COMMUNITY DEVELOPMENT BLOCK GRANT
DISASTER RECOVERY
SUBRECIPIENT AGREEMENT

THIS COMMUNITY DEVELOPMENT BLOCK GRANT DISASTER RECOVERY SUBRECIPIENT AGREEMENT ("Agreement") is made effective as of December 18, 2013 ("Effective Date") by and between the Housing Trust Fund Corporation ("Grantee") and The Research Foundation for The State University of New York, a non-profit, educational corporation organized and existing under the laws of the State of New York, with an office located at Office of Sponsored Programs, Stony Brook, New York 11794-3362 (" Subrecipient"). The foregoing Grantee and Subrecipient shall sometimes be referred to herein individually as a "Party" and collectively as the "Parties."

WHEREAS, pursuant to title I of the Housing and Community Development Act of 1974 (42 U.S.C. § 5301 et seq.) ("HCD Act"), as amended, the Grantee is authorized to administer and distribute Community Development Block Grant ("CDBG") funds in the State of New York ("State"); and

WHEREAS, on March 1, 2013, the President issued a sequestration order pursuant to section 251A of the Balanced Budget and Emergency Deficit Control Act, as amended (2 U.S.C. 901a), and reduced funding for CDBG-DR grants under the Appropriations Act to $15.18 billion; and

WHEREAS, through a Federal Register Notice published March 5, 2013, HUD allocated $5.4 billion for the areas most impacted by Hurricane Sandy, (78 FR 14329), subject to the federal statutes and regulations governing CDBG grants, as modified by exceptions and waivers previously granted and which may hereinafter be granted by HUD; and,

WHEREAS, of the $5.4 billion, the State has, to date, received an allocation in the amount of $1,713,960,000, and anticipates receiving additional funds pursuant to Notices published November 25, 2013 and thereafter; and

WHEREAS, on or about April 26, 2013, HUD approved New York's Action Plan for the utilization of CDBG-DR funds in response to Hurricane Sandy which was submitted by the Grantee on behalf of the State; and

WHEREAS, the Grantee has identified a need for inter-disciplinary research, planning and analysis related to improving resiliency in order to inform its CDBG-DR Program; and

WHEREAS, the public purpose to be derived from this Agreement is the expeditious, efficient and effective recovery of New York from Hurricane Sandy as part of the CDBG-DR Program through the programs in the State's Action Plan; and

WHEREAS, the Subrecipient requires assistance to expeditiously complete a program of research activities intended to improve New York state's ability to plan for and respond to storms and emergencies; and

WHEREAS, the Parties wish to set forth their mutual understanding regarding their respective roles and responsibilities in implementing the CDBG-DR Program; and

NOW THEREFORE, in consideration of the promises set forth herein and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties agree to the following terms and conditions:

I. SUBRECIPIENT PROGRAM

The Subrecipient will be responsible for performing the activities detailed in Schedule A and incorporated herein ("Subrecipient Program Description"). As a reimbursement-based program, for tasks and deliverables contained in the Subrecipient Program Description, they must be conducted in a manner satisfactory to the Grantee and in compliance with applicable federal and state requirements, laws and regulations. The Grantee will monitor the performance of the Subrecipient against goals and performance standards as stated in the Subrecipient Program Description. The Subrecipient must perform (and document to the Grantee) the entire Subrecipient Program Description, even if the funds provided hereunder do not cover 100% of the costs of performance. Substandard performance as reasonably determined by the Grantee, in its sole discretion, will constitute noncompliance with this Agreement. If action to correct such substandard performance is not taken by the Subrecipient within a reasonable period of time (as determined by the Grantee) after being notified by the Grantee, the Grantee may choose not to reimburse the Subrecipient for noncompliant and/or unallowable work and/or take action to suspend or terminate this Agreement or other actions as permitted under applicable law. Nothing in this Agreement shall waive or otherwise limit the actions Grantee may take or the remedies Grantee may seek as a result of any noncompliance by Subrecipient, including but not limited to suspending or debarring the Subrecipient from future State benefits.

II. TERM

The period of performance for all activities (with the exception of those activities required for the close out and final audit) assisted pursuant to this Agreement shall commence as of December 18, 2013, and shall end on December 31, 2014. Any funds not properly used by the end of the term, unless approved otherwise in writing by the Grantee, promptly shall be remitted, in full and without off-set or deduction, to the Grantee.

III. BUDGET

The Grantee may require a detailed budget breakdown, and the Subrecipient shall provide such supplementary budget information in a timely fashion in the form and content prescribed by the Grantee. Any change to the amount of Grant Funds must be approved in writing by both the Grantee before such changes are allowed and reimbursable.

IV. GRANT FUNDS

It is expressly agreed and understood that the total amount to be paid by the Grantee under this Agreement shall not exceed $2,700,000 ("Grant Funds"). The amount of Grant Funds that the Grantee has agreed to provide the Subrecipient under this Agreement is expressly conditioned upon the Grantee's receipt of such funds from HUD pursuant to the Act. The Grantee reserves the right to reduce the Grant Funds if funding from HUD is not provided at the currently anticipated levels and/or if the actual costs for the approved activities are less than those set forth in the Budget.

In the event the Subrecipient is awarded, granted, or provided with additional funds from any other source, which may include, in part or whole, aspects related to the Grantee Program of this Agreement, Subrecipient shall immediately notify Grantee of such funds, the amount, the source, and the conditions for their use. Subrecipient further agrees to provide any additional information Grantee requests related to such funds.

V. DISBURSEMENT OF GRANT FUNDS

a) The Subrecipient is required to submit a request for Grant Funds in accordance with the provisions of this Agreement, program guidelines and the program policy and procedures which are established by the Grantee. No payment by the Grantee of an improper, unauthorized or unallowable request shall constitute a waiver of the Grantee's right, whether before, during or after making any payment, to: (i) challenge the validity of such payment; (ii) enforce all rights and remedies set forth in this Agreement or provided under applicable law; (iii) require and receive a full repayment or refund of all payments made under this Agreement or (iv) take

corrective or remedial administrative action including, without limitation, suspension or termination of the Subrecipient's funding under this Agreement.

b) The Subrecipient shall certify in a sworn statement made by a senior official with each request for Grant Funds that to the best of its knowledge based on the information available to Subrecipient at the time and after making due inquiry: (i) all statements and representations previously made regarding this Agreement are correct and complete; and (ii) the funds do not duplicate reimbursement of costs and services from any other source.

c) The use of Grant Funds is conditioned upon the Subrecipient incurring allowable costs permitted under the terms of this Agreement or as otherwise pre-approved, in writing, by the Grantee. The Subrecipient shall not be reimbursed for any costs until all environmental conditions of 24 CFR Part 58 have been fully satisfied and the Grantee has issued the environmental clearance required thereunder, unless the activity is exempt under section 58.34 or falls under a categorical exclusion listed in section 58.35(b).

d) In the event cognizant State or Federal Government authorities disallow any of the costs incurred by the Subrecipient, the Subrecipient shall immediately remit any funds received by the Subrecipient for the unallowable costs to the Grantee. The Subrecipient may request the Grantee challenge the State or Federal determination and pursue other legal recourse to secure these funds; however, the Grantee maintains the sole discretion in deciding whether to pursue such funds, may request the Subrecipient pay any costs associated with such effort, and may require that the Subrecipient return the questioned funds until a final outcome is reached.

