster-impacted property.

- The Program also covers costs (including elevation) to mitigate future damage for those properties that are located within a 100-year floodplain.
- Assistance is provided for unmet repair/reconstruction and elevation/mitigation needs after accounting for all federal, State, local and/or private sources of disaster-related assistance, including, but not limited to property owners' and/or flood insurance proceeds.
- Assistance for repair and elevation activities is capped at the lesser of a specified dollar amount to be determined by New York State, or the ACTUAL unmet repair, and elevation need as described above. To direct sufficient levels of assistance to those most in need, a higher overall dollar cap amount may be applied to those properties that are occupied by low- and moderate- income households and/or those properties serving low- and moderate- income renter households, where the need is justified.
- Household income verification documentation is required for tenants in affordable units for reporting purposes.
- Priority is given to owners of buildings where a minimum of 51% of the units are occupied by or will be occupied by low- and moderate- income persons and to owners of property with remaining repair needs.

**Maximum Award:** Following the analysis of the needs of the affected communities and the availability of funding, the Program set the following cap amounts and allowances:

- Base Cap: The base cap amount for rental property repair and/or reconstruction coverage is \$150,000. Owners are eligible for a \$50,000 cap increase for each additional unit.
- Low- and Moderate- Income Allowance: Rental property owners who are identified to be low- or moderate- income (total household income is less than or equal to 80% of area median income) will qualify for an increase of \$50,000 in the cap amount. (\$150,000 Base + \$50,000 low- and moderate-income= \$200,000 base cap).
- Elevation Allowance: Rental property owners with damaged properties within the 100-year floodplain are eligible for up to a \$100,000 increase in the base cap amount for a 1- or 2-unit property. The allowance is increased by \$25,000 for each additional unit. The maximum cap increase for elevation is \$225,000.
- Reconstruction Cap: Property owners that require reconstruction are eligible for a base cap of \$300,000 (subject to DOB). For each additional unit (up to 7 units), there is a \$50,000 per unit award cap increase for a maximum award cap of \$600,000.

## 2. The Multi-Family/Affordable Housing Program

This Program supports both the preservation of governmentally-assisted affordable housing and other rental housing developments that were damaged by Hurricane Irene, Tropical Storm Lee or Superstorm Sandy, as well as the development of new affordable housing to address the rental housing shortage created by the storms and to help revitalize hard hit communities. Assistance is limited to projects located in storm damaged counties outside of New York City. The State estimates there are still outstanding needs for affordable rental within the impacted communities, within the Multi-Family/Affordable Housing Fund, it is envisioned that the allocation of CDBG-DR funds dedicated to rental will be leveraged both by tax-exempt private activity bonds (PAB), 4% low income housing tax credits, 9% tax credits, and private financing.

Preservation assistance is targeted to those storm damaged projects that serve low- and moderate- income residents, including special needs and other vulnerable populations. Pursuant to HUD's directive outlined in

its November 25, 2013, Federal Register Notice, preservation assistance through the fund focuses on repairing and retrofitting those governmentally assisted housing projects that have continuing and pressing unmet needs. In keeping with HUD's directive, assistance is targeted to public housing and other affordable housing developments assisted through government programs (including public housing, Low Income Housing Tax Credit, Section 8, McKinney Homeless Housing, and New York State's own affordable housing programs) where future affordability is assured through long-term contracts. As the State outlined in introduction to this housing section, when needs are identified by Public Housing Authorities, the Multi-Family/Affordable Housing Program is one of the tools used to meet the commitment of up to \$10 million dollars made in the first action plan.

Preservation Assistance offered through the Multi-Family/Affordable Housing Fund operates under the following guidelines:

- It supports reimbursement of eligible repair/replacement costs; the repair/replacement of damaged rental properties with eight or more units; replace disaster-impacted non-luxury residential appliances; and cover environmental health hazard mitigation costs related to the repair of disaster-impacted property.
- When practical and warranted, it also covers the cost of mitigating future damage (including elevation when practicable and cost effective) for properties located within a 100-year floodplain. Assistance is for "unmet" repair, reconstruction, and mitigation needs after accounting for all federal, State, local and/or private sources of disaster-related assistance, including, but not limited to, property owners' and/or flood insurance proceeds.
- Assistance for repair, reconstruction, and mitigation activities is capped at the lesser of a specified dollar amount to be determined by New York State, or the unmet repair, reconstruction and mitigation need as described above.
- To direct sufficient levels of assistance to those most in need, especially LMI households, a higher overall dollar cap of \$50,000 per unit may be applied to those properties that serve special needs or other hard to house groups or provide a significant number of units designated for LMI households.

The State recognizes that in some instances hard hit communities and the tenants of New York State may be best served through the development of new, more sustainable units designed to replace some of the lost rental units that were either located in unsuitable sites or were antiquated in their design. The Multi-Family/Affordable Housing Program offers assistance for the development of new selected affordable housing projects to alleviate the shortage of affordable housing created or exacerbated by Hurricane Irene, Tropical Storm Lee, and/or Superstorm Sandy. CDBG-DR assistance provided through the Program is generally limited to assisting affordable housing units. However, mixed income developments are eligible for assistance if developers are able to leverage other funding to support the non-low- and moderate- income units. This initiative works to create new rental housing units through a variety of means, including the substantial repair of uninhabitable rental properties, the conversion of non-residential structures, and new construction. The Program may also "produce" new rental units through the repair of partially occupied properties that have a significant number of vacant, uninhabitable units.

Assistance is awarded through a process that is outlined in the Multi-Family/Affordable Housing Program policies and procedures. This process considers, among other things, the following factors:

- Potential impact on addressing affordable rental housing shortages created or exacerbated by the storms, including replacing damaged housing.
- Extent to which the project serves households displaced by the Storms, the homeless or near homeless, special needs populations, and other vulnerable groups that are traditionally hard to house.

- Extent to which the project delivers dwellings that are stronger, safer, and more disaster resilient.
- Extent to which the project advances Community Reconstruction Program goals or meets other design criteria established by the State.

Development Assistance awarded through the Multi-Family/Affordable Housing Fund operates under the following guidelines:

- It supports the costs of developing rental housing units including the construction, reconstruction, or repair of quality rental units in multi-family developments of eight or more units (projects involving eight or more small buildings on a single property are eligible).
- When practical and warranted, it also covers costs (including elevation) to mitigate future damage for properties that are being repaired. The elevation of the structure and application of storm hardening features are considered part of the cost of construction for new construction and are consequently eligible expenses.
- All projects are subject to the duplication of benefits (DOB) provisions of the Stafford Act. Consequently, to the extent that the Program does select a project that sustained damage through Irene, Lee, and/or Sandy, and did receive other forms of assistance as a result, the State may not duplicate any earlier assistance received by the owner.
- Development assistance is capped at the lesser of a specified dollar amount to be determined by New York State, or the development funding gap. To direct sufficient levels of assistance to those most in need, especially low- and moderate- income and minority households, a higher overall dollar cap amount may be applied to those properties that serve special needs or other hard to house groups or provide a significant number of units designated for low- and moderate- income households.

### Public Housing Assistance Relief Program (PHARP)

*This Program replaces the Sandy Housing Assistance Relief. At this point in the recovery process, the State is focusing on assisting vulnerable populations by investing in the repair and resilience of public housing units damaged by the storm, and the construction of new public housing to replace public housing units that were damaged during the storms.*

**Activity Type:** Rental Assistance and rental housing repair/reconstruction

**National Objective:** Low- and Moderate- Income

**Geographic Eligibility:** Disaster-declared counties outside of New York City

**Eligible Activity:** Sec. 105 (a)(1) (4)(8)(9) 42 U.S.C. 5305 (a)(1)(4)(8)(9) New Construction: FR-5696-N-01(VI)(B)(28)

**Eligible Applicants:** The eligible applicants for the CDBG-DR public housing assistance are Public Housing Authorities and landlords who own affordable housing units damaged by Hurricane Irene, Tropical Storm Lee, and/or Superstorm Sandy.

**Description:** The State is committed to assisting the unmet needs of the Public Housing Authorities. As outlined in the unmet needs section of this amendment, the State along with the PHAs and FEMA are still in the process of assessing their unmet needs. The State has met with housing authorities in Freeport, Hempstead, and Long Beach to review their repair and mitigation needs and the status of their efforts to obtain resources from FEMA PA, 404, 406 mitigation, and private insurance. The State has committed up to \$10 million dollars as outlined in the initial action plan to assist these authorities. As their remaining needs are identified, the State will determine the most appropriate means of meeting these needs. Assistance to public housing may be provided through the Multi Family/Affordable Housing Fund, the Non Federal Share Match Program under the infrastructure program, and the Community Reconstruction

Program. Housing authority recipients of assistance may use funding to invest in housing owned by the housing authority itself or to undertake development in partnership with private entities, or to provide financing to a private entity developing housing in whole or in part affordable to very-low income households.

CDBG-DR funds under PHARP include but are not limited to the following:

- Assistance to public housing units for damage repairs as a result of the storms
- Additional CDBG-DR eligible assistance as needed to those entities and service providers who assist vulnerable populations.

### Public Housing Authorities Program

The State is committed to assisting the unmet needs of the Public Housing Authorities. As outlined in the unmet needs section of this amendment, the State along with the PHAs and FEMA are still in the process of assessing their unmet needs. The State has met with housing authorities in Freeport, Hempstead, Long Beach and Kiryas Joel to review their repair and mitigation needs and the status of their efforts to obtain resources from FEMA PA, 404, 406 mitigation, and insurance. The State has committed up to \$10 million dollars as outlined in the first action plan to assist these authorities. As their remaining needs are identified, the State will determine the most appropriate means of meeting these needs through the Multi Family/Affordable Housing Fund; the State Housing Assistance Relief Program; the Community Reconstruction Program and the Non Federal Share Match Program under the infrastructure program.

The State currently anticipates that the Sandy Housing Assistance Relief Program will be the primary mode of assistance for public housing authorities.

## NY Rising Economic Development and Revitalization

*The State's Economic Development programs were approved in the State's initial Action Plan and revised in subsequent amendments. They are currently operational as previously described. At this juncture, the State continues to address the most immediate economic recovery and revitalization needs of small businesses. Through the Community Reconstruction Program, workforce and technical assistance programs are being developed at the local and regional levels to address identified economic revitalization needs in storm-impacted communities and the State is committed to identifying opportunities that address ongoing economic revitalization needs. In this Amendment the State is expanding eligible applicants to include institutes of higher learning and for profit businesses. This Amendment will serve to consolidate all prior changes and to cohesively reflect current implementation and policy updates.*

**Activity Type:** Economic Revitalization

**National Objective:** Low- and Moderate-Income, Urgent Need, or Slum and Blight

**Geographic Eligibility:** All damaged declared counties

**Eligible Activity:** Economic Development Sec. 105(a)(2), (8),(14), (15), (17), (21), (22) 42 U.S.C. 5305(a)(14) (15) (17) (22); Economic Revitalization FR-5696-N-01 (VI) (D); Tourism FR-5710-N-01 (ii) (3)

**Program Description:** This Program provides for a broad spectrum of activities to support the varied needs of communities recovering from the disaster. Current economic development efforts focus on small business grants, loans and mentorship activities and may expand to address long-term economic development goals of impacted communities. The State continues to implement these recovery-focused economic development programs:

- The Small Business Grant and Loan Program provide small businesses the financial support needed to stabilize their business operations. To date, the Small Business Grant and Loan

Program has awarded 696 grants for a total of \$25,500,000. The State is committed to the recovery of small businesses and intends to use this final allocation to continue that assistance.

- The Coastal and Seasonal Tourism Industry Programs, which are being implemented in tandem with the Small Business Grant and Loan program, targets resources to these heavily impacted industries. The Coastal and Seasonal Tourism Industry programs have historically been administered in tandem with the Small Business Grant and Loan program, providing additional assistance to those applicants that qualify for the Grant program AND demonstrate they fall within a coastal or seasonal tourism industry. The updated budget reflects the Programs more accurately by rolling up the assistance for the Coastal and Seasonal Tourism Industry Programs into the Small Business Grant and Loan Program budget.
- The Tourism Marketing Program provides critical promotion of impacted communities, many of which rely on tourism dollars as part of their economy.
- The Business Mentor NY Program provides mentorship support to small businesses to give businesses the tools to continue to recover and grow.

As needs related to long-term economic development emerge, additional activities to support the business sector may include: small business technical assistance; commercial redevelopment or enhancement; development of public facilities related to economic development; industry cultivation and/or preservation; workforce training or development; planning for economic growth and other activities to catalyze the state's economic recovery. Eligible activities may also include infrastructure development for economic recovery and revitalization purposes as well as mitigation, resiliency and green building efforts to protect, strengthen and increase efficiency of such investments. It is through this comprehensive approach to revitalization that the State will continue to support its communities as they rebuild, recover and grow.

Economic Revitalization can include any activity that demonstrably restores and improves some aspect of the local economy; the activity may address job losses, or negative impacts to tax revenues or businesses. All Economic Revitalization activities must address an economic impact(s) caused by the disaster (e.g., loss of jobs, loss of public revenue).

**Eligible Applicants:** Eligible applicants include local governments and other public agencies, institutes of higher learning, for-profit businesses, nonprofit organizations and other State agencies.

**Eligible Criteria:** Economic Revitalization efforts enable a multi-pronged approach to ensure the businesses in New York's most impacted areas are provided the support they require, including:

- Coordination of priority projects and key economic revitalization needs identified within a Community Reconstruction Plan;
- Alignment to state and local long-term economic development priorities;
- Financial support to impacted communities for economic revitalization efforts including, but not limited to:
  1. Financial and technical assistance to microenterprise, small and medium-sized businesses;
  2. Prioritized economic revitalization assistance to impacted low- and moderate- income communities;
  3. Workforce training in key economic growth sectors;
  4. Development of high-growth industry clusters;
  5. Revitalization and preservation of legacy sectors including agriculture, aquaculture, and fisheries;
  6. Enhancement of recreational and cultural venues and organizations to increase job opportunities and increase local tax revenues;
  7. Rebuilding and expansion of infrastructure to attract and retain businesses and improve job access;
  8. Rebuilding and development to mitigate and increase resiliency for future impacts;

9. Conducting planning activities to develop comprehensive revitalization and development plans; and,
10. Enhancement and/or development of public facilities to further the economic revitalization of storm-impacted areas.

## NY Rising Community Reconstruction (NYRCR) Program

*The NYRCR Program was approved in the State's initial Action Plan. Programmatic changes were made in APA6. This Amendment provides clarity on the Program description and increases the budget for sub-recipient Program delivery costs. This Amendment will serve to consolidate all prior changes and to cohesively reflect current implementation and policy updates.*

Through its ground up planning process, the NYRCR Program identified numerous infrastructure, housing, and economic development initiatives which will be implemented through this Program. The revised budget reflects \$63.9 million in additional funding to program delivery costs. The cross-cutting projects preliminarily identified in NYRCR Plans include housing and economic development projects.

**Activity Name:** NYRCR Program

**Type:** Infrastructure, Housing, Economic Development, Planning

**National Objective:** Low- and Moderate- Income, Urgent Need, or Slum and Blight

**Geographic Eligibility:** Disaster-declared counties, including New York City

**Eligible Activity:** 105 (a) all provisions 42 U.S.C. 5305(a)

**Program Description:** The NYRCR Program was established by Governor Cuomo to provide additional rebuilding and revitalization assistance to communities damaged by Hurricane Irene, Tropical Storm Lee, and Superstorm Sandy. This program empowers communities to prepare locally-driven reconstruction plans that identify innovative resiliency projects and other actions to help each community build back better and smarter in the face of future extreme weather events.

The communities participating in the NYRCR program were selected principally using FEMA Individual Assistance (IA) Full Value Loss (FVL) total claims from Hurricane Irene, Tropical Storm Lee, and Superstorm Sandy obtained in March 2013. Community populations measured in the 2010 census and other factors were considered on a discretionary basis. The NYRCR planning process originally began with 45 Round I Planning Areas, comprising 97 storm-impacted localities. Based on the initial success and popularity of the planning process, the State revisited available data to ensure the most impacted localities were included in the Program. The result was the addition of 22 localities—four of which were added to existing Round I Planning Areas and 18 of which formed 16 new Round II Planning Areas. Therefore, Round I includes 45 Planning Areas comprising 101 localities and Round II includes 16 Planning Areas comprising 18 localities.

After identifying impacted communities to participate in the NYRCR Program, the Governor announced that the GOSR would allot CDBG-DR dollars to fund the implementation of eligible projects identified in NYRCR Plans in each participating locality. These allotments were calculated by taking approximately 25% of each respective locality's total IA FVL, with a minimum allotment of \$3,000,000 and a maximum allotment of \$25,000,000. Additionally, a set-aside of \$24,000,000 was made available for the implementation of projects proposed by Round I Planning Committees through a competitive process for the most innovative practices in categories such as public engagement, green infrastructure, and protection of vulnerable populations. Eight Round I awards were made through the competitive fund. For Round II, GOSR has set aside \$3,500,000 for a commensurate competitive process outlined above. All said, \$624,726,846 has been allotted to fund the implementation of eligible projects identified in NYRCR Plans. In both rounds of the planning process, each NYRCR Planning Area is represented by a Planning Committee composed of a cross-section of local civic, business, and nonprofit leaders who participate on

a voluntary basis. As approved in the initial Action Plan, the State allocated \$25,000,000 to support Round I planning efforts. In January 2014, the State made available an additional \$7,000,000 for Round II planning efforts. The CDBG-DR funds are used to hire teams of professional planning consultants to support the citizen Planning Committees in their efforts. As part of the planning process, Committees are required to hold regular Planning Committee meetings, which are open to the public, and at least four larger-scale public engagement events designed to gather input from the greater community. To date, the NYRCR Program has held at least 800 Planning Committee meetings and public engagement events.

Upon completion of the planning process, each Planning Committee submits a NYRCR Plan to the State. Once NYRCR Plans are submitted, GOSR works to ensure implementation of a number of projects included in the plans that are deemed eligible for CDBG-DR funding. Final plans will also include projects that are not CDBG-DR eligible, as well as long-term resiliency recommendations that are not intended for implementation through the NYRCR program. There is a commitment by the State to continue to work with the Committees to look for alternative funding sources for these projects. The State has successfully secured alternative funding sources for projects through the State's Consolidated Funding Application and Regional Economic Development Council process. In addition, the State is examining possible alternative funding sources such as community development banks, other federal grants, and philanthropic organizations for projects that appear across NYRCR Plans. Lastly, the State is identifying community-based organizations that may be interested in implementing projects.

