Howard Beach
Program Information Meeting
Committee Meeting #7

January 27, 2014
**Project Schedule**

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<tbody>
<tr>
<td>Preliminary Project Reporting</td>
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<tr>
<td>Confirm Priority Projects</td>
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<tr>
<td>Project Analysis &amp; Final Priority Project Selection</td>
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<tr>
<td>Final Community Reconstruction Plans</td>
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<tr>
<td>Final Conference &amp; Public Meeting</td>
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</tbody>
</table>

- **Planning Committee Meeting**
- **Public Meeting**
- **Deliverable Due Date**

- **Preliminary Project Reporting**: Dec. 31
- **Confirm Priority Projects**: Today, Jan. 31
- **Project Analysis & Final Priority Project Selection**: Mid-March
- **Final Community Reconstruction Plans**: Mar. 31
- **Final Conference & Public Meeting**: By May 12
Revised DOS Delivery Schedule

January
- Identify and classify “Priority CDBG-DR Projects” and “Featured Projects” for Howard Beach
  - Current list of priority projects may exceed $18.3 million allocation
  - Projection should conform to a range of $18 million to $21 million
  - Meet with Coleman Square and Cross Bay Blvd merchants to forward Economic Resilience strategy

February
- Finalize priority project list
  - Analyze, Cost and Screen priority projects for final list
  - Gov Office of Storm Recovery determination of eligibility for priority projects and recipients
  - Develop draft of final plan
  - Present priority and featured projects list to community

March
- Committee will continue to coordinate mid-March which project(s) to submit for NY Rising funding

April
- Public Meeting to present final plan
Clarification on Project Definitions

Priority Projects
- Projects that will be funded by the CDBG – DR allocation
  - $18.3 million target for Howard Beach

   Example – *harden the Catholic Charities building*

Featured Projects
- projects that the committee would recommend or partially fund that will not be fully funded through this allocation but are integral to the long-term resiliency plan for the community

   Example – *Lower Spring Creek project extend to protect Old Howard and Hamilton Beach*

Other Projects
- additional projects identified during the process (could be an appendix to the plan)

Regulatory Reforms
- recommendations made by the committee to modify, enhance or change current agency policies that would conform to long-term resilience plans for community
# Evaluation Criteria for Project Prioritization

<table>
<thead>
<tr>
<th>Term</th>
<th>Feasibility</th>
<th>Cost</th>
<th>Risk Reduction</th>
<th>Co-Benefits</th>
<th>Funding Availability</th>
<th>Public Support</th>
<th>Potential CDBG-DR Eligibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Short (1-2yrs), Mid (2-5yrs), Long (5+yrs)</td>
<td>High, Medium, Low</td>
<td>High, Medium, Low</td>
<td>High, Medium, Low</td>
<td>Resiliency Co-Benefits, Non-Resiliency Co-Benefits</td>
<td>High, Medium, Low</td>
<td>High, Medium, Low</td>
<td>High, Medium, Low</td>
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</tbody>
</table>
DOS criteria defined – Priority Projects

<table>
<thead>
<tr>
<th>Criteria:</th>
<th>Feasibility</th>
<th>Cost*</th>
<th>Risk Reduction</th>
<th>Co-Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>Little to no physical, regulatory, or political impediments to implementation. Could initiate program/construction, given the funding, within a year</td>
<td>$1-3M</td>
<td>Eliminates threat or thoroughly protects</td>
<td>Co-Benefits include both resiliency and non-resiliency related benefits.</td>
</tr>
<tr>
<td>Medium</td>
<td>Some physical, regulatory, or political hurdles to implementation but could still be implemented (given funding) within 5 years</td>
<td>$500K - $1M</td>
<td>Significantly enhances resiliency or provides some protection from flooding</td>
<td>Resiliency Co-Benefit example: Lays groundwork for future risk reduction</td>
</tr>
<tr>
<td>Low</td>
<td>Many and difficult physical and regulatory hurdles to implementation. Once approved / funded would likely take more than 5 years to implement</td>
<td>&lt;$500K</td>
<td>Provides little to no protection from flooding and does little to enhance resiliency</td>
<td>Non-resiliency Co-Benefit examples: Job growth, social services, preservation of neighborhood character</td>
</tr>
</tbody>
</table>