VI. NOTICES

All notices, requests, approvals and consents of any kind made pursuant to this Agreement shall be in writing and shall be deemed to be effective as of the date sent by certified mail, return receipt requested. All notices and other written communications under this Agreement shall be addressed to the individuals in the capacities indicated below, unless otherwise modified by subsequent written notice. Communication and details concerning this contract shall be directed to the following contract representatives:

Grantee: Housing Trust Fund Corporation
25 Beaver Street
New York, New York 10004
Attn: Seth Diamond, State Director of Storm Recovery

Subrecipient: The Research Foundation for The State University of New York
Office of Sponsored Programs
Stony Brook University
Stony Brook, NY 11794-3362
Attn: Anne DePietri, Contracts Administrator

VII. GENERAL CONDITIONS

A. Compliance

The Subrecipient agrees to comply with the requirements of Title 24 of the Code of Federal Regulations, Part 570 (HUD's regulations concerning Community Development Block Grants), including any regulations referenced therein, except:

(1) the Subrecipient does not assume the Grantee's environmental responsibilities described in 24 CFR 570.604; and

(2) the Subrecipient does not assume the Grantee's responsibility for initiating the review process under the provisions of 24 CFR Part 52.

Where waivers or alternative requirements are provided for in the applicable Federal Register Notices published by HUD on March 5, 2013 (78 Fed. Reg. 14,329), April 19, 2013 (78 Fed. Reg. 23,578), May 29, 2013 (78 Fed. Reg. 32,262), August 2, 2013 (78 Fed. Reg. 46,999), and November 18, 2013 (78 Fed. Reg. 69,104) ("HUD Notices"), such requirements, including any regulations referenced therein, shall apply.

The Subrecipient also agrees to comply with all other applicable Federal, State and local laws, regulations, HUD Notices, policies and guidelines, whether existing or to be established, provided the same are applied to activities occurring after the date the policy or guideline was established, governing the Grant Funds provided under this Agreement. In the event a conflict arises between the provisions of this Agreement and any of the foregoing, the Federal, State and local laws, regulations, HUD Notices, policies and guidelines shall control and this Agreement shall be interpreted in a manner so as to allow for the terms contained herein to remain valid and consistent with such Federal, State and local laws, regulations, HUD Notices, policies and guidelines. The Subrecipient further agrees to utilize Grant Funds available under this Agreement to supplement rather than supplant funds otherwise available.

B. Independent Contractor

Nothing contained in this Agreement is intended to, or shall be construed in any manner, as creating or establishing the relationship of employer/employee between the Parties. The Subrecipient shall at all times remain an "independent contractor" with respect to the efforts to be performed under this Agreement. The Grantee shall

be exempt from payment of all Unemployment Compensation, FICA, retirement, life and/or medical insurance and Workers' Compensation Insurance, as the Subrecipient is an independent contractor.

C. Hold Harmless

The Subrecipient shall and hereby agrees to hold harmless, defend (with counsel acceptable to Grantee) and indemnify the Grantee and each and all of its successors, affiliates, or assigns, and any of any of their employees, officers, directors, attorneys, consultants, agents, directors, officers, managers, and affiliates, from and against any and all damages, costs, attorneys' fees, claims, expenses, injuries, property damage, causes of action, violations of law, violations of this Agreement, and losses of any form or nature arising from or related to the negligence or willful misconduct of the Subrecipient in the performance of the efforts called for in this Agreement. This indemnity shall expressly include, but is not limited to, the obligation of Subrecipient to indemnify and reimburse Grantee for any attorneys' fees and other litigation or dispute resolution costs incurred or to be incurred by Grantee in enforcing this Agreement or any portion thereof against Subrecipient or otherwise arising in connection with Subrecipient's breach, violation, or other non-compliance with this Agreement. This clause shall survive indefinitely the termination of this Agreement for any reason by either Party.

D. Workers' Compensation

The Subrecipient shall provide Workers' Compensation Insurance coverage for all of its employees involved in the performance of this Agreement unless granted an exemption by the State.

E. Insurance & Bonding

The Subrecipient shall carry sufficient insurance coverage from insurers licensed to conduct business in New York State to protect all contract assets from loss due to any cause, including but not limited to, theft, fraud and/or physical damage. Grantee shall be named as an additional insured on all such insurance and shall meet all other insurance requirements as Grantee may impose from time to time. In addition, all insurance carriers shall meet minimum size and financial stability/ financial rating requirements as may be imposed by the Grantee from time to time. Certificates of insurance shall be provided to the Grantee.

F. Grantee Recognition

The Subrecipient shall insure recognition of the role of the Grantee and HUD in providing efforts through this Agreement. All activities, facilities and items utilized pursuant to this Agreement shall be prominently labeled as to funding source. In addition, the Subrecipient will include a reference to the support provided herein in all publications made possible with funds made available under this Agreement.

G. Amendments

This Agreement may be amended provided that such amendments make specific reference to this Agreement, comply with programmatic policies, procedures, and guidelines and are executed in writing, signed by a duly authorized representative of each Party, and approved by the Grantee's governing body. Such amendments shall not invalidate this Agreement, nor relieve or release the Grantee or the Subrecipient from its obligations under this Agreement. The Grantee may, in its sole discretion, amend this Agreement to conform with Federal, state or local governmental guidelines, policies and available funding amounts, or for other reasons. If such amendments result in a change in the Grant Funds or the Subrecipient Program Description, such modifications will be incorporated in a written amendment signed by both the Grantee and the Subrecipient.

H. Suspension or Termination

In accordance with 24 CFR 85.43, the Grantee may suspend or terminate this Agreement if the Subrecipient materially fails to comply with any terms of this Agreement, which include (but are not limited to) the following:

1. Failure to comply with any of the rules, regulations or provisions referred to herein, or such statutes, regulations, executive orders, guidelines, policies or directives as may become applicable at any time;

2. Failure, for any reason except those beyond Subrecipient's control, of the Subrecipient to fulfill in a timely and proper manner its obligations under this Agreement;

3. Ineffective or improper use of funds provided under this Agreement; or

4. Submission by the Subrecipient to the Grantee of reports that are untimely, incorrect or incomplete in any material respect.

In accordance with 24 CFR 85.44, this Agreement may also be terminated for convenience by either the Grantee or the Subrecipient, in whole or in part, by setting forth the reasons for such termination, the effective date, and, in the case of partial termination, the portion to be terminated. However, if in the case of a partial termination the Grantee determines that the remaining portion of the award will not accomplish the purpose for which the award was made, the Grantee may terminate the award in its entirety.

VIII. ADMINISTRATIVE REQUIREMENTS

A. Financial Management

1. Accounting Standards

The Subrecipient agrees to comply with 24 CFR § 570.502(b) and the sections of 24 CFR part 84 enumerated therein, to adhere to the accounting principles and procedures required therein, to utilize adequate internal controls, and to maintain necessary source documentation for all costs incurred.

2. Cost Principles

The Subrecipient shall administer its program in conformance with applicable Office of Management and Budget Circular(s). These principles shall be applied for all costs incurred whether charged on a direct or indirect basis (if allowed).

B. Documentation and Record Keeping

1. Records to be Maintained

The Subrecipient shall maintain all records required by applicable law, including but not limited to the Federal regulations specified in 24 CFR § 570.502(b), 24 CFR Part 84, Subpart C, 24 CFR § 570.506 and the applicable HUD Notices, that are pertinent to the activities to be funded under this Agreement, as well as any additional records required by the Grantee. Such records shall include but not be limited to:

a. Records providing a full description of each activity undertaken;

b. Records demonstrating that each activity undertaken meets one of the National Objectives of the CDBG program, as modified by the HUD Notices;

c. Records required to determine the eligibility of activities;

d. Records required to document the acquisition, improvement, use or disposition of real property acquired or improved with CDBG-DR funds;

e. Records documenting compliance with the fair housing and equal opportunity components of the CDBG program;

f. Financial records as required by 24 CFR § 570.502(b) and 24 CFR Part 84;

g. Other records necessary to document compliance with Subpart K of 24 CFR Part 570.

