**Project Description**

This project proposes targeted protection strategies and drainage improvements along the northern edge of Hawtree Basin and Coleman Square to limit the impact of regular (equinox) flooding that plagues this community. The project combines berm, coastal protection, and drainage improvement measures to holistically mitigate flooding problems in this part of the community. The protection creates high level of protection at a reasonable cost.

**Benefits**

- **Risk Reduction:** Although the project would not protect the area from a 100-year storm, it could lessen the impacts from such a storm and would protect against a storm that would create up to a 5' surge. The drainage improvements could reduce the frequency and intensity of flooding from rain events, moon and equinox tides and the damaging effects of these events on property and infrastructure.

- **Economic Benefits:** The potential drainage improvement projects could also reduce costly damages to commercial and residential buildings caused by regular, recurring flooding.

- **Environmental Benefits:** Implementation of the targeted drainage and protection improvement projects could help to secure environmental assets and facilitate environmental cleanup. The details of the potential environmental benefits that could accrue are unknown at this time.

**Total Cost**

$2.5 - 5.0 million

**Proposed NYRCR Allocation**

To Be Determined

**Timeline**

Approx. 5 years
(J) Jamaica Bay Protection Strategy

Project Description

The committee recommends that options for bay-wide protection strategies, including a surge barrier at the mouth of Jamaica Bay, be further studied by City, State, and Federal agencies as was recommended in NYC’s Plan “A Stronger, More Resilient New York.” This long-term project could potentially protect a large number of NYC communities. The environmental consequences and effectiveness in risk reduction would have to be extensively studied.

Benefits

- **Risk Reduction:** A bay-wide flood protection strategy would reduce risks from storm surge events up to the design elevation of the coastal protection measures.
- **Economic Development:** Reduced risk to coastal flooding could enable economic development, increase property values, and reduce insurance premiums in communities that front the Jamaica Bay.

Considerations

- These large scale protection strategies would require extensive coordination among City, State, and Federal agencies.
- Environmental and recreational impacts need to be considered.
- The protection projects involve high costs and a long time frame for implementation. Risks to communities in the interim need to be addressed.
- Connecting infrastructure will be extensive and will have impacts on the communities.

Total Estimated Cost

> $5 billion

Timeline

> 25 years
Project Description

The 150-acre span along Spring Creek and Jamaica Bay has recently been approved for an innovative resiliency project. This project is intended to better protect homes and businesses from destructive storm surges and sea level rise. Components of this project include: excavating materials to reshape and create higher inland contours, importing materials for planting purposes, and also restoring dunes, maritime forests and other vital marsh and wetland areas.

Benefits

• **Risk Reduction:** Storm protection would be achieved by drastically recontouring the grade within the mitigation site, creating a uniform elevation that will limit entry of flood waters and waves into the community. Approximately 765,000 cubic yards of material will be excavated across the site to create the higher inland contours.

• **Environment:** In the process, the project will restore over 150 acres of valuable maritime habitats including 86.6 acres of upland buffer (dunes and maritime forest), 49 acres of low marsh, 10 acres of high marsh and 6 acres of tidal creek.

Note: This project received a special CDBG-DR allocation from the State of New York. The project will use an initial $3 million for engineering and design work. Once approved, an estimated $47 million will go towards resiliency efforts. This project is not being funded through the New York Rising Program.
Project Description
Create a relief center hub to provide information and coordination of relief supplies and services, such as access to food, water, health and medical services, after an emergency. Relief centers should be centrally located in the community and located in proximity to open space, evacuation routes, and critical service providers, such as grocery stores or pharmacies. A relief center is not an evacuation center or shelter; rather, it provides a central location for information, community gathering, and services during an emergency. Because emergencies are unpredictable and irregular events, relief centers should be housed within an existing building or organization that provides year-round community services and is well connected to the community.

Benefits
- **Risk Reduction:** A central, resilient community relief center would provide services before and after emergency events that could serve the whole neighborhood, particularly benefitting vulnerable senior populations.
- **Health and Social Benefits:** By developing programs and coordinating the community in preparation for an emergency, the hub can not only help provide a physical safe place for the community but can build social resilience and help ensure faster recovery.