Additionally, \$24,000,000 was made available to Round One communities through a competitive process for the most innovative practices in categories such as public engagement, green infrastructure, and protection of vulnerable populations. Eight Round I awards were made through the competitive fund. For Round II, GOSR has allocated \$3,500,000 for the competitive process outlined above.

In the second allocation, the State increased the NYRCR budget to more than \$650 million of CDBG-DR funds to support the implementation of community-developed resiliency projects as a result of the planning process. The State only funds projects that address a recovery need arising from the disaster(s), meet a CDBG National Objective, and constitute an eligible CDBG activity.

**Implementation Approach:** As the Committees draft their final reconstruction plans, they are asked to identify "Proposed Projects" where CDBG-DR dollars are intended to be the full or partial source of funding for the project. In an effort to develop resilient, cost effective and successful projects for implementation, GOSR is also partnering with the Department of State to engage the Governor's Regional Economic Development Council State Agency Resource Teams (SARTs) to provide additional review of projects and guidance to the Committees.

After the final submission of the NYRCR Plans, GOSR begins the implementation process. The State conducts a formal review of CDBG-DR eligibility for projects, as well as an initial feasibility analysis of the projects. In most cases an eligible sub recipient is identified by the NYRCR program. Potential classes of sub recipients include but are not limited to, local governments (such as county and special districts), nonprofit organizations, and State agencies. The State may also implement select projects directly by either issuing a request for proposals ("Direct Selection") through a Notice of Funding (NOFA), or by utilizing other eligible implementation strategies. The State may also group like projects and projects which share regional boundaries to create a reasonable and cost effective implementation process when applicable. The State further outlines the implementation process as well as the selection process for the entities who implement these projects in the NYRCR Program Policy and Procedure Manuals.

**Eligible Applicants:** The State intends to engage both units of local government and local nonprofit organizations, as well as appropriate State agencies, authorities, and public benefit corporations, to carry out these projects.

**Eligible Activities:** To the extent activities are disaster recovery related and part of the NYRCR Plans submitted to the State, eligible activities for this program include, but are not limited to the following:

- Acquisition of real property, public facilities and improvements, clearance, rehabilitation, reconstruction, and construction of buildings;
- Removal of architectural barriers to access by the elderly and handicapped;
- Disposition of real property, including costs associated with maintenance and transfer of acquired properties;
- Provision of public services, such as job training;
- Infrastructure projects including but not limited to payment of the non-federal share of other federal matching grant programs;
- Relocation associated with projects that utilize one or more of the other eligible activities listed here;
- Activities carried out through nonprofits;
- Assistance to neighborhood-based organizations, local development corporations, and nonprofits serving the development needs of communities; and
- Energy efficiency/conservation programs.

Economic Revitalization activities, as listed in the above Economic Development section, may also be utilized within the implementation of the NYRCR Program.

## NY Rising Infrastructure Program

*The State's Infrastructure Program has been previously approved. The Program below provides a reorganization of how the State will deliver program components previously discussed in prior action plan and amendments. This amendment increases the budget for the program to address identified unmet needs that should be addressed to rebuild and repair impacted infrastructure and to make New York's storm-impacted infrastructure more resilient to future storms. The description of the Infrastructure Program below supersedes the Action Plans and all previous amendments. This Amendment will serve as the current version of the Program.*

**Activity Type:** Public Facilities and Local Government Support

**National Objective:** Low- and Moderate- Income or Urgent Need

**Eligible Activities:** Public facilities 105(a)(2); Code Enforcement 105(a)(3); Clearance 105(a)(4); Public services 105(a)(8); Non-federal share 105(a)(9) Planning 105(a)(12); Energy Use Strategies 105(a)(16); 42 U.S.C. 5305(a)(2); Economic Revitalization FR-5696-N-01 (VI) (D);

**Geographic Eligibility:** The program can provide funds to counties in New York that were Presidentially Declared disasters in 2011, 2012 or 2013. This includes events commonly referred to as Hurricane Irene, Tropical Storm Lee, Superstorm Sandy, the 2013 Mohawk Valley Floods and Winter Storm NEMO, as well as the severe winter storm on December 26-27, 2010 and the severe storms from April 26-May 8, 2011.

**Eligible Applicants:** Eligible applicants for the Infrastructure programs outlined below include: State, local, and county governments; State agencies and authorities; public schools (K-12) and universities; first responders, including volunteer fire and EMS facilities, public housing authorities and other units of government; and private not for profits that entities that are eligible to receive federal recovery funds within federally-declared counties. GOSR will work with State agencies, local governments, and other potential recipients to determine their eligibility for each component of the program.

New York City received its own CDBG-DR allocation to address infrastructure repairs and rebuilding. Therefore, although geographically eligible, the GOSR Infrastructure program will utilize its resources primarily outside of New York City, with two exceptions: providing funds for infrastructure projects

through the New York Rising Community Reconstruction Program and for funds designated to Rebuild by Design that are located in Staten Island.

**Program Description: Program Description:** The State's Infrastructure Program, as approved in the initial Action Plan and subsequent amendments, supports the use of CDBG-DR funds to address two primary needs: (1) provide support to storm impacted units of government and other eligible entities with payment of their non-federal share requirement ("match") so that they can access other federal disaster recovery resources; and (2) the development of stand-alone CDBG-DR infrastructure projects that are necessary to address identified recovery needs in communities not funded by other Federal recovery programs. This APA increases the budget for these activities by \$357 million, to a total of more than \$1.13 billion.

New York's infrastructure assets are still recovering from Hurricane Irene, Tropical Storm Lee, Superstorm Sandy, and more recent federally declared disasters. The total cost of recovery from these storms is still being determined however. The State will have a better estimate as federal entities such as FEMA and the United States Department of Transportation (DOT) complete their assessments and determine the full costs of eligible repairs.

However, through the unmet needs analysis and in consultation with State agency partners, local and county government officials, federal agencies, and other public entities, it is clear that the unmet need for infrastructure recovery is great. The most recent unmet needs analysis identifies more than \$12 billion in outstanding unmet need. This unmet needs analysis confirmed what the State identified in the Action Plan and previous amendments, that, while substantial Federal recovery resources are being provided to assist New York recover from Superstorm Sandy and other federally-declared events, the amount of available resources needed to rebuild damaged infrastructure and mitigate against future storms, far exceeds available resources.

The State continues to work with all federal partners to maximize available repair and mitigation funds. In particular the state has been aggressively working to develop solutions to address the recovery needs of local, county and state government agencies and has been focused on ensuring that publically-owned critical infrastructure assets in the energy, health care, transportation and wastewater sectors are not only identified and funded, but are being repaired and constructed in ways that is more resilient. This is intended to create a more resilient environment for New York's residents and to safeguard the billions of dollars of Federal investment provided to recover and rebuild.

The State has created an Infrastructure Program that addresses these outstanding needs. It is working aggressively to develop solutions to address the recovery needs of local, county and state government agencies and focusing on ensuring that publically owned critical infrastructure assets in the energy, health care, transportation, and water sectors are rebuilt more resiliently.

As approved in the Action Plan and previous amendments, the Program is organized into two sub-programs: a non-federal share "match" program which supports CDBG-DR eligible activities and the Local Government and Critical Infrastructure Program to support stand-alone infrastructure projects. An overview of these components is below. Further program details are provided in the program policies and procedures.

As part of these programs, the State continues to support projects that restore, enhance and make more resilient the region's natural resource assets through the use of green infrastructure. These projects provide a natural line of defense to safeguard communities against future disasters in a more sustainable holistic way. Marquee examples of these projects will be the two (2) Rebuild by Design projects located in Nassau and Richmond counties. These projects which total \$185 million are part of more than \$250 million directed to natural resource recovery. All of the state's infrastructure projects where possible and feasible will be developed to support green alternatives.

1. Non-Federal Share Match Program

Many federal programs require that grant recipients provide a non-federal share, match” of their overall project budget as a condition of funding. In the aftermath of large disasters, this requirement can place a significant fiscal burden on storm-damaged communities. To provide relief to these entities, Congress allows CDBG-DR funds to be the only source of federal funding that can be used for this purpose.

Given this provision, GOSR has designed the Non-federal Share “Match” Program, approved in the initial Action Plan and clarified in APA1 and APA6, to assist storm-impacted entities with the cost share associated with other federal disaster recovery funds. Specifically the program uses CDBG-DR funds to provide the required non-federal cost share, or “match,” payment so that these entities can complete recovery and draw down the larger share of federal recovery funds. Rates for each of the federal programs vary by disaster. These are further defined below.

In this amendment, the State clarifies which federal programs will be eligible for the matching of the non-federal share.

**TABLE 30: FEDERAL PROGRAMS ELIGIBLE UNDER THE STATE’S MATCH PROGRAM**

Federal Program	Federal Agency	Federal Cost Share	State Cost Share	Disasters
<b>Storm Mitigation Loan Program</b>	EPA	84%	16%	Sandy
<b>Hazard Mitigation Grant Program (HMGP)</b>	FEMA	75%	25%	Sandy, Irene, Lee, NEMO, Mohawk Floods.
<b>Individual Assistance (IA)</b>	FEMA	90%	10%	Sandy
<b>Public Assistance (PA)</b>	FEMA	75%	25%	Irene, Lee, NEMO, Mohawk Floods.
<b>Public Assistance (PA)</b>	FEMA	90%	10%	Sandy
<b>Direct Federal Assistance (DFA)</b>	FEMA	90%	10%	Sandy
<b>Federal Highway Administration Emergency Relief (FHWA-ER)</b>	DOT	75%	25%	Irene, Lee, Sandy

Sectors that will receive funds from the match programs shown are:

- Local and county Government and their Departmental units
- State agencies and Authorities
- Schools (K-12) and Universities
- First Responders – Volunteer Fire and EMS facilities,
- Critical Infrastructure Facilities
- Public Housing Authorities
- Other local and county Federal program participants eligible to receive Federal Recovery Funds

**FEMA Programs**

FEMA provides funds to eligible applicants who must document storm-related damages. As a cost sharing program, FEMA requires that the State certify that local applicants that receive FEMA funds have met the “local match” requirement. The match rate is determined by disaster based on the extent of damage. The Federal/local cost-share ratio is normally 75% in Federal funds and 25% state or local funds. Due to the catastrophic nature of Sandy the federal cost-share was increased to 90% reducing the local share to 10%. Under FEMA regulations however, the Hazard Mitigation Program (HMGP) is always a 75/25 cost share program without regard to disaster.

1. Public Assistance

FEMA’s Public Assistance Program (PA) is the nation’s primary and largest disaster recovery program. While the number of projects eligible and costs incurred for PA has not been finalized, there are currently over 4,200 projects that have been approved by FEMA under the PA program for Superstorm Sandy. These projects are submitted by more than 1,000 eligible applicants. The State estimates that once final assessments are made by FEMA, the Sandy PA program could exceed \$8.5 billion in New York State. The program’s costs to provide match for non-New York City counties and State agency costs are expected to exceed \$350,000,000 with over \$153,000,000 needed to assist units of government, schools and eligible non-profits. The total project cost for each eligible disaster is shown in the table below.

**TABLE 31: TOTAL PROJECT COST FOR EACH ELIGIBLE DISASTER**

<b>Storm</b>	<b>Number of Eligible Applicants</b>	<b>Total Project Worksheets (PWs)</b>	<b>Total Project Cost (inclusive of federal share and local match)</b>
<b>Hurricane Irene (4020)</b>	1230	9255	\$ 670,975,918
<b>Tropical Storm Lee (4031)</b>	358	2646	\$ 349,861,711
<b>Superstorm Sandy (4085)</b>	1046	4250	\$7,683,098,540
<b>NY Severe Storms and Flooding (4111)</b>	73	125	\$ 29,748,008
<b>NY Severe Storms and Flooding (4129)</b>	189	670	\$ 73,968,580

Source: GOSR Program Data. Project Cost estimates as of 12/1/2014 and 12/2/2014.

As part of its process for its programs, FEMA validates that projects are storm-related. They also account for insurance proceeds and in the calculation for the award reduce cost which helps reduce with duplication of benefit issues. The State, through its review of PA worksheets and supporting documentation, continues to ensure that projects are CDBG-DR eligible and that duplication of benefits does not occur.

While the PA Program has thousands of applicants, the State is playing close attention to applicants who provide services to vulnerable populations and to entities that provide in-kind services that benefit community recovery. These entities, while they may not have large amounts of PA funding, provide critical resources to their communities. As part of its agency-wide commitment to repair and mitigate Public Housing Authorities, GOSR is aggressively working with FEMA and the impacted PHAs to determine not only the PA match needs, covered through this program, but to identify potential resiliency projects that could be funded through the FEMA HMGP program. In addition, the State will continue to engage in conversations with the PHAs to estimate their housing and infrastructure unmet needs. The State is committed to ensuring that the PHAs’ needs are addressed as the population they serve is a priority for the State.

**2. Hazard Mitigation Program**

GOSR will provide the required non-Federal share for the FEMA Hazard Mitigation Grant Program (HMGP) for Hurricane Irene, Tropical Storm Lee, and Superstorm Sandy. Using a global match financing strategy, it will capitalize on the portfolio of projects managed by GOSR that meet HMGP match requirements. This approved strategy will allow state to assist communities who have FEMA HMGP allocations for DR 1957, 1993, 4020, 4031, 4085, 4029 and 4111. GOSR is responsible for administration of a Global Match strategy for these disasters, and in so doing identified projects eligible for both CDBG-DR and HMGP funds that create programmatic, policy, and administrative efficiencies for the State’s recovery.

### **Environmental Protection Agency Sandy State Revolving Fund Program**

The Environmental Facilities Corporation (EFC), a public benefit corporation of New York State, administers the EPA - Clean Water State Revolving Fund (CWSRF), which provides low- or no-interest rate financing to construct water quality protection projects. Following Sandy Congress appropriated similar funds through the “Disaster Relief Appropriations Act, 2013” (DRAA) that were targeted to Sandy impacted facilities. As a part of the CWSRF, EFC is administering these additional Sandy related funds known as Storm Mitigation Loan Program (SMLP). This program provides funding to eligible municipalities to protect water treatment facilities from future storm events. The SMLP operates as a grant – loan program with a 25% grant and 75% zero-interest loan. This program comes with a 20% local match. GOSR will work with EFC and eligible wastewater systems to provide the 20% match.

The first project to be obligated funding through the SMLP is the Bergen Point Final Effluent Pump Station (FEPS) project. This project will receive a total of \$14,510,000 which will result in \$3,175,000 match. Further projects will be identified for the SMLP based on submittals of full applications. The deadline for the first round of project applications to be considered was December 1, 2014.

### **Federal Highway Administration Emergency Relief Program**

Provides funds to repair or reconstruct eligible highways damaged by either natural disasters or catastrophic failure from external causes. The FHWA oversees the ER program through coordination and implementation of disaster relief policies and procedures, provides assistance to agencies applying for funds, and supports agencies with technical review, design, repair, and reconstruction of damaged highway facilities. Emergency work directly following a disaster to restore essential traffic, minimize the extent of damage, and protect remaining facilities that is completed within 180 days of the event is eligible for reimbursement at 100%. GOSR will help cover the local match for eligible applicants.

### **Local Government and Critical Infrastructure Program**

The majority of local governments’ recovery needs are being addressed through the Non-Federal Share Match Program detailed above. However, the State has developed the Local Government and Critical Infrastructure program to provide resources to communities with gaps in funding for essential public services and critical infrastructure. Under this program component, CDBG-DR funds will be used to repair, rebuild, enhance, or mitigate facilities and provide essential public services that were impacted by Superstorm Sandy.

The Local Government Support component is designed to meet additional recovery needs of heavily impacted local governments, school districts and other public entities that play critical roles in local communities. To be eligible for this track, the public entity must have been directly impacted by one of the named storms and have had a significant and acute funding gap in part caused by lost property tax revenue and/or property abandonment.

The State will also work with local governments to assist the continued repair and mitigation of public facilities and services. Additionally, GOSR is aware that many local school districts and local governments face a strain on their capacity to provide essential services. To meet these needs the State will consider development of a financing program that would address loss to key public services resulting from the disasters.

GOSR continues to engage with units of local government and schools to identify gaps in recovery and may assist entities that meet the Program guidelines.

As detailed in APA6, four sectors will be covered through the Local Government and Critical Infrastructure Program.

1. **Energy Infrastructure:** Superstorm Sandy made landfall on Long Island and crippled the region’s largest public energy system, Long Island Power Authority (LIPA). LIPA provides

service to over 90% of Long Island residents. Sections of Long Island were without power for weeks. In addition to rebuilding and repairing LIPA's system from Superstorm Sandy, additional resiliency measures are needed so that future events do not add more repair and rebuilding costs. As a public entity, LIPA is eligible for federal programs, including FEMA's PA program. The State will assist LIPA with its match requirement. GOSR will also assist LIPA with rebuilding, repairing, and making more resilient elements of the system that were directly impacted by the storm.

2. **Local Government Support Program:** The Program is designed to provide funding to those eligible counties with unmet infrastructure and essential service needs that can be directly tied to the storm, and meet CDBG-DR eligibility requirements. The funding is based on a formula that takes FEMA Public Assistance obligated funds and FEMA Housing Damage Estimates into account. The counties that are considered eligible are those that HUD has deemed to be most impacted by Sandy, outside of New York City. Counties will be responsible for identifying and prioritizing eligible projects.
3. **Water and Waste-water Treatment Facilities:** Treatment facilities, such as the Bay Park Wastewater Treatment Facility, are generally located in low-lying areas and thus were heavily impacted by Superstorm Sandy. Total estimates to repair the full slate of storm-impacted facilities in New York State exceeds \$1 billion. The recovery, repair and resilience of these treatment facilities are a priority for the Governor's Office of Storm Recovery. The eligible FEMA PA assistance projects, including the amount of 406 mitigation measures to be applied to these low-lying facilities, are still being determined. Depending on the final eligibility determinations by FEMA and or EPA, the Governor's Office of Storm Recovery may, depending on the availability of funds, allocate CDBG-DR funds to assist with gap funding for the non-federal share of some of these projects.
4. **Natural Resource Infrastructure:** This program is designed to promote the State's commitment to green infrastructure, meet recommendations made by the Hurricane Sandy Rebuilding Task Force, and embrace HUD's recommendation that grantees incorporate natural resiliency measures into infrastructure projects. This program will house two RBD projects (mentioned in the Rebuild by Design section of this document). The State will also use funds to address the recovery and rebuilding needs of State agencies and units of local government who pursue projects that are natural resource based and or incorporate "green infrastructure" methods in project design. Examples of projects that may be developed include: restoring, developing, and/or enhancing natural barrier dune systems, wetland habitats, near shore vegetation and forest canopies; creating living shorelines; and restoring man-made or natural beach or riverine environments.