2. Retention

The Subrecipient shall retain all financial records, supporting documents, statistical records, and all other records pertinent to the Agreement for a period of five (5) years. The retention period begins on the date of the submission of the Grantee's annual performance and evaluation report to HUD in which the activities assisted under the Agreement are reported on for the final time. Notwithstanding the above, if there is litigation, claims, audits, negotiations or other actions that involve any of the records cited and that have started before the expiration of the five-year period, then all such records must be retained until completion of the actions and resolution of all issues, or the expiration of the five-year period, whichever occurs later.

3. Data

The Subrecipient shall maintain client data for efforts provided as required by the Grantee. Such data may include, but is not limited to, name, racial, ethnic, and gender characteristics, address, income level or other basis for determining eligibility, and description of service provided. Such information shall be made available to cognizant federal authorities, Grantee monitors or their designees for review upon request.

4. Disclosure

The Subrecipient understands that data collected under this Agreement is private and the use or disclosure of such information, when not directly connected with the administration of the Grantee's or Subrecipient's responsibilities with respect to efforts provided under this Agreement, is subject to the provisions of Article 6-A, "Personal Privacy Protection Law", of the New York State Public Officers Law, as well as all other applicable State and Federal privacy laws (e.g., the Federal Privacy Act, 5 U.S.C. § 552a).

5. Close-out

The Subrecipient's obligation to the Grantee shall not end until all close-out requirements are completed. Close-out activities and requirements are subject to 24 CFR Part 84 24 CFR § 570.509 and applicable HUD Notices. Activities during this close-out period shall include, but are not limited to: making final payments, disposing of assets (including the return of all unused materials, equipment, properly addressing Program Income (as that term is defined in section VI(A)(17)(a) of the HUD Notice 78 Fed. Reg. 14,329, 14,341 (March 5, 2013, as may be amended by HUD)) balances, and accounts receivable to the Grantee), and determining the custodianship of records. Notwithstanding the foregoing, the terms of this Agreement shall remain in effect during any period that the Subrecipient has control over CDBG-DR funds, including Program Income.

6. Audits & Inspections

All Subrecipient records with respect to any matters covered by this Agreement shall be made available to the Grantee, HUD, and the Comptroller General of the United States or any of their authorized representatives, at any time during normal business hours, as often as deemed necessary, to audit, examine, and make excerpts or transcripts of all relevant data. Any deficiencies noted in audit reports must be fully cleared by the Subrecipient within 30 days after receipt by the Subrecipient. Failure of the Subrecipient to comply with the above audit requirements will constitute a violation of this Agreement and may result in the withholding of future payments and/or termination. The Subrecipient hereby agrees to have an annual agency audit conducted in accordance with current Grantee policy concerning Subrecipient audits and OMB Circular A-133.

C. Reporting and Payment Procedures

1. Program Income and Other Assets

The Subrecipient shall report monthly all Program Income, as defined in section VI(A)(17)(a) of the HUD Notice 78 Fed. Reg. 14,329, 14,341 (March 5, 2013, as may be amended by HUD), generated by activities carried out with CDBG-DR funds made available under this Agreement. All Program Income shall be returned to the Grantee, absent written authorization from the Grantee to the contrary, in accordance with any procedures established by HUD and the Grantee. Any interest earned on cash advances from the U.S. Treasury and from funds held in a revolving fund account is not Program Income and shall be remitted promptly to the Grantee.

All Program assets supplied by Grantee under this Agreement, other than Program Income (property, equipment, etc.) shall revert to the Grantee upon termination of this Agreement in accordance with applicable Federal, laws, regulations, HUD Notices, policies and guidelines.

2. Indirect Costs

Indirect costs will not be compensated for under this Agreement.

3. Progress Reports

The Subrecipient shall submit regular Progress Reports to the Grantee in the form, content, and frequency as required by the Grantee. At a minimum, Progress Reports shall be submitted no less frequently than as required by 24 CFR § 570.502(b), 24 CFR Part 84, 24 CFR § 570.507 and the applicable HUD Notices.

4. Payment Procedures

In accordance with the terms in Section IV above, Grantee will pay to Subrecipient funds available under this Agreement based upon information submitted by Subrecipient, consistent with the Grantee Program Description, the Budget, Grantee policy concerning payments, and applicable federal and state law and regulation. In addition, Grantee reserves the right to liquidate funds available under this Agreement for costs incurred by Grantee on behalf of Subrecipient.

D. Sub-granting

1. Approvals

The Subrecipient shall not enter into any agreements with any agency or individual to assist in effectuating the activities of this Agreement without the written consent of the Grantee prior to the execution of such agreement.

2. Monitoring

In accordance with Federal, State and local laws, regulations, HUD Notices, program guidelines and the policies and procedures to be issued by the Grantee, the Subrecipient will monitor all Subrecipient efforts on a regular basis to assure compliance. Results of monitoring efforts shall be summarized in written reports and supported with documented evidence of follow-up actions taken to correct areas of noncompliance. Information detailing credible evidence of waste, fraud or abuse, shall be immediately reported to the Grantee, followed by a written report within ten (10) calendar days.

3. Content

The Subrecipient shall cause all of the provisions of this Agreement in its entirety to be included in and made a part of any Subrecipient agreement executed to effectuate the Grantee Program of this Agreement.

4. Selection Process

The Subrecipient shall undertake to insure that all Subrecipients utilized to effectuate the Grantee Program of this Agreement shall be selected on a fair and open basis in accordance with applicable Federal, State and local laws, regulations, and HUD Notices, including the HUD Reform Act codified at 42 U.S.C. § 3537a (referred to as Section 103). Executed copies of all Subrecipient agreements shall be forwarded to the Grantee along with documentation concerning the selection process.

E. Procurement/Subcontracting

1. General

Unless specified otherwise within this Agreement, the Subrecipient shall procure all materials, property, equipment, or services in accordance with the requirements of 24 CFR § 570.502(b) and 24 CFR Part 84, including, but not limited to the need to appropriately assess lease versus purchase alternatives. Only when Grantee's procurement policies are more stringent than those found at 24 CFR § 570.502(b) and 24 CFR Part 84 will the Subrecipient be required to comply with current Grantee policy concerning the acquisition of materials, property, equipment, or services.

2. Records

The Subrecipient shall maintain all records required by 24 CFR § 570.502(b), 24 CFR Part 84, 24 CFR § 570.506 and the applicable HUD Notices. Only when Grantee's procurement record retention standards are more stringent than Federal regulation shall the Subrecipient maintain inventory records of all non-expendable personal property as defined by such policy as may be procured with funds provided herein.

3. Travel

Subrecipient shall comply with all applicable State and HUD regulations and guidelines regarding reimbursement of approved travel expenses to be paid for with CDBG-DR funds provided under this Agreement. The Subrecipient shall obtain prior written approval from the Grantee for any travel to out of service area assignments.

F. Use and Reversion of Assets

The use and disposition of real property and equipment under this Agreement shall be in compliance with the requirements of 24 CFR § 570.502(b) and 24 CFR Part 84, as applicable, which include but are not limited to the following:

1. The Subrecipient shall transfer to the Grantee any CDBG-DR funds on hand and any accounts receivable attributable to the use of funds under this Agreement at the time of expiration, cancellation, or termination.

2. Real property under the Subrecipient's control that was acquired or improved, in whole or in part, with funds under this Agreement in excess of $25,000 shall be used to meet one of the CDBG National Objectives pursuant to 24 CFR § 570.208 until five (5) years after expiration of this Agreement or such longer period of time as the Grantee deems appropriate. If the Subrecipient fails to use CDBG-

assisted real property in a manner that meets a CDBG National Objective for the prescribed period of time, the Subrecipient shall pay the Grantee an amount equal to the current fair market value of the property less any portion of the value attributable to expenditures of non-CDBG funds for acquisition of, or improvement to, the property. Such payment shall constitute Program Income to the Grantee. The Subrecipient may retain real property acquired or improved under this Agreement after the expiration of the five-year period or such longer period of time as the Grantee deems appropriate.