Considerations
This project proposes funding Catholic Charities of Brooklyn and Queens’ Peter J. Striano Residence and Senior Center as the Howard Beach Relief Center. This building is centrally located, in proximity to other service providers and evacuation routes, and includes a large gymnasium that could double as an organizing space for relief and recovery efforts. In addition to providing capital to strengthen the building, this project proposes funding for programs to help prepare for and respond to events. Disaster-related programming might include training and practice drills, “Know your neighbor” events, and outreach to vulnerable populations. This capability may be supported initially with CDBG-DR funds for a full-time equivalent (FTE) to build capacity for two years. After two years, the organization would be responsible for supporting the FTE on an on-going basis.

Location Criteria
- Outside of extreme flood-risk zone
- Ease of access and approachability from street
- Proximity to:
  - Commercial centers for access to food, water and other essential goods and services
  - Vulnerable populations
  - Evacuation route, reliable access to route
  - A large outdoor space to accommodate possible building expansion and outdoor space

Organization Criteria
- Long history of community engagement and demonstrated community service during emergencies
- Regular programming and capacity to provide emergency programming
- Conducts outreach to vulnerable populations
- Capacity to provide social and health services
- Long-term occupancy agreement
- Business continuity plan
- Is financially stable

Total Cost
$2.5 - 3 million

Proposed NYRCR Allocation
$2.5 - 3 million

Timeline
2 years

Note: Total programming costs are $160,000-300,000 including resiliency program manager positions. Total capital expenses are $2.5 million including facility improvements.
Project Description

Create a system of hardened satellite relief centers to serve as distribution centers for supplies and information. As a complement to the relief center hub at Catholic Charities, the committee recommends allocation of funds to harden smaller “satellite” locations throughout the community that can serve as distribution centers for supplies and information. Potential satellite locations include organizations that provided recovery support after Superstorm Sandy.

Benefits

- **Risk Reduction**: A decentralized network of resilient community relief satellite centers would enable organizations to address the needs of their constituents and continue to operate business in the wake of emergency events.

- **Community Capacity Building Benefits**: The various satellite centers and their supporting organizations will help strengthen the ability of communities to respond to emergencies and be more socially resilient.

Components

Relief center satellites would be chosen through a competitive solicitation or similar process, which will identify two categories of funding:

- **Capital to harden existing building or facility**, which includes flood-proofing and installation of alternate power source.

- **Program and operations support to build host organization’s capacity to provide year-round emergency programming and to deploy resources during an emergency**. Satellites will:
  - Manage year-round programming and operations for emergency preparedness and response
  - Have a long history of community engagement and strong community ties
  - Conduct outreach to vulnerable population

### Components

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<thead>
<tr>
<th>Component</th>
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<tbody>
<tr>
<td>Total Cost</td>
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<tr>
<td>Proposed NYRCR Allocation</td>
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<td>$1 million</td>
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<tr>
<td>Timeline to implement and ramp-up</td>
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<tr>
<td>1 - 3 years</td>
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Note: Relief center satellites would be chosen through a competitive solicitation or similar process. This process will identify capital to harden existing building or facility, which includes flood proofing and installation of alternate power source.
Project Description

The proposed project would harden the West Hamilton Beach Volunteer Fire Department (VFD). The West Hamilton Beach VFD serves the Howard Beach community with ambulance services and plays a coordinated support function to FDNY for first-response services. The VFD has identified a series of protection measures needed to make its facility resilient to future storm events, including waterproofing the doors and purchasing an emergency back-up generator to ensure continued operations during power outages.

Benefits

- **Risk Reduction:** Hardening the West Hamilton Beach VFD would reduce risk to Howard Beach residents by enabling the continued operation of first-response and relief services during and after emergency events.
- **Health and Social Benefits:** By bolstering a critical community first-responder, this project can help reduce the health and safety risks associated with a disaster.

Components

Key costs for facility improvements would likely include:

- **Redundant power:** Fixed backup gas-powered generator and potentially solar powered batteries at select sites
- **Flood proofing:** Flood door barriers, exterior and interior waterproof coating, check-valves etc.

**Total Cost**

$300 - 500 thousand

**Proposed NYRCP Allocation**

$300 - 500 thousand

**Timeline**

2 years
(H) Business Resiliency Program

Project Description
This project would help small, at-risk businesses implement resiliency improvements through a technical and financial assistance program. The program would help businesses and commercial building owners identify measures for improving a building’s physical resiliency and business operations by providing technical assistance to implement resiliency strategies and funding for capital improvements.