### **Resilience Performance Standards**

The State is committed to implementing resiliency performance standards for all infrastructure projects. The State considers how requirements related to flood-proofing, wind-resistance and other mitigation efforts associated with rebuilding more resilient structures and communities can be achieved. Working with the New York State Department of Homeland Security and Emergency Services (DHSES), the State utilizes the mitigation principles of FEMA's Hazard Mitigation Program in the development of its resiliency measures.

GOSR is also engaging State agencies and partners with expertise in planning and implementing resiliency projects. Under contract to GOSR are New York State's Department of State (DOS) who provides planning advisory services related to GOSR activities and community resiliency efforts and the Department of Environmental Conservation which acts as the State's regulator and primary environmental steward.

In addition, members of the RISE research team are participating in establishing the New York State Center for Clean Water Technology in conjunction with the larger Suffolk County Water Quality Initiative. The Center will research, develop, and commercialize nitrogen-removal technology, generating valuable insights into performance standards for investments in water quality improvement.

On behalf of the State, RISE continues to refine a set of performance standards that the State uses to measure resiliency within a project. These include:

- Robustness (ability to absorb and withstand disturbances and crises)
- Redundancy (excess capacity and back-up systems, which enable maintenance of the core functionality in an event of disturbance)
- Resourcefulness (ability to adapt to crises and respond flexibly)
- Response (ability to mobilize quickly in the face of crises)
- Recovery (ability to regain a degree of normality after a crisis)

Once this index was compiled, the State reviewed the standards for appropriateness and feasibility of implementation. The State also leverages the SUNY Rockefeller Institute's impact research to inform performance standards. With input from RISE, private stakeholders, and public agencies including the federal agency partners, affected State agencies and units of local government, the State determined a set of performance standards and implemented them where appropriate.

### Covered Projects Previously Approved in APA6

APA6, which was approved in May 2014, included details of three Covered Projects: the Bay Park Wastewater Treatment facility; LIPA's energy system; and the Bridge Scour Project which will address the need to repair and make bridges in impacted communities across the State more resilient. Each of these projects is considered a covered project because the amount of Federal funds provided by FEMA to repair the facilities combined with the non-federal share portion exceeds the \$10 million CDBG-DR and \$50 million or more total project threshold for Covered Projects.

As a result of a federally-approval State-initiated financing method, the State's bridge scour may not require CDBG-DR funds at this time. The LIPA and Bay Park projects however, are among the largest single awards in FEMA history. Together these projects total \$2.2 billion. They will not only restore the assets to their pre-storm condition but it will make them more resilient to future events and make Long Island communities more resilient. Both projects are still active and critical to community recovery. The State will be providing CDBG- DR funds to assist with a portion of the required non-federal share match as well as to potentially build stand-alone projects.

The State continues its commitment to address storm-related recovery actions at the Bay Park Wastewater Treatment Facility in Nassau County as mentioned in the covered project section of APA6. With a Federal settlement in place to address storm-related damages through the FEMA PA Program, the State's commitment to assist Nassau County is to provide the non-federal share of rebuilding at Bay Park, \$81 million and to provide up to \$20 million to install a generator will prevent future power losses to the system. This will serve to protect communities located near the plant as well as to minimize outflows to bays and natural resources areas.

Additionally, while GOSR recognizes the funding shortfall in its current CDBG-DR allocation due to other program needs, program staff are actively engaged with other State and federal agencies to help identify potential funds for a future outfall pipe at Bay Park.

The State has also continued to work with Long Island Power Authority to address its continued recovery needs as it is the primary public energy provider to Long Island. GOSR has committed to assist LIPA cover a portion of storm related recovery needs through assisting with match obligation. From Hurricane Irene, Tropical Storm Lee and Superstorm Sandy, LIPA's total match obligation exceeds \$200 million

with over \$1.4 billion in damages to the energy system coming from Superstorm Sandy, which is used by 95% of the Long Island's residents.

### New Covered Project

**Activity Name:** Suffolk County Water Quality Improvement Initiative

**Eligible Activity Type:** Essential public services, construction/reconstruction of water/sewer lines or systems, rehabilitation/reconstruction of residential structures, and rehabilitation/reconstruction of a public improvement

**National Objective:** Low and Moderate Income or Urgent Need

**Eligible Activity:** 105(a)(2)(4)(8)(16)(17); U.S.C. 5305(a)(2)(4)(8)(16)(17)

**Eligible Applicants:** Both low- and moderate-income households and other households

**Program Description:** The Suffolk County Water Quality Improvement Initiative is a public health and water quality project. Suffolk County has a federally-designated sole source aquifer; it derives its drinking water from the ground. The severe flooding in this region during Superstorm Sandy raised the groundwater elevation above the top of the septic systems and cesspools, resulting in the mix of sanitary wastewater and groundwater, causing public health and water quality hazards. The impacts of Superstorm Sandy exacerbated the already rising nitrogen pollution from failing septic and cesspools along river corridors and into the Great South Bay. Nitrogen pollution has caused a water quality crisis, and the erosion of coastal wetlands, which have been scientifically proven to reduce vulnerability from storm surge.

GOSR, in coordination with the DEC and the County, proposes to extend sewers to communities along four priority watersheds along the Great South Bay. The project combines CDBG-DR funding with \$83 million of low-interest loans from the Clean Water State Revolving Fund administered by the New York State Environmental Facilities Corporation (EFC) and DEC. The initiative will help Suffolk County recover from Superstorm Sandy by installing sewer and wastewater infrastructure in areas where septic systems were compromised during Superstorm Sandy. These interventions will prevent future septic system flooding, sewage backups and groundwater pollution, and will reduce nitrogen pollution that adversely affects natural coastal protection systems.

In Suffolk County, over 70% of the wastewater is managed through on-site disposal systems such as the cesspools and septic tanks, for wastewater treatment. Many of these on-site systems are located only a short depth to groundwater, and are compromised during flood events. This allows effluent to enter groundwater and surface waters. Additionally, even under normal conditions, on-site septic systems do not treat nitrogen effectively, leading large quantities of nitrogen-enriched effluent to flow into the County's groundwater, which then travels to surface waters or infiltrates drinking water aquifers.<sup>40</sup>

The extension of the sewer system is a crucial factor in rebuilding and recovery for these communities. Properties along all four watersheds experienced flooding during Sandy. The application development phase of the project will be used to determine specific project locations based on, but not limited to, damage history, environmental impact, and storm resiliency. As sewer extensions are created, homes will be connected to the new sewer main by means of a sewer lateral.

For many homeowners, paying for the sewer lateral is not financial feasible in light of the financial strain of rebuilding their homes. Providing assistance with installations of sewer laterals aids both individual household and broader community recovery. CDBG-DR funds will be used to assist both low- and moderate- income households and non-low- and moderate- income households. Once the sewer lateral is installed, the homeowner will be responsible for maintaining and repairing it.

This work will be performed on private property; the activity will be carried out as a housing rehabilitation activity<sup>41</sup>. The program will determine the location for the laterals at each residence based on engineering design requirements and cost considerations.

**Geographic Eligibility:** The Great South Bay sits between Fire Island (a barrier island) and the mainland of Long Island. These areas were selected because of the combination of substandard septic systems, dense populations, a short depth to groundwater, and short travel times for nitrogen-enriched groundwater to enter surface waters.

The project area includes four watersheds:

**1. Forge River Watershed centered on Mastic:** This project will address impacts from Superstorm Sandy and reduce extensive nitrogen pollution to the Forge River and Great South Bay. The planning phase of the program will identify parcels in the Forge River watershed whose on-site septic systems were compromised as a result of Superstorm Sandy. The proposed project will connect parcels in the area to a new sewer collection system that will flow to a new wastewater treatment plant (that would include advanced nitrogen treatment) located on municipal property. Additionally, groundwater levels of nitrogen in this area are already at the maximum contaminant level for drinking water, and nitrogen levels are projected to continue to increase without an upgrade to the wastewater infrastructure. The community would be left vulnerable and at risk of contaminated drinking water.

**2. Carlls River Watershed centered on North Babylon and West Babylon:** The planning phase of the program will identify parcels whose on-site septic systems were compromised as a result of Superstorm Sandy. This project will address storm impacts and reduce nitrogen and pathogen pollution in the Carlls River and Great South Bay. Currently over 60% of the nitrogen load from the Carlls River is from septic systems. The proposed project will connect parcels within the current Sewer District No. 3—Southwest Sewer District, and expand the sewer district to include a number of parcels in the North Babylon and West Babylon areas.

**3. Connetquot River Watershed centered on Great River:** After Superstorm Sandy, wastewater flooding caused surface water impairments, resulting in 15 days of emergency closures of shellfish beds by DEC. Actual water quality impacts persisted much longer. The planning phase of the program will identify parcels whose on-site septic systems were compromised as a result of Superstorm Sandy. This project will address nitrogen pollution and pathogens in Connetquot River, Nicoll Bay, and Great South Bay. The proposed project will connect parcels in the Great River area to the Sewer District No. 3—Southwest Sewer District. The Connetquot River contributes 15% of the total nitrogen in the Great South Bay; it is the single largest source of nitrogen. 63% of the nitrogen load from the Connetquot River is from septic systems.

**4. Patchogue River Watershed centered on Patchogue:** As a result of significant flooding from Sandy, the onsite sanitary disposal systems in the watershed contributed to poor water quality and elevated nitrogen levels that exceed limitations set by the Suffolk County Department of Health Services. The planning phase of the program will identify parcels whose on-site septic systems were compromised as a result of Superstorm Sandy. This project will address storm impacts and nitrogen and pathogen pollution in Patchogue River and Great South Bay. The proposed project will connect parcels to the Patchogue sewer system.

**Use of Impact and Unmet Needs Assessment:** As indicated in the Impact and Unmet Needs Assessment, water and wastewater treatment facilities were significantly damaged, resulting in many communities left without proper sewerage systems and lack of clean water. Damage included loss of electrical systems, and damage to pumping facilities and treatment plants due to saltwater and storm surge. The loss of operations of these treatment facilities caused the release of millions of gallons of untreated sewage into public waters. The situation is particularly acute on Long Island where Nitrogen

and other pollutants remain a constant concern. The drinking water for almost 3 million residents is drawn from sensitive groundwater aquifers recharged from the surface. Governor Cuomo directed DEC to undertake an intensive consultation process with key scientists and stakeholders concerning storm resiliency and water quality on Long Island in the context of nitrogen pollution.

In 2014, Suffolk County was awarded an IBM Smarter Cities Challenge grant. A team of six IBM experts spent three weeks in the County working to help solve the challenge of water quality pollution, resulting in the publication of a Smarter Cities Challenge report. The report identified a \$7 billion gap for wastewater infrastructure and treatment upgrades for the 360,000 properties in Suffolk County which currently use on-site septic systems.

There are over 53,000 unsewered parcels in the Great South Bay watershed. This initiative proposes to sewer over 10,000 of these parcels, relieving pressure on on-site systems at increasing risk of failure due to seawater infiltration and corrosion. The frequency and magnitude of severe weather events and subsequent flooding is expected to increase due to climate change. Suffolk County's Comprehensive Water Resources Management Plan Executive Summary (2014) and the State's "Coastal Resiliency and Water Quality in Nassau and Suffolk Counties Recommended Actions and a Proposed Path Forward" (2014) highlight the severe risk of reliance on these vulnerable systems.

The projected sea level rise will increase ground water levels and heighten the risk of groundwater contamination. According to the RISE Climate Risk Report for Nassau and Suffolk (August 2014), the sea level is anticipated to increase by 5.7-8.3 inches in Suffolk County by the 2020s and by 19.4-29.2 inches by the end of the century.

In addition to improving wastewater treatment, the project addresses risks posed by nitrogen concentration in the effluent and surrounding surface waters. Algal blooms linked to excess nitrogen pollution have seriously adverse impacts on swimming, fishing, shellfishing, and boating.

**Transparent and Inclusive Decision Process:** Since Superstorm Sandy, GOSR and State agencies have engaged the public and elected officials through the Action Plan development process, the NY Rising Community Reconstruction Program, and participation in events and discussions organized by DEC and other entities. Utilizing this three pronged approach, GOSR conducted an inclusive decision process.

GOSR held a public hearing in February 2014 in Suffolk County to get feedback on Action Plan Amendment 6. Over 80% of comments made at the hearing and submitted through our web portal from Suffolk County residents concerned issues around wastewater, sewers and nitrogen in the South Bay.

GOSR also engaged residents and elected officials through the nine New York Rising Community Reconstruction Program planning committees in Suffolk County. Stakeholders in this process repeatedly voiced the need to install advanced wastewater infrastructure for the health of people and ecosystems, for the resiliency of the community during severe weather and disaster events, and for fundamental economic vitality.

In addition, GOSR consulted with the scientific community, subject matter experts, and Federal and State partners during the planning for Suffolk County Water Quality Improvement Initiative. These consultations underscored the need to invest in improving water quality so as to ensure a thriving economy and a healthy living environment in Suffolk County.

**Long Term Efficacy and Fiscal Sustainability:** Centralized sewer systems have demonstrated efficacy and fiscal sustainability, supported by a combination of tax revenues and user fees. Suffolk County has substantial experience with managing such systems in southwest portion of the County.

Public health and water quality improvements are expected to result in increases in property values, increased capacity for business expansion and central business district growth, and healthier marine economies. In coastal areas, reducing nitrogen levels is expected to have a positive impact of reducing beach and shellfish closures resulting from pathogenic contamination. Longer term, it is expected that the

stabilization and possible rehabilitation of seagrasses and wetlands along the south shore will protect low lying areas from wave run-up and longshore currents. Property values of existing homes and businesses will likely increase as a result of the improved protection in the area.

Fiscal sustainability will be analyzed in further detail during the planning stage of the initiative.

The long term efficacy of the project will be addressed during the design phase. Design criteria will include longevity of the asset and susceptibility in the context of rising sea level and projected higher occurrences of storm related flooding.

**Environmentally Sustainable and Innovative Investments:** Superstorm Sandy highlighted Suffolk County's vulnerability to climate change, sea level rise, and increasingly violent storm events. Due to its geographic location and nearly 1,000 miles of shoreline, Suffolk County is exposed and vulnerable to numerous natural hazards, especially coastal storms traveling up the Atlantic coast. Sea-level rise can exacerbate storm events, causing storm surges and flooding of increasing intensity and threatening shoreline communities and infrastructure.

As Suffolk County derives its drinking water from a sole source aquifer replenished by groundwater, compromised on-site septic systems represent a direct threat to drinking water and surface water quality. Septic systems and cesspools, especially those close to groundwater tables, can be flooded during storm events, causing mixing of partially-treated or untreated effluent with groundwater.

In 2010, the EPA added the Great South Bay to its 303(d) list of impaired water bodies due to eutrophication and harmful algal blooms. DEC identified nitrogen from wastewater as a major contributor to the water body's lower oxygen levels and impaired status; this finding was corroborated by research showing that almost 70% of the total nitrogen load for the Great South Bay comes from wastewater effluent.

Even when functioning as designed, septic systems only remove a small amount of nutrients such as nitrogen, which enters the groundwater and travels to surrounding surface waters. In the Great South Bay, nitrogen pollution and subsequent eutrophication has devastated the shellfish and eelgrass populations. The Great South Bay had supported large hard clam and bay-scallop industries; both shellfish populations today are a fraction of their previous sizes in large part due to nitrogen pollution. Additionally, DEC estimates that there was an 18%-36% loss in tidal wetlands in the Great South Bay between 1974 and 2001. The loss of marshland habitat is detrimental to the entire coastline, as marshes and wetlands act as natural defenses against storm surges and waves in coastal regions.

The NYS 2100 report states that, "tidal wetlands can protect coastal communities from storm damage by reducing wave energy and amplitude, slowing water velocity, and stabilizing the shoreline through sediment deposition. More than half of normal wave energy is dissipated within the first three meters of marsh vegetation such as cord grass. In addition, given sufficient sediment deposition, wetlands are able to build elevation in response to sea-level rise, providing a buffer against climate change and coastal submergence."

The proposed project brings a sustainable set of centralized sewage collection and treatment systems. Treatment facilities and collection systems to be utilized are and will be sized for present and future flows, and appropriately armored to withstand expected severe weather events.

Infrastructure proposed for this project will also be innovative. For example, small diameter low pressure and vacuum sewers will be used where possible. These sewers can be relatively shallow, avoiding construction impacts, disturbance of the community and the environment, and the possibility of infiltration by ground water. Additionally, the proposed waste water treatment plant will be located inland, away from the threat of sea level rise or coastal flooding. Finally, the proposed project provides for waste water reuse. The project proposes to recharge 100% of the treated waste water from the new waste water treatment plant to Long Island's federally designated sole source aquifer. Waste water reuse

is an important consideration in the overall sustainability of waste water management practices and strategies.

**Regional Coordination Working Group:** GOSR will continue to work with the Sandy Regional Infrastructure Resilience Coordination Group (SRIRC) to ensure that this Initiative maximizes the resources available and collaboratively recovers from these storms while preparing with region for future resiliency.

**Monitoring and Compliance:** Suffolk County Water Quality Improvement Initiative will be subject monitoring and be required to comply with all rules and regulations similar to all other GOSR sub-recipients and under the Infrastructure Program Monitoring Plan as outlined the Compliance and Monitoring Policy and Procedure Manual.

### State Resiliency Retrofit Fund

In its original action plan, the State identified a need to provide assistance for energy-related mitigation to essential services facilities including, in particular, hospitals, nursing homes, group foster care facilities, and other facilities for vulnerable populations. The State anticipated allocating CDBG-DR funding to provide credit enhancement or leverage for private-sector financing of energy-related mitigation projects. Under the proposal, essential services facilities may be eligible to receive assistance to perform energy-related mitigation including, but not limited to, installation of backup power systems. Eligible facilities may include, but are not limited to, hospitals, long- and short-term care facilities, nursing homes, and clinics that were impacted by one of the named storms. The State is continuing to assess unmet needs in this area, and has not allocated resources to this program at this time.

### Infrastructure Bank

In its original action plan, the State anticipated allocating CDBG-DR funding to create an infrastructure bank to better prioritize and leverage capital for infrastructure investment. The bank would help coordinate infrastructure development and investment across the disaster region, combining CDBG-DR funds with State resources and private resources. The State is still reviewing unmet infrastructure needs and financing strategies, and has not allocated resources to this program at this time.