3. In all cases in which equipment acquired, in whole or in part, with funds under this Agreement is sold, the proceeds shall be Program Income (prorated to reflect the extent to that funds received under this Agreement were used to acquire the equipment). Equipment not needed by the Subrecipient for activities under this Agreement shall be (a) transferred to the Grantee; or (b) retained after compensating the Grantee an amount equal to the current fair market value of the equipment less the percentage of non-CDBG-DR funds used to acquire the equipment.

G. Use of Grant Funds to Make Loans

Grant Funds under this Agreement cannot be used to make loans.

IX. RELOCATION, REAL PROPERTY ACQUISITION AND ONE-FOR-ONE HOUSING REPLACEMENT

To the extent applicable to its performance under this Agreement, and as modified by the Notice, the Subrecipient agrees to comply with (a) the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended (URA), and implementing regulations at 49 CFR Part 24 and 24 CFR § 570.606(b); (b) the requirements of 24 CFR § 570.606(c) governing the Residential Anti-displacement and Relocation Assistance Plan under section 104(d) of the HCD Act; and (c) the requirements in 24 CFR § 570.606(d) governing optional relocation policies. The Subrecipient shall provide relocation assistance to displaced persons as defined by 24 CFR § 570.606(b)(2) that are displaced as a direct result of acquisition, rehabilitation, demolition or conversion for a CDBG-DR assisted project. The Subrecipient also agrees to comply with applicable Grantee ordinances, resolutions and policies concerning the displacement of persons from their residences.

X. PERSONNEL & PARTICIPANT CONDITIONS

A. Civil Rights

1. Compliance

The Subrecipient agrees to comply with the New York State Human Rights Law and with Title VI of the Civil Rights Act of 1964, as amended, Title VIII of the

Civil Rights Act of 1968 as amended, Section 104(b) and Section 109 of Title I of the Housing and Community Development Act of 1974 as amended, Section 504 of the Rehabilitation Act of 1973, the Americans with Disabilities Act of 1990, the Age Discrimination Act of 1975, Executive Order 11063, and Executive Order 11246 as amended by Executive Orders 11375, 11478, 12107 and 12086.

2. Nondiscrimination

The Subrecipient agrees to comply with the non-discrimination in employment and contracting opportunities laws, regulations, and executive orders referenced in 24 CFR § 570.607, as revised by Executive Order 13279. The applicable non-discrimination provisions in Section 109 of the HCD Act are still applicable.

3. Land Covenants

This Agreement is subject to the requirements of Title VI of the Civil Rights Act of 1964 (P. L. 88-352) and 24 CFR §§ 570.601 and 570.602. In regard to the sale, lease, or other transfer of land acquired, cleared or improved with assistance provided under this Agreement, the Subrecipient shall cause or require a covenant running with the land to be inserted in the deed or lease for such transfer, prohibiting discrimination as herein defined, in the sale, lease or rental, or in the use or occupancy of such land, or in any improvements erected or to be erected thereon, providing that the Grantee and the United States are beneficiaries of, and entitled to enforce, such covenants. To the extent any such sale, lease or other transfer of land shall occur, the Subrecipient, in undertaking its obligation to carry out the Program assisted hereunder, agrees to take such measures as are necessary to enforce such covenant, and will not itself so discriminate.

4. Section 504

The Subrecipient agrees to comply with all Federal regulations issued pursuant to Section 504 of the Rehabilitation Act of 1973 (29 U.S.C. § 794), which prohibits discrimination against individuals with disabilities or handicaps in any Federally assisted program. The Grantee shall provide the Subrecipient with certain guidelines for compliance with that portion of the regulations in force during the term of this Agreement.

B. Affirmative Action

1. Approved Plan

The Subrecipient agrees that it shall be committed to carry out, pursuant to the Grantee's specifications, an Affirmative Action Program in keeping with the principles as provided in President's Executive Order 11246 of September 24, 1965. The Grantee shall provide certain Affirmative Action guidelines to the Subrecipient to assist in the formulation of such program. The Subrecipient shall

submit a plan for an Affirmative Action Program for approval prior to the award of funds.

2. Women- and Minority-Owned Businesses (W/MBE)

The Subrecipient shall comply with the small and minority firms, women's business enterprise and labor surplus area requirements as set forth at 24 CFR § 570.502(b) and 24 CFR Part 84.

The Subrecipient will use its best efforts to afford small businesses, minority business enterprises, and women's business enterprises the maximum practicable opportunity to participate in the performance of this Agreement. As used in this Agreement, the terms "small business" means a business that meets the criteria set forth in section 3(a) of the Small Business Act, as amended (15 U.S.C. § 632), and "minority and women's business enterprise" means a business at least fifty-one (51) percent owned and controlled by minority group members or women. For the purpose of this definition, "minority group members" are Afro-Americans, Spanish-speaking, Spanish surnamed or Spanish-heritage Americans, Asian-Americans, and American Indians. The Subrecipient may rely on written representations by businesses regarding their status as minority and female business enterprises in lieu of an independent investigation.

HTFC values affording minority- and women-owned business enterprises (M/WBEs) the opportunity to participate in the performance of the contract to be awarded for this project. Accordingly, the Subrecipient asserts that they have made and will continue to make good-faith efforts to promote and assist the participation of certified MWBEs that maintain and/or enhance the value of their proposals as subcontractors and suppliers on this project, in an amount equal to ten percent (10%) MBE and ten percent (10%) WBE of the total dollar value of this project. These participation goals shall be applicable to the contract as a whole and will be monitored by HTFC.

The Subrecipient shall complete the Staffing Plan, PROC-1 form, attached hereto as Exhibit A. Thereafter, this information is to be submitted on a quarterly basis during the term of this Agreement to report the actual workforce utilized in the performance of this Agreement by the specified categories listed including ethnic background, gender, and Federal occupational categories. The Quarterly Workforce Report, PROC-5 form, attached hereto as Exhibit B, must be submitted to report this information for the quarters ending March 31st, June 30th, September 30th and December 31st. Quarterly Workforce Reports shall be submitted, in PDF format, to OFHEO1@nyshcr.org by April 10th, July 10th, October 10th, and January 10th.

The Subrecipient shall comply with the provisions of the Human Rights Law, and all other State and Federal statutory and constitutional non-discrimination provisions. The Subrecipient shall not discriminate against any employee or

applicant for employment because of race, creed (religion), color, sex, national origin, sexual orientation, military status, age, disability, predisposing genetic characteristic, marital status or domestic violence victim status, and shall also follow the requirements of the Human Rights Law with regard to non-discrimination on the basis of prior criminal conviction and prior arrest.

Pursuant to New York State ("NYS") Executive Law Article 15-A, the Subrecipient recognizes its obligation under the law to promote opportunities for maximum feasible participation of NYS certified minority-and women-owned business enterprises ("MWBEs") in the performance of the Subrecipient's contracts. For purposes of this Agreement, the Subrecipient will fulfill its MWBE participation goals by directly contracting with NYS Certified MWBE firms.

3. Access to Records

The Subrecipient shall furnish and cause each of its own Subrecipients or subcontractors to furnish all information and reports required hereunder and will permit access to its books, records and accounts by the Grantee, HUD or its agent, the Comptroller General of the United States, or other authorized Federal officials for purposes of investigation to ascertain compliance with the rules, regulations and provisions stated herein.