* Very High Cost = >$3M
## CDBG-DR Eligibility – Preliminary Interpretation

<table>
<thead>
<tr>
<th>Likelihood of funding</th>
<th>Types of Projects</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>High</strong></td>
<td>- Capital resiliency-focused projects (including coastal protection measures, physical resiliency improvements to homes &amp; businesses, community center resiliency improvements, “immovable” equipment for buildings)</td>
</tr>
</tbody>
</table>
| **Medium**            | - Planning studies for specific resiliency capital projects (e.g., planning and design of flood gate)  
- CBO capacity building (emergency plans and training, operating expenses)  
- Technical support for residential & business |
| **Low**               | - Capital & social resiliency projects with a limited resiliency argument  
- Broad planning studies not focused on a specific capital project  
- CBO mobile equipment purchases (e.g. emergency generators) |
<table>
<thead>
<tr>
<th>Number</th>
<th>Status</th>
<th>Strategy</th>
<th>Project Title</th>
<th>Project Type</th>
<th>S,M,L</th>
<th>Public Support</th>
<th>Risk Reduction</th>
<th>Co-Benefits</th>
<th>Cost Details (L,M,H)</th>
<th>Feasibility, Risk Reduction, and Funding Details</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>N+</td>
<td>Improve recreation areas accessible to Howard Beach residents</td>
<td>Improve recreation areas accessible to Howard Beach residents</td>
<td>POL REC</td>
<td>L</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>2</td>
<td>N+</td>
<td>Protect the edge</td>
<td>Support and augment State DEC Lower Spring Creek project with funding to provide amenities for community.</td>
<td>FP</td>
<td>?</td>
<td>USACE</td>
<td>M</td>
<td>H</td>
<td>H</td>
<td>M</td>
<td>L</td>
</tr>
<tr>
<td>3</td>
<td>N+</td>
<td>Protect the edge</td>
<td>Develop Upper Spring Creek on land and in water protection. Support DPR/DOR Grant proposal with specific funds and specific intervention recommendations.</td>
<td>PP</td>
<td>Y</td>
<td>NYC DPR</td>
<td>M</td>
<td>H</td>
<td>H</td>
<td>H</td>
<td>H</td>
</tr>
<tr>
<td>4</td>
<td>N+</td>
<td>Protect the edge</td>
<td>Develop a protection strategy for Coleman</td>
<td>FP</td>
<td>?</td>
<td>ibd</td>
<td>M to L</td>
<td>H</td>
<td>M</td>
<td>H</td>
<td>H</td>
</tr>
<tr>
<td>5</td>
<td>N+</td>
<td>Wetland and edge improvements to reduce surge in Jamaica Bay and protect against future storm events</td>
<td>Create oyster reefs to reduce storm energy and calm churning water</td>
<td>OTHER</td>
<td>Y</td>
<td>ibd</td>
<td>?</td>
<td>H</td>
<td>M</td>
<td>M</td>
<td>M</td>
</tr>
<tr>
<td>6</td>
<td>N+</td>
<td>Protect Jamaica Bay</td>
<td>Develop a regional Jamaica Bay strategy to protect Bowmont Heights throughout the mouth of Jamaica Bay</td>
<td>OTHER</td>
<td>N</td>
<td>ibd</td>
<td>L</td>
<td>?</td>
<td>L</td>
<td>H</td>
<td>H</td>
</tr>
<tr>
<td>7</td>
<td>N+</td>
<td>Stop localized flooding</td>
<td>Develop system for people to provide complaints about flooding on-line with specific categories to help DEP prioritize projects. Program could be set up now. DEP could modify priorities. Specific projects could result.</td>
<td>PP</td>
<td>?</td>
<td>DEP</td>
<td>S</td>
<td>H</td>
<td>H</td>
<td>L</td>
<td>M</td>
</tr>
<tr>
<td>8</td>
<td>N+</td>
<td>Stop Sewer Back-up</td>
<td>Provide structural protection for local power stations for increased resiliency of NPPD, which is most severe</td>