### Resiliency Institute for Storms and Emergencies (RISE)

*This Program was approved in APA5 and is currently operational.*

**Activity Type:** Planning

**National Objective:** Urgent Need

**Eligibility:** The Resiliency Institute for Storms and Emergencies (RISE)

**Eligible Activity:** Sec. 105 (a) (12) (13) 42 U.S.C. 5305(a) (12) (13)

**Program Description:** RISE, a consortium of New York higher education institutions, brings together local research centers engaged in Sandy-related work and storm resilience through an inter-disciplinary research and planning effort. RISE is a statewide anchor for policymakers, experts and emergency responders, providing comprehensive analysis to inform critical decisions. RISE research teams pursue applied research projects which increase the State's understanding of storm-hazards risk management; provide expertise to aid agencies in providing and quantifying resilience in ecosystem and infrastructure design, operation, and investment; and develop platforms for transforming predictions into adaptive measures.

RISE consists of prominent faculty from seven regional academic institutions and a national laboratory, selected for specific expertise across the spectrum of social and natural sciences relevant to climate change response, disaster preparedness, disaster recovery, and resilience. Stony Brook University and NYU Polytechnic lead the effort.

RISE research activities help the State and the public understand risks of climate change and extreme weather events. Research projects focused on rapid response planning, "cascading dynamics" of storms on transportation/energy/wastewater/drinking water/coastal ecosystems, investments in resiliency, and environmental risks under climate change inform State investments in housing, economic revitalization, infrastructure and community reconstruction. RISE research also supports the development of resilience performance standards and comprehensive risk analysis.

## Rebuild by Design Projects

### Introduction

After Superstorm Sandy’s devastating sweep over the northeastern part of the United States, President Obama created the Superstorm Sandy Rebuilding Task Force (the Task Force) with the purpose to redesign the approach to recovery and rebuilding through regional collaboration and emphasis on the growing risks of climate change. The Task Force partnered with HUD to initiate the Rebuild by Design (RBD) competition, devised to invite the world’s most talented designers and engineers to bring their expertise in flood mitigation and coastal resiliency to Sandy impacted regions. The six RBD competition finalists were announced on June 2, 2014. Two of the six projects were awarded to New York State.

TABLE 32: NEW YORK STATE AWARDED PROPOSALS

Project	Location	Total Proposed Project Cost	CDBG-DR Allocation
<b>Living Breakwaters: Tottenville Pilot</b>	Richmond County	\$73,904,000	\$60,000,000
<b>Living with the Bay: Slow Streams</b>	Nassau County	\$177,366,078	\$125,000,000

The goals of New York State’s RBD implementation plan are to make communities in Richmond County (Staten Island) and Nassau County more physically, economically, and socially resilient in the face of changing climate and volatile storm events. Both proposed projects represent innovative, flexible, and scalable interventions that could be replicated in other parts of the State, nation, and globe. Each project will undergo rigorous environmental review and permitting process, which will include the assessment of potential alternative designs and/or projects

### Living Breakwaters: Tottenville Pilot

**National Objective:** Low- and Moderate- Income and Urgent Need

**Eligible Activity:** Rebuild by Design

**CDBG Allocation:** \$60,000,000

**Project Description:** Richmond County (Staten Island), one of the City of New York’s five boroughs, sits at the southernmost part of New York State. The island is at the mouth of the New York Bight, the waters off the Atlantic Coast extending from the Cape May Inlet in New Jersey, to Montauk Point on the eastern tip of Long Island. The tidal waters surrounding the Borough shape its myriad industries; transportation, housing, and culture. In October 2012, Superstorm Sandy devastated Staten Island’s east and south shore neighborhoods. The driving wave action bombarded the coastline, damaging or destroying an unprecedented number of Staten Island homes and businesses, resulting in loss of life and significant harm to the local economy. Tottenville, a community at the southernmost point of Staten Island, experienced some of the most destructive waves in the region during Superstorm Sandy. Historically known as “The Town the Oyster Built,” the community was once protected by a wide shelf and series of oyster reefs, much of which was harvested by local oystermen. Today, much of the shore of Staten Island is void of these natural systems, and remains exposed to wave action and coastal erosion.

FIGURE 4: MAP OF STATEN ISLAND AND NEW YORK BIGHT



The Living Breakwaters pilot project, located along the coast of Tottenville, proposes to attenuate waves through a system of in-water breakwaters, constructed of a concrete and recycled glass composite. The in-water breakwaters are seeded with oysters that will proliferate and physically grow the breakwater over time. Living breakwaters are similar to conventional breakwater construction; however, this system is designed to provide additional environmental co-benefits, including improved water quality and new marine habitat. Along with protecting shoreline structures and residents, the Living Breakwaters project will also promote resiliency across the Island's many neighborhoods through social resiliency-focused training and education programs.

FIGURE 5: CONCEPTUAL PROJECT DESIGN OF ALL PHASES



Source: Scape 2014

Living Breakwaters proposes a comprehensive approach to resiliency through two potential components:

1. **Off-Shore:** The construction of a system of breakwaters along the coast of Tottenville, protecting adjacent communities and reviving marine ecologies.
2. **On-Shore:** The construction of an on-shore Water Hub to promote social resiliency. The Water Hub would include classrooms and labs, engaging Staten Island schools in waterfront education, oyster restoration, and reef building, and cultivating long-term estuary stewardship. The

Tottenville Water Hub may also include recreation lounges, exhibition space, and nature observation decks.

The Living Breakwaters project significantly compliments other NY Rising recovery and resiliency efforts in the Tottenville community. Throughout the development of the Living Breakwaters project concept, the design team worked closely with many community partners, including the Staten Island NYRCR Planning Committee (Committee). The Living Breakwaters pilot project incorporates the “Tottenville Dunes and Coastline Dune Plantings” project proposed in the Staten Island NYRCR plan. The dune project, while independently valuable, will be further strengthened by the breakwaters, as the breakwaters will protect dunes (and adjoining beach area) against harmful effects caused by coastal erosion. The State will ensure that the design and environmental review of the breakwaters and dunes projects are coordinated to maximize the complementary nature of the projects, ensure robust public review of the changes in this community, and to fully consider cumulative impacts and benefits during the environmental review process.

The RBD project, as outlined below, identifies an implementation plan on par with the current conceptual nature of the proposed project. Through the planning and design phase, the State is working closely with the design teams as well as with the State's environmental team to further identify the technical challenges and solutions needed to construct this ground-breaking project. The project will also undergo State and federal environmental review and permitting, which will include many opportunities for public input and will require an assessment of reasonable project alternatives.

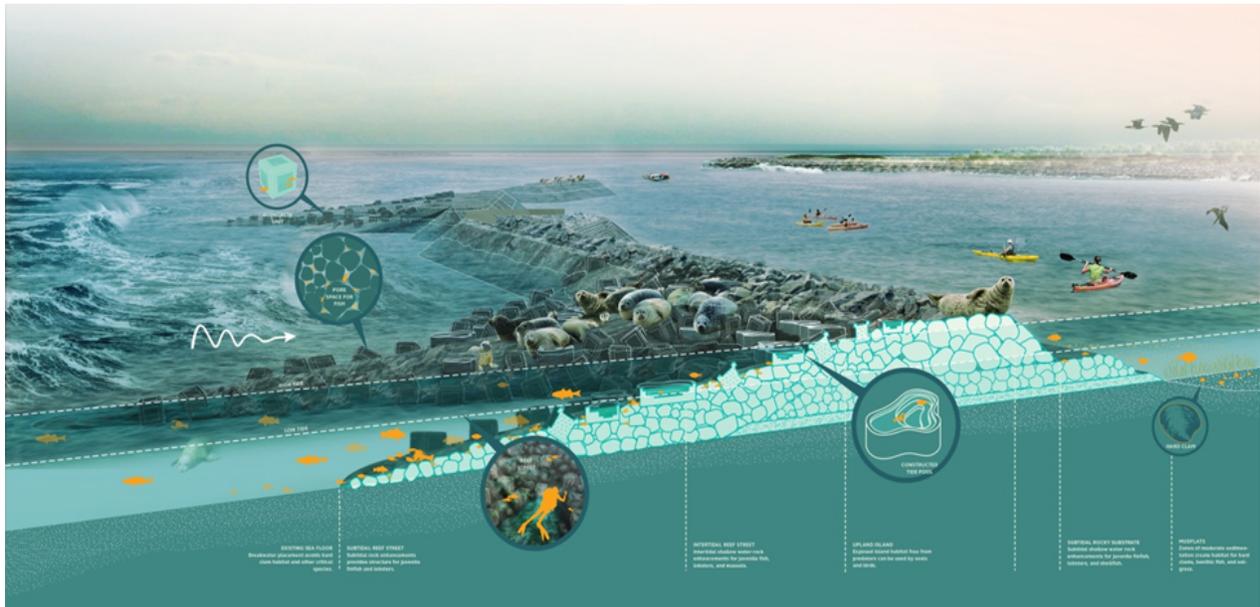
#### ***Off-Shore: Living Breakwaters***

The Living Breakwaters project's layered strategy introduces protective breakwaters and interior tidal flats that can dissipate wave energy and slow the water, while rebuilding sustainable marine life. The Raritan Bay and Lower New York Bay is the optimal site to cultivate a network of large scale habitat breakwaters and reefs. The Bays' shape and depth, central location, water quality conditions, tidal current flow, successful oyster restoration efforts, and risk-reduction potentials all point to the shallow stretch in the Hudson-Raritan Estuary system. In addition to the direct benefits of this project, the concept is a replicable resiliency strategy that can be used elsewhere to reduce damaging wave impacts and promote new marine habitat.

The proposed breakwaters are concrete and recycled glass composite structures placed within the water column that can dissipate destructive wave energy and incorporate micro-pockets of habitat complexity to host finfish, shellfish, and crustaceans. Oysters are among the many marine species to benefit from this project through the creation of a suitable reef environment for breeding. These oyster reef structures will buffer against wave damage, flooding, and erosion, while filtering pollutants from the harbor waters and creating valuable new habitat.

This design explores a mix of sub-tidal beds, as well as forms that extend above the high water line that offer communities protection by dissipating wave action. The breakwaters are designed to avoid critical habitat and integrate micro-complexity, providing habitat for a diversity of species throughout the water column. Underwater, small-scale pockets, or ‘reef streets,’ are incorporated into the breakwater and provide foraging and shelter for juvenile fish.

FIGURE 6: CROSS SECTION OF THE BREAKWATER



Source: Scape, 2014

**On-Shore: Social Resiliency**

Along with the living breakwaters, the Project proposes social resiliency plans. The Water Hub concept proposes a gathering space for lectures, community meetings, and other necessary public use. The Water Hub will join existing public and private programming as well as on-site ecological educational space and facilities. Recreational activities can be expanded through new programming and waterfront access opportunities, such as kayaking and fishing. Tottenville will become a recreational destination for Staten Islanders and visitors from across the region.

The Billion Oyster Project (BOP) and the New York Harbor School are critical partners in the Living Breakwater’s project to bolster Staten Island’s social resiliency. A long-term and large-scale plan, BOP plans to restore one billion live oysters to New York Harbor over the next 20 years while educating thousands of youth in the region about the ecology and the economy of their local marine environment. The Living Breakwaters project intends to build on this foundation by working with the schools, businesses, nonprofits, and individuals that comprise BOP, to cultivate oysters and grow existing and new educational programs. Through the expansion of this coastal stewardship and educational programming, the Living Breakwaters project design will foster a vibrant, water-based culture, and invest in students, shoreline ecologies, and economies. Promoting stakeholder participation in local communities will create stewards organically, ensuring long-term success of the Living Breakwaters project.

TABLE 33: LIVING BREAKWATERS BUDGET

Break-down	Cost
Planning	\$1,800,000
Pre Development	\$4,200,000
Capital Construction Costs	\$51,000,000
Program Delivery	\$3,000,000
<b>Total Allocated Budget</b>	<b>\$60,000,000</b>

Source: Scape 2014

The budget amount submitted in the overall design proposal to the RBD competition for the Living Breakwaters project was \$73,904,000. With a CDBG-DR allocation of \$60,000,000, the State will explore additional funding options to fill any unmet needs and analyze the budget further to implement a reduced scale project which still meets the Project objectives. Additionally, the environmental review process will help shape the potential implementation requirements of the Project not currently identified in the conceptual plan. The State anticipates budget changes which will be reflected in future APAs.

**Timeline**

The State is in the pre-planning phase of the Project, and therefore the outline below is an overarching proposed timeline for the Living Breakwaters pilot project. Once the environmental scoping is complete, the State will adjust timelines as appropriate. The State is committed to ensuring the timely expenditure of federal funds and will be providing a more detailed timeline in future APAs.

TABLE 34: LIVING BREAKWATERS PROPOSED SCHEDULE

	Start	Finish
<b>Living Breakwaters</b>	<b>Quarter 4 2014</b>	<b>Quarter 4 2020</b>
<b>Study, Research Planning:</b> This Phase will outline all additional studies, research and planning needed prior to the design and engineering phase. As necessary, this phase will be incorporated into the Environmental and Review and Permitting stage as well as the Engineering Phase.	<b>Quarter 4 2014</b>	<b>Quarter 2 2016</b>

<p><b>Environmental Review and Permitting:</b> This Phase will include scoping for and preparation of an environmental impact statement, as well as the submittal of permits applications to the appropriate governmental agencies. This Phase will include significant opportunities for public review and comment, as well as intergovernmental consultation. Additionally, as required by State and federal law, the EIS will evaluate alternatives to the proposed project. This timeline is meant to represent an overview of the expected Environmental Review Process for all aspects of the Living Breakwaters. It should be noted that the environmental review and permitting timeline is dependent on the permitting requirements of agencies with jurisdiction, including the United States Army Corps of Engineers, NOAA-NMFS, USFWS, and the New York State Department of Environmental Conservation.</p>	<p><b>Quarter 4 2014</b></p>	<p><b>Quarter 1 2016</b></p>
<p><b>Design and Engineering:</b> This phase will include all design and engineering work required for Living Breakwaters culminating with complete construction specs. Depending on the progress and outcome of the Environmental Review and Permitting process, this process will be able to run concurrently for some components of the project. This phase will include any and all necessary procurement and contracting as appropriate.</p>	<p><b>Quarter 4 2015</b></p>	<p><b>Quarter 2 2017</b></p>
<p><b>Site Development:</b> This Phase will include all necessary elements for site development from the Design and Engineering Phase that will prepare for the construction phase of Living Breakwaters. GOSR will evaluate a potential phased site development schedule for different project components (e.g., upland components and in-water components).</p>	<p><b>Quarter 3 2016</b></p>	<p><b>Quarter 2 2017</b></p>
<p><b>Construction:</b> This Phase will include all elements of construction related to Living Breakwaters outlined in the Design and Engineering Phase. For Living Breakwaters, the timeline is extended to reflect that the nature of the project will only allow for construction in specific building seasons. GOSR will evaluate a potential phase construction schedule for different project components (e.g., upland components and in-water components).</p>	<p><b>Quarter 2 2017</b></p>	<p><b>Quarter 4 2019</b></p>
<p><b>Closeout:</b> This phase will include the closeout of the entire project, including but not limited to: Final site visits and review, release of final contingency payments and all applicable CBDG-DR construction closeout requirements.</p>	<p><b>Quarter 4 2019</b></p>	<p><b>Quarter 1 2020</b></p>

### Living with the Bay: Slow Streams

**National Objective:** Urgent Need and Low- to Moderate- Income

**Eligible Activity:** Rebuild by Design

**Allocation:** \$125,000,000

**Project Description:** Living with the Bay provides a comprehensive suite of potential resiliency interventions for Nassau County communities surrounding Mill River; an environmentally degraded north-south tributary flowing from Hempstead State Park into the South Shore of Long Island’s Back Bay. During Superstorm Sandy, Nassau County was hit with heavy rain and tidal surge of up to 18 feet. Fourteen people lost their lives and approximately 113,197 homes were destroyed. Public and private infrastructure along the river were damaged including bridges, businesses, parks, roads, schools, and a wastewater treatment facility at the entrance of the Bay.

The dam of Mill River, built 16 feet high and 1,200 feet wide, was constructed in the 1870s. The dam had five gates that could be opened and closed to manage and assist with water flow. Over time, the lake and river system was named Hempstead Lake State Park, which provides a wide range of beneficial recreational activities for residents. While Hempstead Lake State Park is still open to the public, the century old dam is currently non-operational.

Over the last century, Mill River watershed became more populated with communities growing along each bank. As communities emerged, storm water and sewer systems developed with outflow pipes entering the river and roads and rail lines crossing the river. With increasing populations and development, Mill River communities are more susceptible to flooding from storm surge and rain events.

Today, along Mill River, low-density suburban development has degraded natural buffers that once offered protection to neighborhoods and ecosystems alike. Without the robust vegetated buffers along the river to absorb and store rainwater and coastal inundation, stormwater drains rapidly into Mill River, backing up outflow pipes, causing severe inland flooding. Superstorm Sandy produced a tidal surge which catastrophically impacted the Bay Park Sewage Treatment Plant at the mouth of Mill River, sending not just untreated stormwater, but also untreated sewage, into the Bay and nearby communities.

The purpose of the Living with the Bay project is to increase community resilience through identifying tidal and storm water flooding events and to develop mitigation strategies incorporating environmental co-benefits such as water quality improvements, ecological restoration, and aquifer recharge. In addition, the Project creates public access to the river, reconnecting communities with the natural environment. The Living with the Bay project will leverage and build upon the federal and State funded recovery and resiliency efforts of the Bay Park Sewage Treatment Plant project.

This comprehensive, yet flexible, strategy will be accomplished by examining and modifying the suite of opportunities included in the winning RBD design and incorporates other projects that achieve the goals expressed in the winning proposal. Living with the Bay will include an assessment of the following components, some or all of which may be included in the final design:

- **Dam Restoration and Enhancement:** The State will examine ways to incorporate the century old dam at Hempstead Lake State Park into the project design. The dam offers an additional catch basin and enhances existing recreational opportunities within Hempstead Lake State Park;
- **Sluice Gate:** The State will examine the possibility of constructing a sluice gate that would mitigate tidal surges during certain storm events, and create in-river storm water storage capacity;
- **Blue/Green Water Retention Park:** The State will examine transforming an underutilized waterfront into an accessible, floodable riverfront park to filter storm water and “make room for the river;”
- **Bioswales:** The State will examine a system of strategically located bioswales on streets adjacent to the river to capture, store, and filter stormwater; and
- **Stormwater Quality Improvements along Mill River:** The State will examine if adding additional underground stormwater storage and cisterns are feasible and determining if check valves on outflow pipes could help address and mitigate negative storm surge, flooding from heavy precipitation, and high tide events. The State will also consider other storm water run-off strategies that achieve the goals of the RBD competition.