4. Equal Employment Opportunity and Affirmative Action (EEO/AA) Statement

The Subrecipient will, in all solicitations or advertisements for employees placed by or on behalf of the Subrecipient, state that it is an Equal Opportunity or Affirmative Action employer.

5. Subcontract Provisions

The Subrecipient will include the provisions of Paragraphs X.A, Civil Rights, and B, Affirmative Action, in every subcontract or purchase order, specifically or by reference, so that such provisions will be binding upon each of its own Subrecipients or subcontractors.

C. Employment Restrictions

1. Prohibited Activity

The Subrecipient is prohibited from using funds provided herein or personnel employed in the administration of the program for: political activities; inherently religious activities; lobbying; political patronage; and nepotism activities.

2. Labor Standards

The Subrecipient agrees to comply with the requirements of the Secretary of Labor in accordance with the Davis-Bacon Act as amended, the provisions of Contract Work Hours and Safety Standards Act (40 U.S.C. § 327 et seq.) and all other applicable Federal, state and local laws and regulations pertaining to labor standards insofar as those acts apply to the performance of this Agreement. The Subrecipient agrees to comply with the Copeland Anti-Kick Back Act (18 U.S.C. § 874 et seq.) and its implementing regulations of the U.S. Department of Labor at 29 CFR Part 5. The Subrecipient shall maintain documentation that demonstrates compliance with hour and wage requirements of this part. Such documentation shall be made available to the Grantee for review upon request. The Subrecipient agrees that, except with respect to the rehabilitation or construction of residential property containing less than eight (8) units, all contractors engaged under contracts in excess of $2,000.00 for construction, renovation or repair work financed in whole or in part with assistance provided under this Agreement, shall comply with Federal requirements adopted by the Grantee pertaining to such contracts and with the applicable requirements of the regulations of the Department of Labor, under 29 CFR Parts 1, 3, 5 and 7 governing the payment of wages and ratio of apprentices and trainees to journey workers; provided that, if wage rates higher than those required under the regulations are imposed by state or local law, nothing hereunder is intended to relieve the Subrecipient of its obligation, if any, to require payment of the higher wage. The Subrecipient shall cause or require to be inserted in full, in all such contracts subject to such regulations, provisions meeting the requirements of this paragraph.

3. "Section 3" Clause

a. Compliance

Compliance with the provisions of Section 3 of the HUD Act of 1968, as amended, and as implemented by the regulations set forth in 24 CFR 135, and all applicable rules and orders issued hereunder prior to the execution of this Agreement, shall be a condition of the Federal financial assistance provided under this Agreement and binding upon the Grantee, the Subrecipient and any of the Subrecipient's Subrecipients and subcontractors. Failure to fulfill these requirements shall subject the Grantee, the Subrecipient and any of the Subrecipient's Subrecipients and subcontractors, their successors and assigns, to those sanctions specified by the agreement through which Federal assistance is provided. The Subrecipient certifies and agrees that no contractual or other disability exists that would prevent compliance with these requirements.

The Subrecipient further agrees to comply with these "Section 3" requirements and to include the following language in all subcontracts executed under this Agreement:

"The work to be performed under this Agreement is a project assisted under a program providing direct Federal financial assistance from HUD and is subject to the requirements of Section 3 of the Housing and Urban Development Act of 1968, as amended (12 U.S.C. § 1701). Section 3 requires that to the greatest extent feasible opportunities for training and employment be given to low- and very low-income residents of the project area, and that contracts for work in connection with the project be awarded to business concerns that provide economic opportunities for low- and very low-income persons residing in the metropolitan area in which the project is located."

The Subrecipient further agrees to ensure that opportunities for training and employment arising in connection with a housing rehabilitation (including reduction and abatement of lead-based paint hazards), housing construction, or other public construction project are given to low- and very low-income persons residing within the metropolitan area in which the CDBG-DR funded project is located; where feasible, priority should be given to low- and very low-income persons within the service area of the project or the neighborhood in which the project is located, and to low- and very low-income participants in other HUD programs; and award contracts for work undertaken in connection with a housing rehabilitation (including reduction and abatement of lead-based paint hazards), housing construction, or other public construction project to business concerns that provide economic opportunities for low- and very low-income persons residing within the metropolitan area in which the CDBG-DR funded project is located; where feasible, priority should be given to business concerns that provide economic opportunities to low- and very low-income residents within the service area or the neighborhood in which the project is located, and to low- and very low-income participants in other HUD programs.

The Subrecipient certifies and agrees that no contractual or other legal incapacity exists that would prevent compliance with these requirements.

b. Notifications

The Subrecipient agrees to send to each labor organization or representative of workers with which it has a collective bargaining agreement or other contract or understanding, if any, a notice advising said labor organization or worker's representative of its commitments under this Section 3 clause and shall post copies of the notice in conspicuous places available to employees and applicants for employment or training.

c. Subcontracts

The Subrecipient will include this Section 3 clause in every subcontract and will take appropriate action pursuant to the subcontract upon a finding that the subcontractor is in violation of regulations issued by HUD. The Subrecipient will not subcontract with any entity where it has notice or knowledge that the latter has been found in violation of regulations under 24 CFR Part 135 and will not let any subcontract unless the entity has first provided it with a preliminary statement of ability to comply with the requirements of these regulations.

D. Conduct

1. Hatch Act

The Subrecipient agrees that no funds provided, nor personnel employed under this Agreement, shall be in any way or to any extent engaged in the conduct of political activities in violation of Chapter 15 of Title V of the U.S.C.

2. Conflict of Interest

The Subrecipient agrees to abide by the provisions of 24 CFR §§ 570.502(b), 84.42, and 570.611, which include (but are not limited to) the following:

a. It is presumed that the Subrecipient is subject to state and local ethic laws and regulations related to the conduct of its officers, employees or agents engaged in the award and administration of this Agreement.

b. In the event the Subrecipient is not, the Subrecipient shall maintain written standards of conduct governing the performance of its employees engaged in the award and administration of this Agreement. No employee, officer, or agent shall participate in the selection, award, or administration of a contract supported by Federal funds if a real or apparent conflict of interest would be involved. Such a conflict would arise when the employee, officer, or agent, any member of his or her immediate family, his or her partner, or an organization which employs or is about to employ any of the parties indicated herein, has a financial or other interest in the firm selected for an award. The officers, employees, and agents of the recipient shall neither solicit nor accept gratuities, favors, or anything of monetary value from contractors, or parties to subagreements. However, recipients may set standards for situations in which the financial interest is not substantial or the gift is an unsolicited item of nominal value. The standards of conduct shall provide for disciplinary actions to be applied for violations of such standards by officers, employees, or agents of the recipient.

c. No covered persons who exercise or have exercised any functions or responsibilities with respect to CDBG-DR assisted activities, or who are in a position to participate in a decision-making process or gain inside information with regard to such activities, may obtain a financial interest in any contract, or have a financial interest in any contract, subcontract, or agreement with respect to the CDBG-DR assisted activity, or with respect to the proceeds from the CDBG-DR assisted activity, either for themselves or those with whom they have business or immediate family ties, during their tenure or for a period of one (1) year thereafter. For purposes of this paragraph, a "covered person" includes any person who is an employee, agent, consultant, officer, or elected or appointed official of the Grantee, the Subrecipient, or any designated public agency.

5. Lobbying

The Subrecipient hereby certifies that:

a. To the best of its knowledge and belief, no Federal appropriated funds have been paid or will be paid, by or on behalf of it, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Agreement;

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Agreement;

c. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S.C. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

d. It has and will comply with Section 139-j and 139-k of the State Finance Law.

e. It will require that the language of paragraphs (a) through (e) of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all Subrecipients shall certify and disclose accordingly

6. Copyright and Patents

If this Agreement results in any copyrightable material or inventions, the Grantee and/or HUD reserves the right to royalty-free, non-exclusive and irrevocable license to reproduce, publish or otherwise use and to authorize others to use, the work or materials for governmental purposes. This clause shall survive indefinitely the termination of this Agreement for any reason by either Party.