Benefits
- **Risk Reduction:** Reduces risks to commercial assets that provide important basic services and supplies to Howard Beach residents during emergencies.
- **Economic Benefits:** Increasing the resiliency of local businesses helps ensure business continuity and contributes to the longer-term financial stability of local businesses. By stabilizing retail clusters, it can also help encourage more businesses and new types of businesses to locate in the area. The project also supports a small number of temporary jobs for construction and installation of resiliency measures.
- **Health and Social Benefits:** By supporting business continuity during and after an emergency, this program will help ensure the availability of critical resources provided by local retail stores—such as water, food or other basic emergency supplies—to local residents.

Considerations
The Planning Committee has targeted a $1M-$3M allocation for this program, which could be administered through an existing local Community Development Financial Institution (CDFI) or other local partner. There may be an opportunity to coordinate this project with existing City efforts through the New York City Economic Development Corporation (NYCEDC) Business Resiliency Investment Program (BRIP), a $110 million CDBG-DR funded program that will provide funds to both business tenants and building owners to make improvements that enhance resiliency to severe weather-related events.

Components
A wide range of improvements can be used to improve the resiliency of businesses. Options range in cost and optimal interventions vary widely depending on building use, location, construction, and other elements. Possible interventions may include:

**Building-based resiliency measures, such as:**
- Elevating mechanical systems
- Protecting critical building systems
- Dry flood-proofing of buildings
- Wet flood-proofing of certain building uses
- Structural reinforcement of wood-framed buildings

**Business-based resiliency measures, such as:**
- Creating business disaster preparedness plans
- Elevating or flood-protecting business equipment/inventory
- Elevating or flood-protecting data systems

**Total Cost**
$1 - 3 million

**Proposed NYRCR Allocation**
$1 - 3 million

**Timeline to implement**
2 years

Note: Criteria for business participation may include: location within the flood zone; at-risk or damaged during Irene and/or Sandy; small/locally-owned. Program assumes a prototypical business resiliency scope of $50,000.
(I) Residential Resiliency Program

Project Description
The proposed Residential Education and Technical Assistance program entails two components – (1) education, and (2) counseling and technical assistance. The goal of the program would be helping property owners fully understand the physical and financial risks facing their homes and helping them make more informed decisions about resiliency investments. The project could be administered by a citywide organization providing oversight and information to CBOs – there are several citywide non-profit organizations already administering programs similar to this. Qualified counselors and auditors would be responsible for carrying out the education and technical assistance.

The education program would offer property owners useful, broad and generally-accessible information. As part of the general education program, a resiliency repository would be created in the form of a website, manual or physical information center to serve as a one-stop-shop for all resiliency information and resource for accessing the education and technical assistance programs.

Benefits
- **Risk Reduction:** The project would help property owners make more informed decisions about how to best protect their homes from future flooding. If residents choose to implement the suggested flood mitigation measures to their properties, the retrofits will help protect the community’s residential housing stock from future damage.

  Financial education and counseling will reduce financial risks to residents and help property owners to better understand the financial implications of their insurance decisions, helping them choose the most appropriate insurance for their homes, and avoid being over- or under-insured.

- **Health and Social Benefits:** The proposed Residential Education and Technical Assistance program may be particularly beneficial to low-income residents who are particularly vulnerable to financial shocks from unforeseen, high-cost repair expenses associated resulting from flooding.

Components

General educational information includes:
- Identifying common insurance pitfalls and loopholes
- Avoiding potential rebuilding, insurance or financial scams
- Obtaining and understanding flood insurance
- Financing needed home repairs
- Remediating mold
- Understanding resiliency retrofits, including elevating/flood-proofing building mechanicals, installing backflow prevention device, etc.
- Identifying products, providers and reasonable costs

Individual counseling could include:
- Flood, homeowner and property insurance, financial management, and individually-tailored rebuilding and resiliency support for property owners
- Management of rebuilding, resiliency and recovery issues for building managers
- Legal support and representation when necessary

Technical assistance could include:
- Accurately assessing storm damage on single-family homes and multifamily properties
- Identifying potential retrofits to mitigate against future storm damage

Note: This amount would cover the cost of hiring a full-time program administrator, a housing auditor, three financial counselors and a lawyer, all of whom are estimated to serve approximately 250 families per year.

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<thead>
<tr>
<th>Total Cost</th>
<th>Proposed NYCR Allocation</th>
<th>Timeline to implement</th>
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<tbody>
<tr>
<td>$1 - 3 million</td>
<td>$1 - 3 million</td>
<td>2 years</td>
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Image credit: Howard Beach residential houses, Flood Resilience Zoning, New York City Department of City Planning