Together, these concepts constitute the dynamic protection, ecological restoration, and social reactivation of Mill River corridor. The elements of this strategy are flexible and scalable, and could potentially be replicated elsewhere in the region.

The Living with the Bay project is conceptual in nature so the exact location, design, and operation of project components have not yet been determined. As the State continues to move ahead in the planning and environmental scoping phases, it will study the feasibility of alternate measures that will achieve the

same or similar objectives as the current conceptual plan. The public and governmental stakeholders will be involved in the development of potential alternatives through the environmental review process.

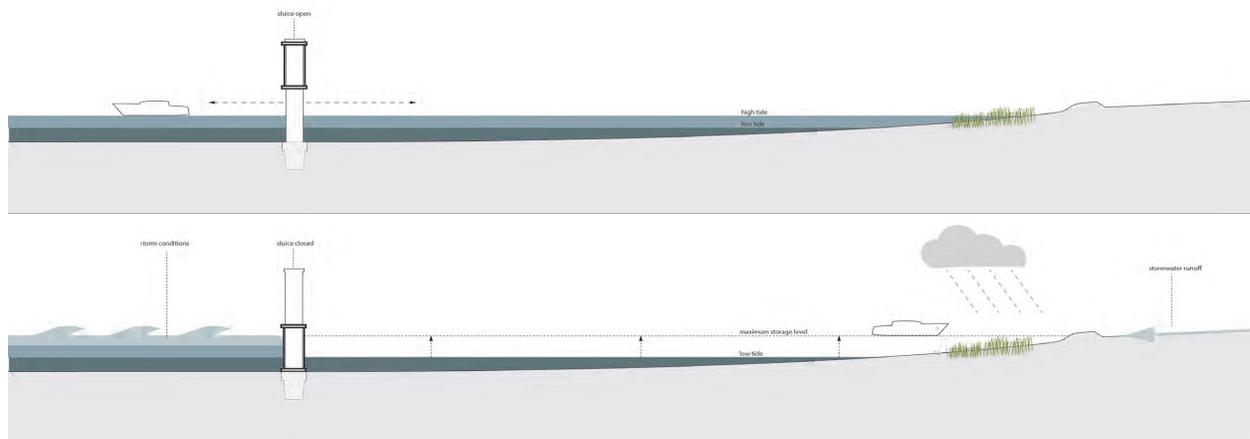
***Dam Restoration and Enhancement***

If feasible, the dam’s restoration and enhancement would create a second catch basin to provide additional stormwater runoff management, address predicated precipitation events and high tides, and enhance recreational activities within Hempstead Lake State Park. If incorporated into the final design, information on modernizing the dam will be provided in the environmental scope and in future APAs.

***Sluice Gate***

A sluice gate is a valve or gate to control water levels and flow rates in a stream or river. This component serves a dual purpose: to mitigate tidal storm surge from certain storm events and to create stormwater storage capacity upstream. During normal non-storm conditions, the gate remains open, allowing for tidal flow and boat and/or other recreational water vehicle movement. In anticipation of a tidal surge and/or major rainfall event, the sluice gate would be closed. The sluice gate would offer protection during certain weather events and allow for enhanced public access and tidal circulation during “normal weather conditions.” The State is examining the efficacy of sluice gates and the impact on Mill River. The State plans to evaluate several variations of sluice gates for the Project. Additionally, the siting of the potential sluice gate will be studied during the planning phase, and further evaluated during the environmental review and design phases. If incorporated into the final design, sluice gate models and locations will be provided in the environmental scope and in future APAs. The sluice gate shown in Figure 7 is entirely conceptual in nature and its specific design and functionality will be selected during the planning phase, and further evaluated during the environmental review and design phases.

FIGURE 7: CONCEPTUAL SLUICE GATE RENDERINGS



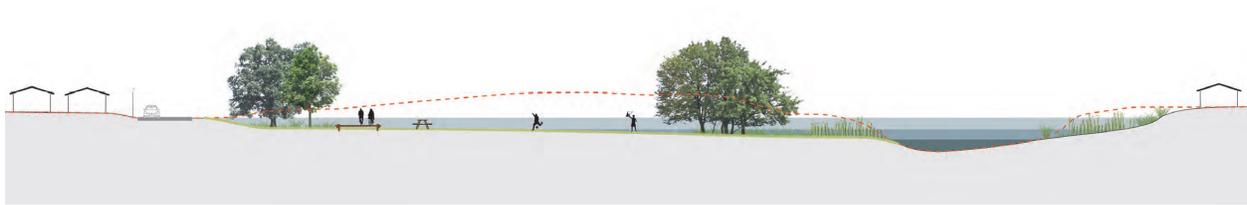
Source: Interboro Partners, 2014

***Blue/Green Water Retention Park***

Blue/Green infrastructure constitutes a network of nature-based water management features. As part of the larger slow streams phase, strategic excavation, grading, and landscaping will transform underutilized land into a public riverfront park that will filter stormwater and may be inundated during a storm event, as well as improve daily public access to the river. Retention ponds and reed/sand filters will purify stormwater before it is released into the river. By grading or lowering the site, there will be more surface area to store water in the floodplain during an extreme event, effectively expanding the river. Additionally, a network of permeable pathways will enhance public access to the river, providing recreational, educational, and potential economic opportunities for residents and visitors alike. Potential locations for the park may be on publically-owned land and alternative sites will likely be evaluated through the environmental review and planning process. A conceptual rendering of the Blue/Green Water

Retention Park is described in Figure 8. If incorporated into the final design, the Model and locations will be provided in the environmental scope as well as in future APAs.

FIGURE 8: CONCEPTUAL RENDERING OF THE BLUE/GREEN WATER RETENTION PARK

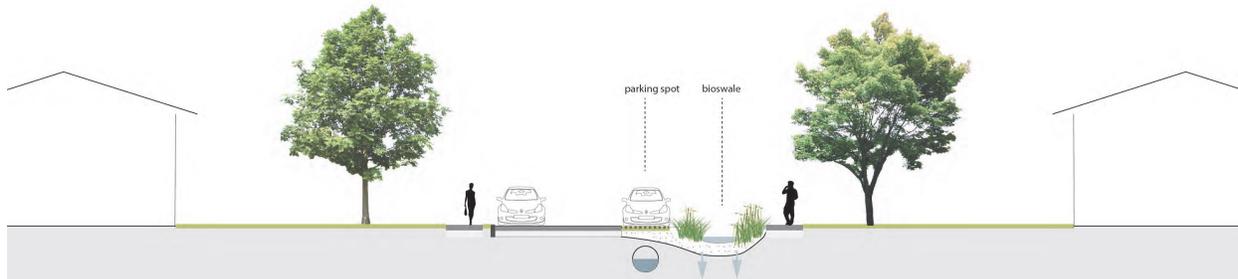


Source: Interboro Partners, 2014

### ***Bioswales***

A bioswale is a sloped retention area filled with vegetation and soil that can hold and filter water as it runs from an area of high elevation to low elevation. The Living with the Bay project included a system of bioswales along streets adjacent to Mill River to allow for water storage, infiltration, and purification. The State plans to examine a variety of bioswale design and conduct an analysis of potential locations before determining if this is an appropriate intervention. A conceptual rendering of Bioswales is described in Figure 9. The potential locations for the bioswales will be evaluated through the environmental review and planning process. If incorporated into the final design bioswale models and locations will be provided in the environmental scope and future APAs.

FIGURE 9: CONCEPTUAL RENDERING OF BIOSWALES IN NASSAU COUNTY



Source: Interboro Partners, 2014

### ***Stormwater Quality Improvements along Mill River***

Improvement of the stormwater quality along Mill River incorporates a variety of interventions, some of which are outlined in the Living with the Bay proposal. Storm water quality interventions detain, or temporarily store, runoff in order to reduce or delay peak storm water flows in areas subject to flooding. The State will review mechanisms such as check valves, which control the water flow direction, mitigating flooding specifically when water levels rise above outfall pipes. Additionally, the State will examine the benefits of resilient stormwater management through the possibility of underground stormwater storage which would utilize underground cisterns designed to reduce the flooding along Mill River.

TABLE 35: LIVING WITH THE BAY BUDGET

Breakdown	Cost
Planning	\$3,750,000
Pre Development	\$8,750,000
Capital Construction Costs	\$106,250,000
Program Delivery	\$6,250,000
<b>Total Allocated Budget</b>	<b>\$125,000,000</b>

Source: Interboro Partners, 2014

The overall budget proposal submitted to the RBD competition for the Living with the Bay project is \$177,366,078. With a CDBG-DR allocation of \$125,000,000, the State will explore additional funding options to fill any unmet needs and analyze the budget further to implement a reduced scale project which still meets the Project objectives. Additionally, the environmental review process will help shape the potential implementation requirements of the Project not currently identified in the conceptual plan. The State anticipates budget changes which will be reflected in future APAs.

**Timeline**

The State is in the pre-planning phase of the project and determining which elements of the plan would result in the highest resiliency benefits for the communities located on the waterway. Therefore below is an overarching proposed timeline for the Living with the Bay project. In coordination with the design team, the State has determined that critical data elements needed to design and implement the project to HUD standards. Once the data gathering, modeling, and environmental scoping is complete, the State will adjust timelines as appropriate for the Project. The State is committed to ensuring the timely expenditure of federal funds for the Projects, and is committed to designing the Project so that it achieves the desired goals of the RBD process. However that State recognizes that differing solutions may be needed depending on the planning and environmental scoping phases. The State will be providing more detailed timelines in future APAs.

TABLE 36: LIVING WITH THE BAY PROPOSED SCHEDULE

Living with the Bay	Start	Finish
	Quarter 4 2014	Quarter 3 2023
<b>Study, Research Planning:</b> This Phase will outline all additional studies, research and planning needed prior to the design and engineering phase. As necessary, this phase will be incorporated into the Environmental Review and Permitting stage as well as the Engineering Phase.	Quarter 4 2014	Quarter 1 2016

<p><b>Preliminary Environmental Scope Development:</b> This phase will be an additional step for the Living with the Bay Project. The complexity of the project as currently envisioned, as well as the size of the potential study area, will require careful consideration prior to formally commencing the Environmental Review and Permitting Stage. At the same time, given the need for an expedient schedule, this preliminary phase will allow certain environmental tasks to be performed in anticipation of the formal review. Concurrent with the study, research and planning phase, the State will conduct preliminary environmental scoping activities. This additional planning and scope development is essential to planning a cogent and implementable project to meet the objectives of Rebuild by Design.</p>	<p>Quarter 4 2014</p>	<p>Quarter 4 2015</p>
<p><b>Environmental Review and Permitting:</b> This Phase will include scoping for and preparation of an environmental impact statement, as well as the submittal of permits applications to the appropriate governmental agencies. This Phase will include significant opportunities for public review and comment, as well as intergovernmental consultation. Additionally, as required by State and federal law, the EIS will evaluate alternatives to the proposed project. This timeline is meant to represent an overview of the expected Environmental Review Process for all aspects of the Living with the Bay Project. It should be noted that the environmental review and permitting timeline is dependent on the permitting requirements of agencies with jurisdiction, including the United States Army Corps of Engineers, NOAA-NMFS, USFWS and the New York State Department of Environmental Conservation.<sup>42</sup></p>	<p>Quarter 4 2015</p>	<p>Quarter 1 2018</p>
<p><b>Design and Engineering:</b> This phase will include all design and engineering work required for the Living with the Bay culminating with complete construction specs. Depending on the progress and outcome of the Environmental Review and Permitting process, this process will be able to run concurrently for some components of the project. This phase will include any and all necessary procurement and contracting as appropriate.</p>	<p>Quarter 2 2017</p>	<p>Quarter 1 2020</p>
<p><b>Site Development:</b> This Phase will include all necessary elements for site development from the Design and Engineering Phase that will prepare for the construction phase of the Living with the Bay project. GOSR will evaluate a potential phased site development schedule for different project components (e.g., upland components and in-water components).</p>	<p>Quarter 4 2019</p>	<p>Quarter 3 2021</p>
<p><b>Construction:</b> This Phase will include all elements of construction related to the Living with the Bay project outlined in the Design and Engineering Phase. For the Living with the Bay project, the timeline is extended to reflect that the nature of the project will only allow for construction in specific building seasons. GOSR will evaluate a potential phase construction schedule for different project components (e.g., upland components and in-water components).</p>	<p>Quarter 2 2021</p>	<p>Quarter 1 2023</p>
<p><b>Closeout:</b> This phase will include the closeout of the entire project, including but not limited to: final site visits and review, release of final contingency payments and all applicable CBDG-DR construction closeout requirements.</p>	<p>Quarter 1 2023</p>	<p>Quarter 2 2023</p>

**Overall Rebuild by Design Requirements**

**Implementation Partnerships**

GOSR currently plans to serve as the grantee agency responsible for the implementation of both RBD projects. GOSR is responsible for the implementation of the entire CBDG-DR portfolio for New York State and has taken the necessary steps to build capacity since its inception in June 2013. Two program areas with GOSR have specific skills to address the RBD projects. The NYRCR Program, an award

winning community-based resiliency planning and implementation effort comprised of citizen planning committees throughout the Sandy-impacted region has worked in close collaboration with both winning RBD teams in the State of New York throughout project concept development. In addition to engaging with citizen groups, NYRCR Program has working relationships with local and county governments that will be vital to the success of these RBD projects. The second program is the GOSR Infrastructure Program. GOSR is currently undertaking numerous, large scale infrastructure projects and has demonstrated the capacity to manage these projects in a timely, cost effective manner. Engaging with federal, State, local, and private entities in other CDBG-DR projects, GOSR has demonstrated an ability to work collaboratively with other entities as needed to execute successful resilient recovery projects. It is prepared to leverage institutional knowledge and spearhead RBD project implementation. Both Programs are committed to developing innovative financing strategies that streamline recovery at the local level while maximizing available CDBG-DR funds.

The State has recently updated their Certification of proficient controls, processes, and procedures to ensure that the grantee has established adequate and proficient financial controls; procurement processes; procedures to prevent any duplication of benefits as defined by Section 312 of the Stafford Act; procedures to ensure timely expenditure of funds; procedures to maintain comprehensive websites regarding all disaster recovery activities assisted with these funds; and procedures to detect fraud, waste, and abuse of funds.

Further, each RBD project is subject to complex federal and State environmental review and permitting requirements, which will include the assessment of alternatives. For both projects, GOSR intends to serve as the lead agency for the environmental review and, as the projects are shaped through this process, will consult closely with interested governmental and non-governmental stakeholders. The State understands that the partnership and coordination of partners throughout the life of each RBD project is crucial for its success. As the State begins the planning and environmental process, there is an understanding that there will be a need to engage with numerous entities in the public and private sector.

As the State moves towards the implementation phases of the RBD projects, the State will continue to assess the needs of each project and how private sector partners can be engaged to fill these project gaps. The State intends to explore options with local advocacy groups, educational institutions, for profit agencies and not for profit agencies as appropriate for each RBD project.

The nature of the projects also indicate that the State anticipates possible engagement with federal agencies such as the HUD, the Army Corps of Engineers, the U.S. Department of the Interior, the U.S. Environmental Protection Agency, National Oceanic and Atmospheric Administration, U.S. National Park Service, and other partners as needed for the design and execution of each project. Within the State, there are numerous agencies that will also play specific roles in the implementation of these projects, such as New York State Department of Environmental Conservation, Department of State, Department of Education, New York State Office of Parks, Recreation and Historic Preservation and others to be identified as the State works through the planning and environmental phase. The State intends to facilitate its coordination and consultation efforts through the Sandy Regional Infrastructure Coordination Group convened by HUD and FEMA.

Each RBD project will also require careful consultation with local governments. For Living Breakwaters, the State will perform outreach to the City of New York and relevant agencies, including the Office of Recovery and Resiliency, the Department of Parks and Recreation, the Department of Environmental Protection, the Department City Planning, as well as the Office of the Borough President. For, the Living with the Bay project, GOSR will consult with the appropriate units of government that are located on Mill River to ensure that coordination for the riverine systems is addressed. This includes Nassau County, the Town of Hempstead, and villages, as appropriate. Among other areas, local governments will be involved in the environmental review process, including scoping. These transformative projects will

necessitate long-term agreements between the State and relevant entities to ensure proper operation and maintenance of the projects.

Currently, the State expects to work with the design teams in, at minimum, the pre-planning and environmental review phases of the projects. The State has also assigned environmental scoping tasks to two of its competitively procured environmental firms. The design teams will provide requested data to the State, additional planning and budgeting documents, and any other items needed to meet the requirements of the Federal Register Notice and complete the environmental review and APA process. The State will ensure compliant procurement in all phases of work for both RBD projects.

**Leveraging of Funds**

The State is committed to the successful implementation of both RBD projects using the allocations provided and understands the need to identify and secure additional funding outside of the CDBG-DR allocation as needed. This includes not only identifying funds to address the unmet needs identified in the awarded phases of the project, but identifying innovative funding mechanisms to pay for the long term operation and maintenance costs of these projects. The State will look at funding opportunities such as federal or private grants, and collaboration with not for profit and academic institutions focused on similar resiliency actions, as well as financing opportunities, which can be leveraged alongside CDBG-DR for investment.

**TABLE 37: LEVERAGING OF FUNDS – RBD UNMET NEED**

<b>Project</b>	<b>Location</b>	<b>Total Project Cost</b>	<b>CDBG-DR Allocation</b>	<b>RBD Unmet Need</b>
<b>Living Breakwaters: Tottenville Pilot</b>	Richmond County	\$73,904,000	\$60,000,000	\$13,904,000
<b>Living with the Bay: A Comprehensive Regional Resiliency Plan for Nassau County’s South Shore: Slow Streams</b>	Nassau County	\$177,366,078	\$125,000,000	\$52,366,078

The process to identify funding and financing opportunities for Living Breakwaters and Living with the Bay started with a high level review of both project as a whole and the respective component phases. By taking this approach, the State is able to elucidate a variety of layered funding and financing opportunities. Many of the grant opportunities identified are both competitive and ongoing, based upon State and federal budget appropriations.

An important initial step will involve finalizing the entities implementing each component of each RBD project and evaluating if they can provide financial support and oversight, long term operations, and maintenance capacity for the project. There are some unique financing opportunities such as public-private partnerships, but this may entail a repayment to the private partner for their work. All options should be further based upon the ability and willingness of the entity implementing the project to entertain these options.

From the funding and financing sources review, a description and matrix of funding and financing was created and is available in Appendix E. This matrix identifies the many funding and financing options that the State will consider and addresses the applicability to each RBD project.

The State will also look to the current CDBG-DR programs and assess the anticipated program income and how it can be used in the implementation and monitoring of the RBD projects. The State will coordinate with HUD and future APAs on the feasibility of this approach.