7. Religious Activities

The Subrecipient agrees that funds provided under this Agreement will not be utilized for inherently religious activities prohibited by 24 CFR § 570.200(j), such as worship, religious instruction, or proselytization.

XI. ENVIRONMENTAL CONDITIONS

A. Environmental Laws

The Subrecipient agrees to comply with the following requirements (and their state and/or local counterparts or analogues, if any) insofar as they apply to the performance of this Agreement or the Grantee Program, as any of the following may hereinafter be amended, superseded, replaced, or modified:

- Executive Order 11988, Floodplain Management, May 24, 1977 (42 FR 26951, 3 CFR, 1977 Comp., p. 117, as interpreted at 24 C.F.R. Part 55), and Executive Order 11990, Protection of Wetlands, May 24, 1977 (42 FR 26961; 3 CFR, 1977 Comp., p. 121);

- Coastal Zone Management Act of 1972, as amended (16 U.S.C. § 1451 *et seq.*);

- Safe Drinking Water Act of 1974 (42 U.S.C. 201, 300(f) *et seq.*, and 21 U.S.C. § 349, as amended), and EPA regulations for Sole Source Aquifers (40 C.F.R. Part 149);

- Endangered Species Act of 1973, as amended (16 U.S.C. § 1531 *et seq.*);

- Wild and Scenic Rivers Act of 1968, as amended (16 U.S.C. § 1271 *et seq.*);

- Clean Air Act, as amended (42 U.S.C. § 7401 *et seq.*);

- EPA regulations for Determining Conformity of Federal Actions to State or Federal Implementation Plans (40 C.F.R. Parts 6, 51, and 93);

- Farmland Protection Policy Act of 1981 (7 U.S.C. § 4201 *et seq.*), and USDA regulations at 7 C.F.R. Part 658;

- HUD criteria and standards at 24 C.F.R. Part 51;

- Executive Order 12898, Federal Actions to Address Environmental Justice in Minorit Populations and Low-Income Populations, Feb. 11, 1994 (59 FR 7629, 3 CFR, 1994 Comp. p. 859);

- Flood Disaster Protection Act of 1973, as amended (42 U.S.C. § 4001-4128);

- National Flood Insurance Reform Act of 1994 (42 U.S.C. § 5154a);

- Coastal Barrier Resources Act, as amended by the Coastal Barrier Improvement Act of 1990 (16 U.S.C. § 3501);

- Runway Clear Zone regulations (24 C.F.R. Part 51);

- Federal Water Pollution Control Act, as amended (33 U.S.C. § 1251, *et seq.*), 1318 relating to inspection, monitoring, entry, reports, and information, as well as other requirements specified in said Section 114 and Section 308, and all regulations and guidelines issued thereunder;

- Environmental Protection Agency (EPA) regulations at 40 CFR Part 50, as amended;

- HUD regulations at 24 C.F.R. Part 51, Subpart B, and New York State and local laws, regulations, and ordinances related to noise abatement and control, as applicable;

- HUD regulations at 24 C.F.R. Part 51 Subpart C regarding siting of projects near hazardous operations handling conventional fuels or chemicals of an explosive or flammable nature;

- HUD and EPA regulations related to asbestos-containing material and lead-based paint, including but not limited to Part 56 of Title 12 of the Official Compilation of Codes, Rules and Regulations of the State of New York Department of Labor (12 NYCRR Part 56), the National Emission Standard for Asbestos (40 C.F.R. § 61.145), the National Emission Standard for Asbestos (40 C.F.R. § 61.150), and 24 C.F.R. Part 35 Subparts B, H, and J; and

- All other applicable Environmental Laws that may exist now or in the future. For the purposes of this section, "Environmental Laws" shall mean any federal, state, provincial or local law (including but not limited to statutes, rules, regulations, ordinances, directives, guidance documents or judicial or administrative interpretation thereof, or any judicial or administrative order, ruling or other such written requirement). Environmental Laws include, without limitation, any action which causes a review or reassessment of the Grantee Program.

B. Flood Disaster Protection

In accordance with the requirements of the Flood Disaster Protection Act of 1973 (42 U.S.C. 4001), the Subrecipient shall assure that for activities located in an area identified by the Federal Emergency Management Agency (FEMA) as having special flood hazards, flood insurance under the National Flood Insurance Program is obtained and maintained as a condition of financial assistance for acquisition or construction purposes (including rehabilitation).

C. Lead-Based Paint

The Subrecipient agrees that any construction or rehabilitation of structures containing residential units with assistance provided under this Agreement shall be subject to HUD Lead-Based Paint Regulations at 24 CFR § 570.608, and 24 CFR Part 35, Subpart B. Such regulations pertain to all CDBG-assisted housing and require that all owners, prospective owners, and tenants of properties constructed prior to 1978 be properly notified that such properties may include lead-based paint. Such notification shall point out the hazards of lead-based paint and explain the symptoms, treatment and precautions that should be taken when dealing with lead-based paint poisoning and the advisability and availability of blood lead level screening for children under seven. The notice should also point out that if lead-based paint is found on the property, abatement measures may be undertaken. The regulations further require that, depending on the amount of Federal funds applied to a property, paint testing, risk assessment, treatment and/or abatement may be conducted.

D. Historic Preservation

The Subrecipient agrees to comply with the Historic Preservation requirements set forth in the National Historic Preservation Act of 1966, as amended (16 U.S.C. 470) and the procedures set forth in 36 CFR Part 800 and 801, Advisory Council on Historic Preservation Procedures for Protection of Historic Properties, insofar as they apply to the performance of this agreement, as well as any other applicable laws or regulations relating to historic properties.

In general, this requires concurrence from the State Historic Preservation Officer for all rehabilitation and demolition of historic properties that are fifty years old or older or that are included on a Federal, state, or local historic property list.

E. Implementation of Mitigation Measures

The Subrecipient agrees to comply with and timely implement any and all mitigation measures and other requirements set forth in any environmental reviews, environmental assessments or environmental impact statements performed or to be performed in connection with, or records of decision or any similar documents, issued or to be issued in connection with, the CDBG-DR Program as may be applicable to the Grantee Program and Grantee Program Description. It is Subrecipient's responsibility to ensure that it has complete copies of all such documents.

XII. ASSIGNMENT

The Subrecipient shall not assign or transfer any interest in this Agreement without the prior written consent of the Grantee.

XII. SEVERABILITY

If any provision of this Agreement is held invalid, the remainder of the Agreement shall not be affected thereby and all other parts of this Agreement shall nevertheless be in full force and effect.

XIII. SECTION HEADINGS AND SUBHEADINGS

The section headings and subheadings contained in this Agreement are included for convenience only and shall not limit or otherwise affect the terms of this Agreement.

XIV. WAIVER

The Grantee's failure to act with respect to a breach by the Subrecipient does not waive its right to act with respect to subsequent or similar breaches. The failure of the Grantee to exercise or enforce any right or provision shall not constitute a waiver of such right or provision.

XV. CHOICE OF LAW

This Agreement shall be governed by and construed under the laws of the State of New York, USA, without giving effect to its conflict of law principles. Nothing in the Agreement shall preclude either Party from seeking injunctive relief to protect its rights under this Agreement.

The Parties consent to and agree that any and all disputes arising out of or relating in any way to the Agreement shall be subject to the exclusive jurisdiction of the state or Federal U.S. District Courts of New York. The Parties consent to the jurisdiction of such courts, agree to accept service of process by mail, and waive any jurisdictional or venue defenses otherwise available.