The State will utilize the following approach as the process for securing additional funding for each RBD project:

1. Prioritize Living Breakwaters and Living with the Bay project components. Isolate components of both projects and identify the following items:
  - a. Initial budget, including start-up and capital costs, ongoing operations, and maintenance;
  - b. Identify entities/partners to implement, operate, and maintain the project post-completion; and,
  - c. Develop time horizon for initial capital costs and ongoing operations and maintenance.
2. Organize sources of funding and financing based upon the initial assessment:
  - a. Identify sources of funding from entities/partners implementing and operating the projects;
  - b. Leverage funding and financing matrix and prioritize funding opportunities based upon grant funding application dates and probability of success;
    - i. Develop a layering strategy for each project component;
  - c. Identify if financing structures would be applicable to any components of both projects;
    - i. Identify ability and willingness of local municipal partners to issue debt or take on long-term liabilities involving project finance;
  - d. Engage not for profit, academic, corporate, and philanthropic partners with draft program framework for funding.
3. Continually update and monitor federal, State, and local grant opportunities.

#### **Citizen Participation Plan for Rebuild by Design**

Public participation was instrumental in the development of each RBD project, as evidenced by the high level of community engagement undertaken by both design teams. This Citizen Participation Plan (CPP) advances policies and procedures that will engage a large and diverse group of stakeholders. Possible outreach strategies are described in the environmental review section as well as below. A primary outreach strategy may be the formation of a Citizens Advisory Committee (CAC) for each RBD project which would complement the State's current outreach efforts. When feasible, the opportunity for public input will be aligned with public participation in the environmental review process to ensure that the public has the ability to learn about the projects and also submit comments and concerns that will inform the assessment of potential environmental impacts and project alternatives.

The CPP reflects guidance specified by the U.S. Department of Housing and Urban Development (HUD) in the Federal Register (FR-5696-N-11).

The State will ensure that any Units of General Local Government (UGLG) or sub-recipients receiving funds for RBD projects will have a CPP that meets the HUD CDBG-DR regulations and takes into consideration the waivers and alternatives made available under CDBG-DR funding.

#### **Public Outreach for Rebuild by Design**

To keep the public informed throughout the RBD project scoping, environmental review, design, and construction phases, the State will undertake public outreach both through in person meetings and through social and print media and through GOSR website. Modifications will be made to GOSR's website to include project pages dedicated to the State's RBD projects. Each RBD project page will have a subpage with project status updates and materials that are relevant to the project. Outreach may also be in-person meetings, solicitation of verbal and written comments, outreach events, online and traditional media, and the formation of a Citizens' Advisory Committee.

#### **Outreach to Vulnerable Populations for Rebuild by Design**

The State will undertake specific measures to solicit input from low- and moderate- income households and households headed by non-English speaking persons. To do this, key meetings throughout the

project's development will be advertised in various languages. Translators, as well as sign language interpreters, will be present as needed. Notice of meetings will be posted in common areas of public housing and public buildings near the project site, and on the GOSR website. Meetings will be held in handicap accessible locations, and in locations served by public transportation. Scheduling meetings will take into consideration non-traditional work schedules. A local public library or publically accessible public building in or around the project site will be designated as a document repository for all materials relating to the RBD project. Materials presented at meetings will be posted online for public viewing in a timely manner. To further ensure that RBD information is accessible to all residents, all public program materials will be available in the four languages—English, Spanish, Chinese and Russian.

### **Citizens' Advisory Committee for Rebuild by Design**

The State is firmly committed to continue to maintain community engagement for both RBD projects. The State may develop a Citizens' Advisory Committee (CAC) to complement the public outreach described above. The CAC would serve an advisory role, meeting and receiving updates on the project as it progresses from conceptual development through environmental review into design and eventually through construction and completion. The CAC could also engage the wider community at key points in the project development and environmental review process. All CAC meetings would be open and advertised to the public. Should New York State form a CAC for each RBD project, it is anticipated that each CAC would include members who reside in the project area. The State will release information about the format of the CAC and how it will be formed.

The CAC could utilize innovative methods to solicit public input, such as toll-free phone lines, mobile recording and listening booths, social media, and other online tools, in addition to more traditional means such as giving presentations at governmental facilities, senior housing sites, public housing sites, local community centers, schools and universities. To the greatest extent possible, the CAC and its public engagement events will be coordinated with the citizen participation required for the environmental review and could extend into the building phases of the project. For example, as a first step, the State could announce at a scoping hearing that it will be forming a CAC and encourage interested individuals to apply. Additionally, technical staff and consultants from GOSR and other local, State, and federal agencies could make presentations and answer questions from community members in order to explain the highly technical components of each RBD project.

Forming a CAC is consistent with the model developed in the State's NYRCR Program, which was led by a community-based committee made up of local leaders and community residents. It is also consistent with New York State's two RBD projects. The proposal for Living Breakwaters states that water hubs will be designed through community design charrettes. The CAC could be one of the entities providing input at these charrettes, or the CAC could be used to promote these design charrettes to the wider community. The Living with the Bay proposal discusses the establishment of a Bay Alliance in Phase One, which the CAC could help form.

### **Environmental Review for Rebuild by Design**

The State plans to engage in robust and open public engagement throughout the environmental review process to ensure that the projects comply with State and federal environmental requirements and consider sound environmental practices. The State will undertake the required environmental review process for each RBD project, which includes multiple opportunities for public review and comment. First, the State intends to hold public meetings on the draft scope for the environmental impact statement. These public meetings will abide by the notice and scheduling requirements set forth in 24 CFR 58.56 and 58.59. The State will accept both written and oral comments from the public on the draft scope, and the State will consider these comments when preparing the final scope of the projects. The purpose of these scoping public meetings is to allow community members and community organizations, the scientific and academic community along with the public as a whole, to raise issues and concerns to be

evaluated in the environmental review process. This will ensure that the review is substantively robust, as well as responsive to any community issues with the projects.

Following the scoping process, the State may establish a CAC for each RBD project, as described above. If the CAC is established, the State will schedule meetings of the CAC to provide updates on the ongoing environmental review process. Engaging the CAC will ensure that the community stays engaged in the process and understands the technical nature of the work that these projects entail.

Once the draft environmental impact statement (DEIS) is complete, the State will conduct a second round of public meetings and comment period. The State plans to coordinate these public meetings and comments with the RBD project-specific APA. As it prepares the final EIS, the State will consider and respond to the public comments.

## General Administration

### Organizational Infrastructure

In June 2013, Governor Andrew M. Cuomo established GOSR to maximize the coordination of recovery and rebuilding efforts in storm-affected municipalities throughout New York State. GOSR is formed under the auspices of New York State's Office of Homes and Community Renewal's Housing Trust Fund Corporation (HTFC), a subsidiary public benefit corporation of the New York State Housing Finance Agency, which will direct the administration of the Federal CDBG-DR funds.

GOSR works in close collaboration with local and community leaders to respond to communities' most urgent rebuilding needs while also identifying long-term and innovative solutions to strengthen the State's infrastructure and critical systems. It also administers a variety of programs related to housing recovery, economic development, infrastructure, and community reconstruction following the devastating impact of Hurricane Irene, Tropical Storm Lee and Superstorm Sandy.

Programs and the other activities under GOSR are based on the foundation of six key principles:

- **Building back better and smarter** – As New Yorkers work to repair the severe damage caused by Hurricane Irene, Tropical Storm Lee and Superstorm Sandy, the state will use the opportunity to ensure that damaged housing, infrastructure and communities are not simply restored to their pre-storm condition but built back safer and stronger. New York State will invest in additional mitigation measures to prevent similar damage from occurring in the future.
- **State-led, community-driven recovery** – New York State is collaborating closely with local governments and other organizations to ensure a coordinated and holistic response, while looking to individual communities to develop forward-looking local recovery plans that meet their specific needs.
- **Recovery from Irene and Lee** – The recovery efforts will also extend to those communities still recovering from Hurricane Irene and Tropical Storm Lee.
- **Leveraging private dollars** – New York State will undertake programs that will help unlock capital markets and increase the amount of low-interest financing of key projects by reducing the risk for private sector lenders.
- **Spending accountability** – New York State will implement rigorous controls and checks to ensure funds are spent responsibly and in compliance with federal and state guidelines.
- **Urgency in action** – The recovery is a long-term endeavor, but people need immediate help. The projects and programs presented in the Action Plan including this amendment have been shaped to balance effective delivery of support to individuals and communities while maintaining compliance with regulatory requirements.

### General Administration Expenditures

General administration expenditures includes staff, occupancy, equipment, consultant, and other operating costs related to implementing the CDBG-DR program, the selection, funding, assisting, and monitoring of local projects, detailed quarterly reporting to HUD, and documentation of adherence to all laws, and other expenses.

The State is allocating \$190,810,000 million from CDBG-DR funds to General Administration. This may include efforts to provide technical assistance and public education, working within existing administrative infrastructure and expanding on already existing programs to create the greatest efficiency for minimizing administrative costs.

While the Federal Register Notice places a cap on general administration costs (at 5% of the cost of the total CDBG-DR grant), the State has chosen not to allocate funds to administration in the third allocation, but rather put those funds into programming. Therefore the Administration and Planning budget remains as it was in the second allocation. Recipients (i.e. sub-grantees and sub-recipients) will be strongly encouraged to minimize their administrative costs so that the amount available for program activities will be maximized.

**Administrative Activities:**

The State will use its General Administrative funds to carry out the following activities related to implementing its CDBG-DR grant:

- Providing local officials and citizens with information about the CDBG-DR funded project;
- Internal meetings for general program administration and review that is not related to program delivery activities;
- Preparing program budgets and schedules, and amendments thereto;
- Developing systems for assuring compliance with CDBG-DR program requirements;
- Preparing the Environmental Review Record for the overall program, including the release of funds;
- Preparing Requests for Proposals (RFPs) and Requests for Qualifications (RFQs) to procure consultants for grant administration or other related work;
- Developing interagency agreements and agreements with sub-recipients and contractors to carry out program activities;
- Monitoring program activities for progress and compliance with the program requirements;
- Preparing reports and other documents related to the program for submission to GOSR regarding the grant;
- Coordinating the resolution of audit and monitoring findings;
- Evaluating program results against state objectives;
- Managing or supervising persons whose primary responsibilities with regard to the program include such assignments as those described above;
- Official business travel in carrying out the program and administrative services performed under a third party contract;
- Purchase of equipment, such as file cabinets and computers to be used exclusively for CDBG-DR grant administration; and
- Training on CDBG-DR grant administration requirements.

**General Administration Management**

(Below is a restatement of this section from HUD approved Action Plan dated April 31, 2013)

**Timeliness:** GOSR has adopted procedures to ensure the timely expenditure of funds, track expenditures in each month, monitor of recipients, reprogram funds in a timely manner, and project expenditures over time. The procedures indicate which personnel or unit is responsible for the task.

GOSR is committed to ensuring that CDBG-DR funds are spent in a timely manner and within the statutory two-year period. To ensure such commitment, GOSR establishes strict timelines and milestones within each of the agreements entered into with sub-recipients, contractors, consultants and recipients of funds. Failure to meet such milestones may result in full or partial recapture of funds or a reduction in award amount. These requirements and milestones will be specifically outlined in each agreement and will be designed to be specific to categories of funding.

**Tracking and Reporting of Program Income:** The State will follow the requirements of 24 CFR 570.489 in regards to Program Income. All Program Income will come back to the State.

**Procurement:** All UGLGs, State agencies/authorities or sub-recipients of New York State CDBG–DR assistance must demonstrate compliance with 24 CFR 85.36. As outlined in the March 5, 2013 Federal Register Notice, 24 CFR 85.36 requires that the State identify how its procurement standards conform to federal standards. To address this, GOSR reviewed the Housing Trust Fund Corporation's existing procurement standard and created and adopted GOSR-specific procurement guidelines which conform to 24 CFR 85.36.

**Anti-Displacement and Relocation:** The State and all UGLGs, State agencies/authorities or sub-recipients of New York State CDBG-DR funds will be expected to minimize displacement of persons or entities and assist those displaced as a result of the disasters. If an individual person or entity is displaced as a result of the New York State CDBG-DR investment, the State will provide assistance as required through the Uniform Relocation Act Requirements.

**Prevention of Duplication of Benefits:** GOSR provides written policies and procedures, along with required forms and required training, to all of its own staff, sub-grantees, sub-recipients, contractors, etc. As required by the Stafford Act<sup>3</sup>, the State has established a uniform procedure for verifying all sources of disaster assistance for the same purpose as CDBG-DR funding. To its best ability, GOSR determines an applicant's unmet need(s) before awarding assistance, and ensuring beneficiaries agree to repay the assistance if they later receive other disaster assistance for the same purpose. After the initial Duplication of Benefits review, GOSR conducts subsequent reviews to detect additional benefits before release of final payment. These reviews identify situations where new information or changes to previously obtained assistance amounts require a recalculation of benefits. In instances where full information is not available prior to making a final award, GOSR has established a uniform recapture policy to account for newly available data. The primary responsibility for compliance with the Stafford Act rests with GOSR staff. GOSR verifies information using available and accessible third party data feeds from federal agencies, insurance companies and private sources. GOSR has developed data sharing agreements with the SBA, FEMA, National Flood Insurance Policy (NFIP), and others to ensure that it has all the needed data to perform the analyses and calculations of allowable disaster recovery awards.

GOSR uses data matching protocols and software tools to automate the initial review, by cross-comparing reported information with FEMA, SBA, and NFIP databases. These data tools are used to verify self-reported information provided by applicants before issuing payments. GOSR staff are trained on data matching protocols and interface with contractors and partner agencies to ensure accuracy of automated procedures.

GOSR conducts systematic quality assurance (QA) reviews of award calculations on an ongoing basis to prevent duplication of benefits, verify the accuracy of award calculations, and ensure that program award policies are implemented consistently across applicants. This QA process involves parallel processing of all award amounts in a systematic manner to ensure that all necessary applicant information is collected and consolidated. The results obtained are compared against already-existing award amounts per applicant, to ensure that the same results are derived from the same inputs. Any outstanding award amounts are noted and root-caused, to identify potential process or policy improvements. This QA review also ensures alignment with Stafford Act requirements, and confirms that the procedures address, if appropriate, avoiding utilization of staff with conflicting duties, access to information, or potential conflicts of interest with award recipients.

**National Objective:** All activities undertaken with New York State CDBG-DR funds must meet one of the following three National Objectives; address urgent need, primarily benefit low- and moderate-income persons, or address slums and blighted conditions, as identified in the Housing and Community Development Act of 1974.

At least 50% of the CDBG-DR funds awarded to New York State under this allocation must be used for activities that meet the National Objective of primarily benefiting low- and moderate- income persons. To

ensure compliance with this requirement, the State, along with its sub-grantees, sub-recipients, contractors and other partners will take the following steps:

While serving eligible low- and moderate- income households will be the State's priority, our assessment of need demonstrates that the impact of these disasters extends far beyond predominantly low- and moderate- income neighborhoods. Therefore, the State will also work to qualify households above 80% of AMI under the National Objective of urgent need, where there exists a documented unmet need resulting from one of these storms. Doing so will ensure assistance is provided to as many households as possible, and contribute to holistic community recovery.

For small business related activities, while it is not a requirement of the CDBG-DR program to document the family incomes of those who benefit from the creation or retention of jobs under this assistance, GOSR will require salary ranges to be report for all positions created or retained as a result of our small business assistance programs. Doing so will ensure a more accurate reporting of the populations benefitting from assistance under these activities and contribute towards the required 50% expenditure threshold.

The State and its partners will closely monitor the actual expenditure of funds and benefiting populations throughout the administration of all activities under this grant to ensure we meet or exceed the required 50% expenditure threshold.

**Access to Records:** The State will provide citizens, public agencies, and other interested parties with reasonable and timely access to information and records relating to the State's CDBG-DR Action Plan and amendments as well as the State's use of assistance under the programs covered by the Action Plan during implementation. All requests for such information should be directed to GOSR's External Affairs Department who will then forward on each request to the appropriate department within GOSR.

**Monitoring and Compliance and Investigations:** GOSR follows a comprehensive fraud-waste-abuse prevention program which consists of integrity monitoring, internal controls assessments, and investigations in order to create a series of "check and balances" to mitigate risks and ensure compliance with Federal and State regulations. This program is directed and managed by the GOSR Operations Department, under which GOSR has created a Monitoring and Compliance Department, as well as the GOSR Office of the General Counsel, under which GOSR has created an Investigations Department. GOSR's Monitoring and Compliance and Investigations Departments are structured to allow for coordination between, and monitoring of, all GOSR programs and internal operations departments. Each of the Departments consist of a director who is and/or will be supported by additional compliance officers and investigators, respectively, as well as outside integrity monitoring firms and consulting firms with expertise in CDBG-DR program administration and compliance with HUD regulations.

The primary purpose of GOSR's Monitoring and Compliance and Investigations Departments is to ensure that all programs, contractors administering GOSR programs, departments, and sub-recipients comply with applicable State and federal regulations, as well as to prevent and minimize fraud, waste and abuse, and effectively fulfill the goals set forth in GOSR's Action Plans and Action Plan Amendments.

The Monitoring and Compliance and Investigations Departments work in conjunction to:

1. Gauge the overall progress and effectiveness of project implementation;
2. Serve as a management tool to identify issues that may compromise program integrity, fund, and service delivery;
3. Work with program and operational staff to implement corrective action and resolutions;
4. Oversee the implementation of GOSR's recapture process;
5. Provide information and input on how GOSR's programs and practices can be improved and enhanced to improve performance, efficiency, and curtail waste, fraud, and abuse; and

6. Serve as a layer of oversight to mitigate any potential risks, proactively detect and investigate potential fraud, and identify areas in which to strengthen program capacity and the quality of service delivery.

**Internal Audit:** GOSR's fraud-waste-abuse prevention program is supported by HCR's Office of Internal Audit (OIA) which provides internal audit coverage for HCR and HTFC and, as such, serves as GOSR's internal auditor with independent oversight over GOSR's program operations. GOSR's Monitoring and Compliance Department coordinates with OIA which has a role in detecting fraud, waste and abuse generally for all HCR and HTFC auditing efforts and specifically as part of the State of New York's administration of its CDBG-DR funding allocations pursuant to Public Law 113-2. OIA is responsible for maintaining a reporting line, independent of GOSR's management team, to HTFC Finance and the HTFC Board as it relates to GOSR activities, including any contested findings and recommendations. In addition, OIA is responsible for assisting GOSR with the coordination and review of all external audits, including the annual HTFC Financial Statement Audit, the New York State Single Audit/OMB A-133 audit of GOSR and the OMB A-133 audit of GOSR's sub-recipients, as well as any audits conducted by the Office of the New York State Comptroller.

Furthermore, OIA is responsible for preparing the annual Internal Control Certification Report that describes all HCR program area's internal control activities, including those of GOSR's. This report is prepared annually by the HCR Internal Control Officer of OIA and submitted to the New York State Division of Budget. Different functions within program areas are selected each year for internal control review. Accordingly, OIA is responsible for conducting an annual review of GOSR's internal control process as part of HCR's Internal Control Review Process. Annually, GOSR must complete a "Risk Assessment Survey" and the "Managers Internal Control Review Form." The Risk Assessment Survey identifies areas related to funding, staffing, duties and responsibilities, data security and previous audits/reviews conducted in the GOSR program area. The Managers Internal Control Review identifies functions performed, risks, procedures/controls in place and the testing of those procedures/controls. HCR's Internal Control Officer from OIA works closely with GOSR to complete the process. The current approach is to review documentation from the risk assessment and manager internal control forms to identify moderate to high risk functions. Meetings are then held with program managers to discuss those functions and the risks and controls related to them. As necessary, discussions focus on developing an appropriate corrective action plan to strengthen the controls that will mitigate those risks. Discussions may also include follow-up on any reviews or audits that have outstanding recommendations. Documentation is required to ensure that corrective action has taken place to close out recommendations.

GOSR is in the process of creating and implementing an Internal Audit Department specifically for the State's CDBG-DR program. The GOSR Internal Audit Department will supplant the roles and responsibilities of HCR's Office of Internal Audit as described above and only as they relate to the State's CDBG-DR program.

**Citizen Complaints:** The State shall respond to complaints from citizens related to the Action Plan or amendments, and quarterly reports. Written complaints must be directed to GOSR who will further direct the complaint to the appropriate agency as necessary. The State will provide a timely, substantive written response to the complainant within a reasonable amount of time. All Recipients of funds from New York State (i.e. sub-grantees and sub-recipients) will be required to adopt these procedures for responding to citizens' complaints regarding activities carried out by the Recipient.

### Certifications and Compliance

As mentioned above, GOSR, operating under the auspices of New York State's Office of Homes and Community Renewal's Housing Trust Fund Corporation (HTFC, a subsidiary public benefit corporation of the New York State Housing Finance Agency), is the responsible entity for direct administration of the CDBG-DR grants for allocations made in 2011 and 2012.

In keeping with the requirements detailed in November 18, 2013 Federal Register guidance, GOSR updated its Certifications for submission to HUD. The Certifications were reviewed by the HTFC board on September 11, 2014. GOSR has also updated its General Administration Policies and Procedures Manual to include the policies and procedures for updating the Certifications. These policies and procedures have been revised to include the fact that GOSR will identify in an Action Plan Amendment any material changes in its processes or procedures that could potentially impact GOSR's Certifications.

These policies follow the practices of the HTFC, but recognize that CDBG-DR has special requirements that the state has addressed within its administrative policies.

## Regulatory Requirements

(Below is a restatement of this section from HUD approved Action Plan dated April 31, 2013)

UGLGs, State agencies/authorities or sub-recipients must comply with fair housing, nondiscrimination, labor standards, and environmental requirements applicable to the CDBG Program, as follows:

**Fair Housing:** The State and all UGLGs, State agencies/authorities or sub-recipients will be required to take steps to affirmatively further fair housing; and when gathering public input, planning, and implementing housing related activities, will include participation by neighborhood organizations, community development organizations, social service organizations, community housing development organizations, and members of each distinct affected community or neighborhood which might fall into the assistance category of low- and moderate- income communities.

Any activities that will be administered by the State will be conducted in accordance with the State's Analysis of Impediments to Fair Housing Choice and the Fair Housing Plan adopted in November 2010. Any activities using CDBG-DR funding will be conducted in accordance with Fair Housing principles.

**Nondiscrimination:** The State and all UGLGs, State agencies/authorities or sub-recipients will be required to adhere to the established Federal policies which ensure that no person be excluded, denied benefits or subjected to discrimination on the basis race, color, national origin, religion, sex, familial status, and/or physical and mental handicap under any program funded in whole or in part by Federal CDBG-DR funds. UGLGs, State Agencies/Authorities or sub-recipients will be required to document compliance with all nondiscrimination laws, executive orders, and regulations.

**Labor Standards:** The State and all UGLGs, State agencies/authorities or sub-recipients will be required to oversee compliance with Davis-Bacon Labor Standards and related laws and regulations as provided at 40 U.S.C. 276a-a7 and 29CFR Part 5. Regulations require all laborers and mechanics employed by contractors or subcontractors on CDBG funded or CDBG assisted public works construction contracts in excess of \$2,000, or residential construction or rehabilitation projects involving eight or more units are paid wages no less than those prescribed by the Department of Labor and in accordance with Davis Bacon Related Acts.

**Minority and Women's Business Enterprises (M/WBE):** The State and all UGLGs, State agencies/Authorities or sub-recipients are required to take affirmative steps to assure that minority-owned firms, women's business enterprises, and labor surplus area firms are used when possible. The State and all UGLGs, State agencies/authorities or sub-recipients will take at least all of the following steps in accordance with 24 CFR 85.36 and Article 15A of the New York State Executive to further this goal:

- Ensure that small businesses, minority-owned firms, and women's business enterprises are used to the fullest extent practicable.
- Make information on forthcoming opportunities available and arrange time frames for purchases and contracts to encourage and facilitate participation by small businesses, minority-owned firms, and women's business enterprises.
- Consider in the contract process whether firms competing for larger contracts intend to subcontract with small businesses, minority-owned firms, and women's business enterprises.

- Encourage contracting with consortiums of small businesses, minority-owned firms and women's business enterprises when a contract is too large for one of these firms to handle individually.
- Use the services and assistance, as appropriate, of such organizations as the Small Business Administration and the Department of Commerce's Minority Business Development Agency and the Empire State Development Corporation, Division of Minority and Women's Business Development in the solicitation and utilization of small businesses, minority-owned firms and women's business enterprises.

The State, UGLGs, State agencies/authorities or sub-recipients should obtain a list of Minority and Women-owned Business Enterprises (MBE/WBE) certified firms by contacting the Empire State Development Corporation, Division of Minority and Women's Business Development, 30 South Pearl Street, Albany, NY 12245, (518) 292-5250 or utilize the website-based retrieval process at <http://www.esd.ny.gov/MWBE.html>.

**Section 3 Compliance:** GOSR is committed to the goals of Section 3, as outlined in CFR 24 Part 135, to increase employment and business opportunities for low and very low income person within projects developed with HUD resources. In accordance with the requirements under Section 3 of the Housing and Urban Development Act of 1968, as amended, UGLGs, State agencies/authorities or sub-recipients shall ensure that employment and other economic opportunities generated by the use of CDBG-DR funds shall, to the greatest extent feasible, be directed to low and very low income persons, particularly those who are recipients of government assistance for housing, and to business concerns that provide economic opportunities to low and very low income persons. Assistance covered by Section 3 includes the expenditure of CDBG-DR funds for work arising in connection with housing rehabilitation, housing construction, or other public construction projects. Section 3 requirements are applicable to all procurement actions in excess of the small purchase threshold established at 24 CFR 85.36(d) (1), regardless of whether the procurement is governed by 24 CFR 85.36. Section 3 applies to the entire project or activity funded with assistance that triggers Section 3 requirements. The State and all UGLGs, State agencies/authorities or sub-recipients receiving CDBG-DR grants that exceed \$200,000 must include a Section 3 clause in all contracts for \$100,000 or more. GOSR has included the provisions of CFR 24 Part 135 regarding the implementation of Section 3 goals within its RFPs, contracts, and sub recipient agreements and is monitoring contractors and sub-recipients' efforts to meet these goals.

**Environmental:** The State has dedicated staff to implement the environmental review requirements set forth in 24 CFR Part 58 for all CDBG-DR funded storm recovery activities, as well as the floodplain notice requirements set forth in 24 CFR Part 55. The environmental staff oversees the environmental reviews for each GOSR program, which may be individual review or programmatic tiered reviews dependent on the scope of the activities. The environmental staff also consults regularly with program staff to ensure compliance with environmental requirements. The State has dedicated certifying officers specifically for CDBG-DR storm recovery projects and, through New York State Division of Homes and Community Renewal's Housing Trust Fund Corporation, assumes "Responsible Entity" status for purposes of issuing required environmental determinations and notices. When permissible, the State may adopt a pre-existing environmental review, or coordinate its environmental review with other entities. The State may also, under appropriate circumstances, allow sub-recipients, subject to all legal requirements, to prepare environmental review documents, which the State will then monitor to ensure conformance with all applicable environmental requirements.

**Lead Based Paint:** All New York State CDBG-DR funded housing rehabilitation and mitigation projects must adhere to the EPA regulations at 40CFR Part 745 and the Residential Lead-Based Paint Hazard Reduction Act of 1992 (24 CFR Part 35). These regulations must be carefully followed to ensure that exposure to lead hazards is reduced in any residential property to be rehabilitated or purchased. The regulations can be found at [www.hud.gov/offices/lead/enforcement/lshr.cfm](http://www.hud.gov/offices/lead/enforcement/lshr.cfm)

Interpretive Guidance was created by HUD to be used when addressing questions that arise as a result of the implementation of these regulations. The Interpretive Guidance can be found at: [www.hud.gov/utilities/intercept.cfm?/offices/lead/library/enforcement/LSHRGuidance21June04.pdf](http://www.hud.gov/utilities/intercept.cfm?/offices/lead/library/enforcement/LSHRGuidance21June04.pdf)

For questions that cannot be answered through the regulations or Interpretive Guidance, Recipients should submit their questions in writing to GOSR. GOSR will respond in writing.

## Monitoring

GOSR has established a Monitoring Plan to ensure that all programs and projects comply with applicable Federal, State, and local regulations and effectively fulfill the goals set forth in GOSR's Action Plans and Action Plan Amendments. GOSR must ensure compliance with the following HUD regulations, including but not limited to: Record Keeping, Administrative and Financial Management, Environmental Compliance, Citizen Participation, Conflict of Interest, Procurement, Davis-Bacon Labor Standards Compliance, Diversity and Civil Rights regulations (including but not limited to Minority and Women's Business Enterprise (M/WBE), Section 3, Fair Housing, Limited English Proficiency, and American with Disabilities Act), Property Acquisition and Management, Displacement, Relocation, and Replacement.

GOSR's Monitoring Plan serves to identify risks, deficiencies, and remedies relating to GOSR's directly administered programs, administrative and financial management, and programs administered via GOSR's sub-recipients. The monitoring plan will seek to accomplish the following objectives:

- To determine if a grantee/subrecipient is carrying out its CDBG program, and its individual activities as described in the Action Plan for CDBG-DR assistance and its related Agreement.
- To determine if a grantee/subrecipient is carrying out its activities in a timely manner, in accordance with the schedule included in the Agreement.
- To determine if a grantee/subrecipient is charging costs to the project that are eligible under applicable laws and CDBG-DR regulations, and are reasonable.
- To determine if a grantee/sub-recipient is conducting its activities with adequate control over program and financial performance, and in a way that minimizes opportunities for waste, mismanagement, fraud, and abuse.
- To assess if the grantee/sub-recipient has a continuing capacity to carry out the approved project, as well as future grants for which it may apply.
- To identify potential problem areas and to assist the grantee/Sub-recipients in complying with applicable laws and regulations.
- To assist grantee/sub-recipients in resolving compliance problems through discussion, negotiation, and the provision of Technical Assistance and training.
- To provide adequate follow-up measures to ensure that performance and compliance deficiencies are corrected by grantee/Sub-recipients, and not repeated.
- To comply with the Federal monitoring requirements of 24 CFR 570.501(b) and with 24 CFR 84.51 and 85.40, as applicable.
- To determine if any conflicts of interest exist in the operation of the CDBG-DR program per 24 CFR 570.611.
- To ensure that required records are maintained to demonstrate compliance with applicable regulations.

GOSR will conduct a risk analysis on all entities being monitored, including all programs, contractors, and sub-recipients in order to identify the appropriate level of monitoring, include the frequency and depth of review. GOSR will make necessary adjustments in its monitoring plan based on the most current information, data, and analyses available. Any risks and deficiencies identified will result in a request for timely corrective action from the entity being monitored. The State and all UGLGs, other State Agency/Authority's and Sub-recipients will provide technical assistance to facilitate compliance with all applicable Federal, State, and local regulations.

## Citizen Participation Plan

The primary goal of the New York Citizen Participation Plan is to provide all New York citizens with an opportunity to participate in the planning, implementation, and assessment of the State's CDBG-DR Sandy recovery program(s). The Plan sets forth policies and procedures for citizen participation, which are designed to maximize the opportunity for citizen involvement in the community redevelopment process. New York State developed the Citizen Participation Plan to meet the requirements of the CDBG Disaster Recovery (CDBG-DR) funding for Superstorm Sandy, Hurricane Irene, and Tropical Storm Lee. The Plan reflects the alternative requirements as specified by the U.S. Department of Housing and Urban Development (HUD) in the Federal Register (FR-5696-N-01), Federal Register (FR-5696-N-06), Federal Register (FR-5696-N-11), and notice of specific waivers.

The State will ensure that any Units of General Local Government (UGLG) or sub-recipients who receive funds will have a Citizen Participation Plan that meets the CDBG-DR regulations and takes into consideration the waivers and alternatives made available under CDBG-DR funding.

In order to facilitate citizen participation requirements and to maximize citizen interaction in the development of the New York Disaster Recovery Action Plan, substantial amendments to the Action Plan, and the Quarterly Performance Reports (QPR), the State has laid out targeted actions to encourage participation and allow equal access to information about programs by all citizens, including those of low and moderate income, persons with disabilities, the elderly population, persons receiving Disaster Housing Assistance Program (DHAP) funding, and persons with limited English proficiency.

### *Public Outreach*

GOSR is committed to ensuring that all populations impacted by the storms are aware of the programs available to assist in the recovery from Hurricane Irene, Tropical Storm Lee, and Superstorm Sandy. Through in person meetings, outreach events, online and traditional media, GOSR has publicized programs and conducted outreach efforts throughout the storm impacted areas. In addition, the Governor initiated the NYRCR Program, a grass-roots community driven process that engages the public as a key stakeholder in the planning and rebuilding process. Through 61 cross-jurisdictional Planning Committees representing 119 communities, the NYRCR stakeholders helped to inform their communities about the available recovery programs as they came online.

### *Programmatic Outreach*

Through the NYRCR Program, there have been over 650 Planning Committee Meetings to construct a vision statement; to conduct an inventory of critical assets and an assessment of risks; and then ultimately to craft the strategies, and proposed projects or actions to address these risks. All meetings were open to the public and were publicized by media advisories, flyers, and posters hung in public buildings; radio announcements; and through social media. Where necessary, meetings were advertised in various languages to ensure the immigrant population was informed. Translators were also present at meetings so that information was clearly understood. For the hearing impaired, sign language interpreters were also available.

More than 250 Public Engagement Events attracted thousands of community members, who provided feedback on the NYRCR planning process and proposals and made additional suggestions. Planning Committees members were instrumental in representing communities that are traditionally underrepresented in disaster recovery, from engaging immigrant populations to working with high school students. Committee members made presentations at senior housing complexes, religious gatherings, schools, and at Chambers of Commerce.

For the Small Business program, GOSR worked in coordination with the Empire State Development Corporation (ESD) as well as its sub-recipient, the Small Business Development Center (SBDC) to create a multi-pronged approach to reach out to more than 3,000 businesses in the impacted communities has included paid advertising, door-to-door visits, press releases and other public relations efforts, and collaboration with various constituents and community organizations.

For the NY Rising Homeowner Program, early on the State partnered with the Long Island Housing Partners to target community outreach including but not limited to, persons with disabilities and other special needs, and senior households, with a focus on low- and moderate- income minority communities; outreach to and coordination with civic associations, religious and advocacy groups (racial equity), social service agencies, emergency aid not-for profits, educational institutions, and outreach to residences impacted by the disaster.

The State's vendors on the project also held numerous meetings to inform the public about the availability of grants for home repairs. This outreach consisted of a variety of methods: media announcements, online updates on the Storm Recovery website and through Storm Recovery profiles on social media platforms including Facebook, Twitter, and Instagram, community meetings, and partnerships with sub-recipients. Additionally, staff frequently made presentations to community groups, specifically in Long Island, to provide updated program information. A similar effort has been conducted in counties in upstate New York to make sure that all impacted homeowners have the most up to date information about the program. In addition, frequent technical assistance meetings were held with applicants to assist homeowners in better understanding the program and completing the rebuilding process successfully.

Further the State also engaged the Welfare Council of Long Island/Long Island Long-Term Recovery Group (LTRG) to conduct targeted outreach to low and moderate income individuals that were affected by the Superstorm Sandy, in order to encourage these individuals to apply to the NY Rising Housing Recovery Assistance Program before the April 11, 2014 deadline.

For its rental programs, the State will continue to conduct outreach to potential landlords throughout the impacted areas that may be eligible for the program. As part of its implementation, the State will also conduct outreach to previous tenants of the damaged rental units to make them aware of potential repaired and newly built units as they are completed.

#### *Outreach to Vulnerable Populations*

The State has also conducted outreach to residents with more acute needs, particularly low and moderate income household and households headed by non-English speaking persons. As noted above, within the NYRCR program, where necessary, meetings were advertised in various languages to ensure the immigrant population was informed. Translators were also present at meetings so that information was clearly understood. For the hearing impaired, sign language interpreters were also available.

As the State continues to implement programs and work with communities to recover from Hurricane Irene, Tropical Storm Lee and Superstorm Sandy, GOSR is committed to continued outreach and program accessibility to vulnerable populations and ensuring that program information is accessible to populations with language barriers. For example, the APA is translated into Spanish, Russian and Chinese, which are the three languages most needed for persons with language barriers in impacted counties (based on the 2008-2012 ACS 5-Year Estimates, Table B16001, Populations 5 Years and Over Who Speak English less than "very well").

Currently documents are translated into the three above-mentioned languages. The State will continue to translate programmatic materials within its programs. The State will also continue to provide translation services as needed in case management and public meetings.

The State is in the process of upgrading its entire website. In the interim, prior to deployment of the revised website, the State continues to update its current website to enable language access capabilities. In addition, as it rolls out the revised website, the State will prioritize language translation functionality as one of the first phases of the development process. The State will also provide translation of any document into additional languages, braille, or any other formats for persons with visual impairments upon request.