XVI. COMPLIANCE WITH LAW

It is the intention and understanding of the Parties hereto that each and every provision of law required to be inserted in this Agreement should be and is inserted herein. Furthermore, it is hereby stipulated that every such provision is deemed to be inserted and if, through mistake or otherwise, any such provision is not inserted herein or is not inserted in correct form, then this Agreement shall forthwith, upon the application of either Party, be amended by such insertion so as to comply strictly with the law and without prejudice to the rights of either Party.

XVII. SUBROGATION

Subrecipient acknowledges that funds provided through this Agreement are Federal funds administered by HUD under the CDBG-DR Program and that all funds provided by this Agreement are subject to audit, disallowance, and repayment. Any disagreement with adverse findings may be challenged subject to Federal regulation; however, Subrecipient shall promptly return any and all funds to the Grantee, which are found to be ineligible, unallowable, unreasonable, a duplication of benefits, or non-compensable, no matter the cause. This clause shall survive indefinitely the termination of this Agreement for any reason by either Party.

XV. ENTIRE AGREEMENT

This Agreement constitutes the entire agreement between the Grantee and the Subrecipient for the use of funds received under this Agreement and it supersedes all prior or contemporaneous communications and proposals, whether electronic, oral, or written between the Grantee and the Subrecipient with respect to this Agreement.

IN WITNESS WHEREOF, this Agreement has been executed by a duly authorized representative of the parties.

Housing Trust Fund Corporation

By: [redacted]
Name: Seth Diamond
Title: State Director of Storm Recovery

By: [redacted]
Name: «LastName»
Title: «JobTitle»

ANNETTE DEPIETRI
CONTRACTS ADMINISTRATOR

This contract has been approved by the Grantee's Counsel as to form and its Treasurer as to fiscal sufficiency.

SCHEDULE A
Subrecipient Program Description

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

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

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

RISE consists of prominent faculty from seven regional academic institutions, selected for specific expertise in areas across the spectrum of social and natural sciences relevant to disaster preparedness. The institute's headquarters will be at the Stony Brook University of SUNY in the School of Marine and Atmospheric Sciences, and New York University-Polytechnic Campus in the Civil Engineering Department. The team includes experts from Stony Brook University of SUNY, New York University, NYU-Polytechnic, Columbia University, Cornell University, the City University of NY, and Brookhaven National Laboratory. Core project delivery staff include

two Principal Investigators and multiple Co-Principal Investigators, graduate assistants, undergraduate students, and technical support staff. Additional technical expertise will be brought on as necessary throughout the course of the research. The efforts across the institutions will be tightly integrated from project identification and implementation to end products and deliverables. Stony Brook University serves as fiscal agent for the consortium.

New York State sought and received approval from the U.S. Department of Housing and Urban Development to provide CDBG-DR funding to seed RISE activity, with the expectation that the consortium will function as an institution for knowledge development of storm-hazards risk management; provide expertise to aid agencies in providing and quantifying resilience in ecosystem and infrastructure design, operation, and investment; develop platforms for transforming predictions into adaptive measures; serve as a statewide anchor for policymakers, experts and emergency responders, and provide comprehensive analysis to inform critical decisions before, during and after extreme weather events.

Scope of Work and Deliverables (by Research Work Unit)

1. Rapid Warning System Enhancements

1.1 Assessment of Base Plans

This work unit will evaluate county level hazard mitigation plans in the wake of Hurricane Sandy, determine the impact they have on reducing flooding damage from storms, and make recommendations on how the State can improve outcomes by reforming requirements and procedures in the planning process.

Deliverables:

- Interim progress report at 75% completion.
- Technical report describing the approach, process and rating and critique of the counties' plans including a database of county Hazard Mitigation Plans.
- Report on the functioning of an actual evacuation event on Long Island during Hurricane Sandy and case study of issues encountered at the local level of evacuations with recommendations for improving evacuation planning coordination and implementation.

1.2 Storm Simulations and Evacuation

This work unit will produce high-resolution storm surge simulations of Hurricane Sandy to better understand how the coastal flooding evolved as the storm approached, including scenarios describing the Sandy's impact had it landed at different points in the tidal cycle.

Deliverables:

- Interim progress report at 75% completion.
- Report on storm surge simulation of Hurricane Sandy coastal flooding evolved as the storm approached, including scenarios if Sandy landed at different times of the tidal cycle.
- Report on the evaluation of evacuation plans under different Hurricane Sandy simulation scenarios.

1.3 Enhancements to Long Lead Forecasting

This work unit will evaluate the quality and potential utility of back-testing techniques to assess the accuracy of medium range landfall forecasts for hurricane models for Hurricane Sandy and similar storms, and calibrate the NCEP (National Center for Environmental Prediction) Global Ensemble Forecasting System (GEFS). It will also assess alternative sources of tropical storm statistics and incorporation of ocean warming trends on forecasting hurricanes and winter storms in areas of New York impacted by Hurricane Sandy and other storms.

Deliverables:

- Interim progress report at 75% completion.
- Report on techniques for back-testing hurricane landfall models.
- Report on the relationship between Atlantic basin-wide and land falling tropical cyclone statistics for the Sandy-impacted area to the different phases of El Nino Southern Oscillation (ENSO).
- Report on how Arctic sea ice decline and North Atlantic warming may impact Atlantic hurricanes and winter storms in New York.

1.4 Rapid Warning System Enhancement

This work unit will identify enhancements to rapid warning systems, informed by advanced modeling for coastal storms and surge and damage inflicted by Hurricane Sandy.

Deliverables:

- Interim progress report at 75% completion.
- Report on existing warning systems and potential enhancements.
- Report on adaptability of the "Hudson Estuary Watershed Resiliency Project" to other upstate watersheds.

2. Assessment of Cascading Dynamics

2.1 Flooding Impacts on Transportation

This work unit will assess the impact of Hurricane Sandy and other recent storms on New York's transportation infrastructure with a focus on system interdependencies and failures.

Deliverables:

- Interim progress report at 50% completion including specifications for database on Hurricane Sandy and other recent storms about flood water impact on transportation infrastructure.
- Database on Hurricane Sandy and other recent storms about flood water impact on transportation infrastructure.
- Report on interdependencies and failure modes and thresholds revealed by Hurricane Sandy.
- Report on transit system vulnerabilities revealed by Hurricane Sandy with recommendations for changes in system configurations, usage and scheduling, proximity and elevation of transportation elements relative to water bodies.

2.2 Flooding Impacts on Electric Power System

This work unit will examine the performance of the NYC electrical distribution system and areas of vulnerability revealed by Hurricane Sandy, including interactions between electric power and water bodies (flooding and surge). The project will identify system improvements to increase resiliency, which may include reinforcing substations against flooding, microgrids, combined heat and power, distributed generation, smart grid technologies, and energy storage.

Deliverables:

- Report on NYC electrical distribution system and areas of vulnerability disclosed by Hurricane Sandy, including interactions between electric power and water bodies (flooding and surge).
- Interim progress report at 50% completion including specifications for Prototype Geographical Information System (GIS) that integrates weather data, soil type, land use, electrical power generation infrastructure, electrical power distribution systems, and outage data.
- Prototype Geographical Information System (GIS) that integrates weather data, soil type, land use, electrical power generation infrastructure, electrical power distribution systems, and outage data.

2.3 Flooding Impacts on Wastewater Infrastructure

This work unit will examine causes of damage and component vulnerability in wastewater treatment systems in select areas of Long Island, including the analysis of the design, operation and capacity characteristics of the existing wastewater infrastructure system and the limitations, deficiencies, potentials and dynamics of each component of the system. The research will assess performance of specific facilities during Hurricane Sandy including contaminant increases in loadings of chemical contaminants.