The State continues to further these efforts to reach out to all populations and ensure that the community is educated and aware of all of the recovery programs. As programs adjust and move into new phases, the State will continue to adjust their public outreach to ensure comprehensive outreach to all populations.

### **Public Notices, Public Hearings, and Comment Period**

The State Citizen Participation Plan will ensure that there is reasonable and timely access for public notice and comment on the activities proposed for the use of CDBG-DR grant funds. In the Notices for the Second and Third Allocation HUD revised the requirements for public hearings. The State will always hold a minimum of one public hearing for each substantial amendment which started with APA6. Written minutes of the hearings and attendance rosters will be kept for review by State officials. The State will continue to coordinate outreach meetings with State entities, local governments, non-profits, private sector, and involved associations. The State invited public comment to the New York Disaster Recovery Action Plan and will continue to invite public comment for any future Substantial Amendments for a minimum thirty days, posted prominently and accessed on GOSR's official website.

#### *Substantial Amendments to the Action Plan*

The State has defined Substantial Amendments to the Action Plan as those proposed changes that require the following decisions:

- Addition or deletion of any allowable activity described in the approved application
- The allocation or re-allocation of more than \$1 million
- Change in the planned beneficiaries

Those amendments which meet the definition of a Substantial Amendment are subject to public notification, public hearings and public comment procedures. Citizens and units of local government will be provided with reasonable notice and an opportunity to comment on proposed Substantial Amendments to the Action Plan. A notice and copy of the proposed Substantial Amendment will be posted on the agency's official website. Citizens will be provided with no less than thirty (30) days to review and comment on the proposed amendment. Written comments may be submitted to:

**Governor's Office of Storm Recovery  
64 Beaver Street  
P.O. Box 230  
New York, New York 10004  
Comments may also be made at [www.stormrecovery.ny.gov](http://www.stormrecovery.ny.gov)**

A summary of all comments received and reasons why any comments were not incorporated into the Substantial Amendment will be included in the HUD request for a Substantial Amendment and posted to GOSR's official website.

Non-substantial Amendments to the Action Plan will be posted on GOSR's official website after notification is sent to HUD and the amendment becomes effective. Every Amendment to the Action Plan (substantial and non-substantial) will be numbered sequentially and posted on the website.

### *Performance Reports*

The State must submit a Quarterly Performance Report through HUD's Disaster Recovery Grant Reporting (DRGR) system no later than thirty (30) days following the end of each calendar quarter. Within three (3) days of submission to HUD, each QPR must be posted on GOSR's official website for public review and comment. The State's first QPR is due after the first full calendar quarter after the grant award. QPR's will be posted on a quarterly basis until all funds have been expended and all expenditures have been reported.

Each QPR will include information about the uses of funds in activities identified in the Action Plan as entered in the DRGR reporting system. This includes, but is not limited to: project name, activity, location, and National Objective; funds budgeted, obligated, drawn down, and expended; the funding source and total amount of any non-CDBG-DR funds to be expended on each activity; beginning and actual completion dates of completed activities; achieved performance outcomes such as number of housing units complete or number of low and moderate income persons benefiting; and the race and ethnicity of persons assisted under direct-benefit activities. The State must also record the amount of funding expended for each Contractor identified in the Action Plan. Efforts made by the State to affirmatively further fair housing will also be included in the QPR.

During the term of the grant, the grantee will provide citizens, affected local governments, and other interested parties with reasonable and timely access to information and records relating to the approved program and to the grantee's use of grant funds as well as contracts procured with CDBG-DR funding. This information shall be posted on the grantee's official website and provided on request.

### **Technical Assistance**

The State will provide technical assistance to facilitate citizen participation where requested, particularly to groups representative of persons of low and moderate income and vulnerable populations. The level and type of technical assistance shall be determined by the applicant/recipient based upon the specific need of the community's citizens.

### **Citizen Participation Requirements for Sub-recipients and Local Governments Participating in CDBG-DR Programs**

To ensure applicant compliance with Section 508 of the Housing and Community Development Act of 1974, as amended, the citizen participation requirements for Units of General Local Government (UGLG) applying for or receiving Disaster Recovery funds from the State are as follows:

Each applicant shall provide citizens with adequate opportunity to participate in the planning, implementation, and assessment of the CDBG program. The applicant shall provide adequate information to citizens, obtain views and proposals of citizens, and provide opportunity to comment on the applicant's previous community development performance.

UGLGs that receive CDBG-DR funds must have a written and adopted Citizen Participation Plan which:

- Provides for and encourages citizen participation, with particular emphasis on participation by persons of low- and moderate- income who are residents of slum and blighted areas and of areas in which funds are proposed to be used;
- Provides citizens with reasonable and timely access to local meetings, information, and records relating to the State's proposed method of distribution, as required by regulations of the Secretary, and relating to the actual use of funds under Title I of the Housing and Community Development

Act of 1974, as amended, and the unit of local government's proposed and actual use of CDBG funds;

- Provides for technical assistance to groups representative of persons of low- and moderate-income that request such assistance in developing proposals with the level and type of assistance to be determined by the grantee;
- Provides for the review of proposed activities and program performance by potential or actual beneficiaries, and with accommodations for the disabled;
- Provides for a timely written answer to written complaints and grievances, within 15 working days where practicable;
- Identifies how the needs of non-English speaking residents will be met where a significant number of non-English speaking residents can be reasonably expected to be involved;
- Establishes procedures and policies to ensure non-discrimination, based on disabilities, in programs, and activities receiving Federal financial assistance as required by Section 504 of the Rehabilitation Act of 1973, as amended.

The plan must be made available to the public and must include procedures that meet the following requirements:

- *Performance Hearings:* Prior to close out of the disaster recovery program, the Program, the UGLG and State sub-recipients may be required to hold a public hearing to obtain citizen views and to respond to questions relative to the performance of the program. This hearing shall be held after adequate notice, at times and locations convenient to actual beneficiaries and with accommodations for the disabled and non-English speaking persons provided. Written minutes of the hearings and attendance rosters will be kept for review by State officials. Nothing in these requirements shall be construed to restrict the responsibility and authority of the applicant for the development of the application.
- *Complaint Procedures:* The State will ensure that each UGLG, or Sub-recipient funded with CDBG-DR funds will have written citizen and administrative complaint procedures. The written Citizen Participation Plan shall provide citizens with information relative to these procedures or, at a minimum, provide citizens with the information relative to the location and hours at which they may obtain a copy of these written procedures. All written citizen complaints which identify deficiencies relative to the UGLG, Sub-recipient's community development program will merit careful and prompt consideration. All good faith attempts will be made to satisfactorily resolve the complaints at the local level. Complaints will be filed with the Executive director or chief elected official of the entity who is receiving the funds and who will investigate and review the complaint. A written response from the Chief Elected Official, Agency Head, or Executive Director to the complainant will be made within 15 working days, where practicable. A copy of the complaint and determination must be sent to GOSR's head of Monitoring and Compliance.

## Public Comments

Information forthcoming after public comment period to be held in January 2015.

## Appendix

<sup>1</sup> Federal Register Notice (FR-5696-N-11) indicates that HUD employs a high construction cost multiplier in its updated CDBG-DR allocation methodology. In the case of New York State, housing and small business unmet needs are multiplied by a factor of 1.44.

<sup>2</sup> Bronx, Kings, Manhattan, Queens, and Richmond counties.

<sup>3</sup> The following summarizes the primary differences and similarities in methodology between the unmet needs assessment conducted in April 2013 and the unmet needs assessment of this report:

1. Damage Categories for Housing – Severe Damage remains at 4 feet to 6 feet of flooding. The State continues to define any unit with 1 foot to 4 feet as “Major-Low”. However, when FEMA-IA data indicates a zero damage category and SBA data indicates that damage was assessed, this analysis uses the SBA data as the measure of damage and categorization. In addition, if FEMA-IA data indicates what HUD defines as a zero damage category but there is a recorded flooding of at least one foot, then the housing unit is given a HUD damage category of 3.
2. As in APA6, if the owner has insurance, then the unmet need is 20% of the damage costs not covered by FEMA. If the owner received an SBA loan, then they are determined to have no unmet need.
3. If the renter earns more than \$30,000, then HUD presumes the landlord has sufficient insurance and there is no unmet need.
4. If the renter earns less than \$30,000, then unmet need is 75% of damage costs. If the renter earns more than \$30,000, then there is no need.
5. FEMA PA categories A and B (Emergency Measures and Debris Removal) are excluded from the estimate of infrastructure Unmet Needs
6. Local match for Federal Transit Administration projects, Federal Highway Administration projects, and U.S. Army Corps of Engineers Sandy-related projects are included in the Unmet Needs.
7. Mitigation costs for major and severe damage are included, estimated at 30% of damage costs for homes, businesses and applicable infrastructure projects with major to severe damage.

<sup>4</sup> Limited to occupied housing, vacation homes and vacant properties are not part of the analysis; these units are also not eligible for FEMA assistance

<sup>5</sup> Federal Register Notice (FR-5696-N-11) omitted 1-4 feet as an adjustment category. However, the state continues to believe that any unit that received a foot or more of water should be classified as most impacted.

<sup>6</sup> Damage estimates use FEMA Individual Assistance records for Superstorm Sandy, Hurricane Irene, and Tropical Storm Lee effective December, 2014. Excludes New York City counties (Bronx, Kings, New York, Queens and Richmond).

<sup>7</sup> FEMA Individual Assistance data for Superstorm Sandy, Hurricane Irene and Tropical Storm Lee effective December 2014. Count is based on FEMA Individual Assistance applicants with FEMA Real Property Full Verified Loss (RP FVL) greater than \$8,000 (for owners), Personal Property Full Verified Loss (PP FVL) greater than \$2,000 (for renters) or flooding of one foot or greater. A home may have more than one FEMA Individual Assistance record if majorly or severely impacted by more than one storm. In instances where this occurs, the home is counted towards damage counts more than once. Excludes New York City counties (Bronx, Kings, New York, Queens and Richmond).

<sup>8</sup> Table 6-1 uses the most recent FEMA and SBA data to construct damage categories and estimate average damage by calculating average SBA loan amount for each damage category. This is based on HUD's recommendation to use SBA loans as more accurate measures of damage than FEMA damage estimates. Since the original amount of SBA loans—upon application—was used in APA6's calculations, this table displays damage estimates using the original loan amount. These data exclude New York City Applicants.

<sup>9</sup> Found within FEMA IA records effective December, 2014

<sup>10</sup> Low and Moderate Income defined as a household earning less than 80% of Area Median Income, which differs across metropolitan area. For the purpose of this analysis, we use 80% of Area Median Income within the Nassau Suffolk MSA of \$67,000 annually.

<sup>11</sup> This analysis uses the most recent FEMA and SBA data to update the number of rental housing units with unmet needs for repair and mitigation. It follows the exact same instructions as were used in APA6 to calculate unmet needs.

<sup>12</sup> This analysis uses the most recent FEMA and SBA data to update the unmet needs for rental housing repair and mitigation. It follows the same methodology used in APA6 to calculate unmet needs. In cases where renters had zero FEMA-IA award and a non-zero SBA loan, the State assumed the SBA loan to be the correct figure.

<sup>13</sup> For more information see: <http://www.stormrecovery.ny.gov/funding-portal>

<sup>14</sup> Source: New York State Homes and Community Renewal, December 5th, 2014.

<sup>15</sup> Communications with New York State Housing Trust Fund, December 2014.

<sup>16</sup> Low and Moderate Income Census Tracts were determined to be substantially impacted if more than 100 units have FEMA-verified loss. A more detailed demographic analysis of these low- and moderate- income areas, including statistics on race and ethnicity, and poverty rates, are provided in Appendix A of APA6.

<sup>17</sup> Eric S. Blake, Todd B. Kimberlain, Robert J. Berg, John P. Cangialosi, John L. Beven II, National Hurricane Center, *Tropical Cyclone Report, Hurricane Sandy*, February 12, 2013, retrieved January 21, 2014. [http://www.nhc.noaa.gov/data/tcr/AL182012\\_Sandy.pdf](http://www.nhc.noaa.gov/data/tcr/AL182012_Sandy.pdf)

<sup>18</sup> Guy Carpenter, *Post-Sandy: Damage Survey*, October 2013, retrieved January 15, 2014, <http://www.guycarp.com/content/dam/guycarp/en/documents/dynamic-content/2013%20Oct%20Post-Sandy%20Damage%20Survey%20Publish.pdf>

<sup>19</sup> APA 6 used a broad measure of business impact by estimating the number of businesses in flooded census tracts determined to be impacted )Based on Dun and Bradstreet 2012 business data overlaid with FEMA Flood Inundation Files April 23, 2013). In this analysis, the State uses more nuanced measures to more accurately reflect the estimated business impact.

<sup>20</sup> *Ibid.*

<sup>21</sup> *Economic Impact of Hurricane Sandy – Potential Economic Activity Lost and Gained in New Jersey and New York*. Prepared by the U.S. Department of Commerce, Economics and Statistics Administration, Office of the Chief Economist, September, 2013. Available online at: <http://www.esa.doc.gov/sites/default/files/reports/documents/sandyfinal101713.pdf>. Analysis includes 13 counties (including all five in New York City).

<sup>22</sup> This is compared to 75% of businesses in the data used to calculate APA6.

<sup>23</sup> Senate Bipartisan Task Force on Hurricane Sandy Recovery, *Preliminary Response and Recovery Report*, February 2013.

<sup>24</sup> A Census Block smallest geographic Census area; as an example, there are over 350,000 Census Blocks as of the 2010 Census. For more see: [https://www.census.gov/geo/maps-data/data/tallies/census\\_block\\_tally.html](https://www.census.gov/geo/maps-data/data/tallies/census_block_tally.html). Census Tracts are larger areas, designed to have between 2,500-8,000 residents each. For more see: *Census Tracts and Block Numbering Areas*, available at: [https://www.census.gov/geo/maps-data/data/tallies/census\\_block\\_tally.html](https://www.census.gov/geo/maps-data/data/tallies/census_block_tally.html)

<sup>25</sup> FEMA Sandy Flood Inundation File April 18, 2013.

<sup>26</sup> Business locations, revenue and employees from Dun and Bradstreet 2013. Profit is assumed at 7.2% of revenue during two-week duration. For the purposes of this calculation, the definition of a small business is one with fewer than 100 employees.

<sup>27</sup> The only change in Table 17 is replacing the “Annual Revenue” with annual revenue for small businesses. APA 6 used the annual revenue for ALL businesses.

<sup>28</sup> Utilizing data collected by the New York State Department of Financial Services from private insurers making up over 95% of insurance market in areas affected by Superstorm Sandy. These data, current as of October 2013 indicates that in State’s most impacted counties (outside of New York City) 5,806 business interruption claims were received by insurers. Of those some 2,133 claims were closed without payment and the total case incurred loss exceeded \$71 million.

<sup>29</sup> U.S. Department of Commerce, Economics and Statistics Administration, Office of the Chief Economist, *Economic Impact of Hurricane Sandy*, September 2013. Available online at <http://www.esa.doc.gov/sites/default/files/reports/documents/sandyfinal101713.pdf>.

<sup>30</sup> Identified by their NAICS industry code.

<sup>31</sup> Brian Patrick Eha, “Six Months after Hurricane Sandy, Many Businesses Still Struggle to recover,” *Entrepreneur* online, April 29, 2013, retrieved January 27, 2014, <http://www.entrepreneur.com/article/226520>.

<sup>32</sup> As in previous notices, HUD advises in the most recent allocation methodology for calculating unmet need that since debris removal and emergency protective measures have already taken place, there is no gap in funding. The State has funded these activities using CDBG-DR funding. However, for the purposes of this unmet need analysis, we ignore categories A and B for determining damage and the funding gap.

<sup>33</sup> That total was subsequently cut by almost \$545 million due to sequestration:

[http://www.fta.dot.gov/newsroom/news\\_releases/12286\\_15760.html](http://www.fta.dot.gov/newsroom/news_releases/12286_15760.html)

<sup>34</sup> [http://www.fta.dot.gov/15138\\_16223.html](http://www.fta.dot.gov/15138_16223.html), retrieved December 11, 2014.

<sup>35</sup> Power outages reported by ConEdison, retrieved February 1, 2014, <http://www.coned.com/newsroom/news/pr20121101.asp>

<sup>36</sup> *Coastal Resiliency and Water Quality in Nassau and Suffolk Counties: Recommended Actions and a Proposed Path Forward*. New York State Department of Environmental Conservation and other New York State Agencies and Governments. October 28, 2014. Available at: <http://www.lisser.us/lireportoct14.pdf>.

<sup>37</sup> Available at:

[http://suffolkcountyny.gov/Portals/17/Reports/SC%20Comprehensive%20Water%20Resources%20Management%20Plan%20Executive\\_Summary.pdf](http://suffolkcountyny.gov/Portals/17/Reports/SC%20Comprehensive%20Water%20Resources%20Management%20Plan%20Executive_Summary.pdf).

<sup>38</sup> *Coastal Resiliency and Water Quality in Nassau and Suffolk Counties: Recommended Actions and a Proposed Path Forward*. New York State Department of Environmental Conservation and other New York State Agencies and Governments. October 28, 2014.

Available at: <http://www.lisser.us/lireportoct14.pdf>. A more detailed cost estimate of the outfall pipe conducted in January 2013 puts the estimated delivery cost at \$546 million dollars Nassau County Department of Public Works “*Cost Estimate for New Outfall and Long Beach STP Conversion*”. January 2013. Conducted by Arcadis.

<sup>39</sup> Applicant numbers confirmed by Alex Zablocki (GOSR), Laurretta Fischer (Suffolk County), Kay Shaw (Town of East Hampton), and Luke McKay (Peconic Land Trust).

<sup>40</sup> *Coastal Resiliency and Water Quality in Nassau and Suffolk Counties: Recommended Actions and a Proposed Path Forward*. New York State Department of Environmental Conservation and other New York State Agencies and Governments. October 28, 2014. Available at: <http://www.lisser.us/lireportoct14.pdf>.

<sup>41</sup> U.S. Department of Housing and Urban Development, State Community Development Block Grant Program: Guide to National Objectives and Eligible Activities for State CDBG Program lists eligible types of Rehabilitation assistance including (**Water and sewer**—Costs of connecting existing residential structures to water distribution lines or local sewer collection lines, or installing wells, septic tanks, septic fields for individual houses, as well as replacing any of the above. 2-30)

<sup>42</sup> GOSR is currently evaluating different potential environmental review frameworks that could potentially reduce the timeframe for environmental review for some or all project components, while other may require more lengthy studies. GOSR will ensure that its environmental review framework is informed by consultation with governmental stakeholders and the public.