Deliverables:

- Interim progress report at 50% completion including specifications for computer code for hydrodynamic modeling of dilution patterns from the outfall in Reynolds Channel and relief discharge in Mill River associated with the flooding at the Bay Park Publicly Owned Treatment Works (POTW),
- Report on damage and component vulnerability in wastewater treatment systems in the study region caused by Hurricane Sandy and other storms.
- Computer code for hydrodynamic modeling of dilution patterns from the outfall in Reynolds Channel and relief discharge in Mill River associated with the flooding at the Bay Park Publicly Owned Treatment Works (POTW), including a map and an interpretation of distribution of sewage tracers in sediments.

2.4 Flooding Impacts on Drinking Water System

This work unit will examine causes of damage and component vulnerability in water supply systems in NYC and Long Island.

Deliverables:

- Interim progress report at 50% completion including specifications for database of water supply systems and flooding potential.
- Report summarizing the most important causes of damage and component vulnerability in water supply systems in NYC and Long Island, including recommendations for improved service and lessons learned from New York City and Long Island during Hurricane Sandy and other recent storms.
- Preliminary database of water supply systems and flooding potential.

2.5 Storm Impacts on Coastal Ecosystem and Fisheries

This work unit will investigate the impacts of Sandy and on coastal ecosystems and fisheries.

Deliverables:

- Interim progress report at 75% completion.
- Reports on the effects of Hurricane Sandy and other storm events on seagrass resources, water quality and plankton community composition in Great South Bay, and blue crabs in the New York coastal ecosystem.

3. Vulnerability and Resilience – Investment Strategies

3.1 Prioritization of Storm Hazards and Critical Facility Vulnerabilities

This work unit will undertake a high-level inventory and prioritization of vulnerable critical facilities in the wake of Hurricane Sandy. It will exam current mitigation measures using a benefit-cost analysis approach. It will also examine oil spills that occurred due to infrastructure

failures during Sandy and the economic and environmental impact of oil spills and sewage discharge on fisheries and ecological resources. Research will additionally estimate locations, tonnages, and costs of removing debris from beaches, marshes, and waterways, and estimate Suffolk County tree damage associated with power failures.

Deliverables:

- Interim progress report at 50% completion including specifications for an inventory of vulnerable critical facilities and methodology for cost-benefit analysis.
- Report on inventory of vulnerable critical facilities in areas affected by Hurricane Sandy and other recent storms.
- Report with a comprehensive, wide ranging, high-level examination of current mitigation measures using a benefit-cost analysis approach.
- Report on oil spills due to infrastructure failures during Hurricane Sandy.

3.2 Reserved

3.3 Assessment of Economic Vulnerabilities and Investment Strategies Targeting Flood-Prone Communities

This work unit will develop an economic vulnerability and investment assessment software tool for use by coastal communities to evaluate, predict and respond to potential risks. It will focus on climate change-related economic vulnerabilities of communities in Nassau, Suffolk, and Westchester County.

Deliverables:

- Interim progress report at 50% completion including specifications for a model and methodology for a software tool for assessing local economic vulnerability and investment in resiliency measures.
- Software tool for assessing local economic vulnerability and investment in resiliency measures. Report on economic vulnerabilities related to climate change on communities in Nassau, Suffolk, and Westchester County to impacts of climate change, including a discussion of areas of typical economic assets at risk.

3.4 Resilience Metrics for Infrastructure Investments

This work unit will develop an index to measure and monitor regional and local resilience to climate extremes and to evaluate the impacts of infrastructure investment on resilience/vulnerability. The index is intended to inform investment decisions and educate the public on policy choices. The unit will produce a report describing the index methodology, results, and use cases. This work unit will also develop an index to report the resiliency characteristics (e.g., robustness, redundancy, resourcefulness), and resiliency performance (e.g., response, and recovery) of infrastructure investments (initially focusing on electric system).

Deliverables:

- Interim progress report at 50% completion including specifications for New York State Resilience to Emergencies and Disasters Index (NYS REDI) and Climate Resilience Index (CRI).
- New York State Resilience to Emergencies and Disasters Index (NYS REDI) to measure and monitor regional and local resilience to climate extremes.
- Climate Resilience Index (CRI) and companion report describing metrics for assessing the resiliency features of infrastructure investments.

4. Climate Change and Sea Level Rise

4.1: Improved Evacuation Zone Modeling

This work unit will investigate evacuation zone modeling under sea level rise and climate variability data, including means to foster public understanding of storm risk. A high-resolution version of the Weather Research and Forecast atmospheric model will be coupled with a high resolution storm surge model (ADCIRC) to downscale sea level rise under climate change to community scales.

Deliverables:

- Report on evacuation zone modeling methodology.
- Interim progress report at 50% completion including specifications for a database of sea level rise along the NYS coasts under various climate change scenarios from multi-global models.
- Database of sea level rise along the NYS coasts under various climate change scenarios from multi-global models, with high spatial resolution downscaled to coastal communities from multi model climate change projections.
- Methodology to incorporate synoptic weather events into climate change.
- Visualization and display system of flooding scenarios as a result of sea level rise.
- High resolution Weather Research and Forecast model software codes and storm surge model software codes ported on Linux cluster suitable for regional sea-level rise simulations.

4.2 Integration of Multiple Monitoring Systems Targeting Coastal Zones

This work unit will survey, collect, and integrate multiple water and ecosystem monitoring systems along the New York State coasts in order to assess storm threats to coastal ecosystems and flood-prone areas. It will include an inventory of continuous coastal water monitoring assets in NYS by NYCDEP, LISS, Town of Hempstead, Suffolk County, and NYSDEC. It will assess

storm threats to coastal ecosystems from climate change. This work unit will make integration and synthesis of continuous coastal water monitoring assets that will be put at a singular NYS RISE web site with retrievable data. It will explore the impacts of Irene and Sandy on coastal water quality and coastal ecosystems.

Deliverables:

- Report existing real-time water and ecosystem monitoring systems along the New York State coasts in order to assess storm threats to coastal ecosystems under climate change.
- Interim progress report at 50% completion including specifications for a database of coastal ecosystem monitoring data and software tool for integrating coastal monitoring data from different existing systems.
- A database of coastal ecosystem monitoring data as a baseline.
- Software and web interface integrating and accessing continuous coastal ecosystem monitoring data, housed on the NYS RISE public web site.

EXHIBIT B
Budget Summary
New York State Resiliency Institute for Storms and Emergencies (RISE)
New York Rising Project Budget

Research Activities (by Work Unit)*	Budget
1.1 Assessment of Base Plans	[redacted]
1.2 Evacuation Planning	
1.3 Long-Lead Forecasting	
1.4 Rapid Warning System Enhancement	
2.1 Cascading Dynamics - Transportation	
2.2 Cascading Dynamics - Electric Power	
2.3 Cascading Dynamics - Wastewater	
2.4 Cascading Dynamics - Drinking Water	
2.5 Cascading Dynamics - Fisheries	
3.1 Critical Facilities Protection	
3.2 Reserved	
3.3 Economic Vulnerability	
3.4 Metrics on Infrastructure Investment	
4.1 Climate Change	
4.2 Monitoring System Integration	
Reserve for Projects to be Determined*	
Subtotal Research Activities	
Administration (not to exceed 5%)	
Total	$2,700,000

* The Scope of Work and Deliverables indicates an interim progress report requirement for each Work Unit. The Subrecipient may submit requests for reimbursement for time and materials expenses incurred up to the point of the interim progress report. Final payment for reimbursement of work under each Work Unit will be withheld until delivery of an acceptable final product (report, database, or tool).
** Amounts designated "Reserved" and "Reserve for Projects to be Determined" to be allocated under a future task order.