<td>OTHER</td>
<td>N</td>
<td>ConEd</td>
<td>M</td>
<td>H</td>
<td>M</td>
<td>M</td>
<td>H</td>
</tr>
<tr>
<td>9</td>
<td>N+</td>
<td>Increase access to isolated sections of the community</td>
<td>Raise 204d, Russell, 104th Street where flooding is most severe</td>
<td>PP</td>
<td>Y</td>
<td>NYC DOT</td>
<td>M</td>
<td>H</td>
<td>M</td>
<td>M</td>
<td>M</td>
</tr>
<tr>
<td>10</td>
<td>N+</td>
<td>Increase access to isolated sections of the community</td>
<td>Repair/Replace the DCAS boardwalk that extends from subway station to Hamilton Beach</td>
<td>PP</td>
<td>Y</td>
<td>DCAS</td>
<td>M to L</td>
<td>?</td>
<td>M</td>
<td>H</td>
<td>L</td>
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<tr>
<td>11</td>
<td>N+</td>
<td>Protect Jamaica Bay</td>
<td>Develop a regional Jamaica Bay strategy to protect Bowmont Heights throughout the mouth of Jamaica Bay</td>
<td>OTHER</td>
<td>N</td>
<td>ibd</td>
<td>L</td>
<td>?</td>
<td>L</td>
<td>H</td>
<td>H</td>
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<tr>
<td>12</td>
<td>N+</td>
<td>Stop localized flooding</td>
<td>Develop a protection strategy for Coleman Square</td>
<td>PP</td>
<td>?</td>
<td>DEP</td>
<td>S</td>
<td>H</td>
<td>H</td>
<td>L</td>
<td>M</td>
</tr>
<tr>
<td>13</td>
<td>N+</td>
<td>Stop Sewer Back-up</td>
<td>Provide free check valves to homeowners that qualify</td>
<td>PP</td>
<td>Y</td>
<td>ISSUE</td>
<td>S</td>
<td>H</td>
<td>L</td>
<td>M</td>
<td>M</td>
</tr>
<tr>
<td>14</td>
<td>N+</td>
<td>Stop Sewer Back-up</td>
<td>Protect DEP pumping facilities against storm events so that they do not shut down during future events - protect the Howard Beach pump station</td>
<td>PP</td>
<td>N</td>
<td>DEP</td>
<td>M</td>
<td>H</td>
<td>H</td>
<td>H</td>
<td>M</td>
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<tr>
<td>15</td>
<td>N+</td>
<td>Protect the edge</td>
<td>Protect DEP Sewage Treatment Facility against flooding and storm surge</td>
<td>PP</td>
<td>N</td>
<td>DEP</td>
<td>M</td>
<td>H</td>
<td>H</td>
<td>H</td>
<td>M</td>
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<tr>
<td>16</td>
<td>N+</td>
<td>Expand healthcare and social infrastructure to support senior and other vulnerable populations</td>
<td>Expand healthcare and social infrastructure to support senior and other vulnerable populations</td>
<td>PP</td>
<td>Y</td>
<td>CC</td>
<td>M</td>
<td>H</td>
<td>H</td>
<td>M</td>
<td>M</td>
</tr>
<tr>
<td>17</td>
<td>N+</td>
<td>Expand healthcare and social infrastructure to support senior and other vulnerable populations</td>
<td>Build up to 3 dual purpose or multi-purpose service centers</td>
<td>PP</td>
<td>Y</td>
<td>ibd</td>
<td>M to L</td>
<td>H</td>
<td>H</td>
<td>M</td>
<td>M</td>
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<tr>
<td>18</td>
<td>N+</td>
<td>Expand healthcare and social infrastructure to support senior and other vulnerable populations</td>
<td>Provide low-cost financing to help residents fund housing resiliency improvements to protect against storm events. This can also include check valve program</td>
<td>PP</td>
<td>?</td>
<td>see above</td>
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<tr>
<td>19</td>
<td>N+</td>
<td>Expand healthcare and social infrastructure to support senior and other vulnerable populations</td>
<td>New construction or rehabilitation of senior housing located in Howard Beach</td>
<td>OUT</td>
<td>N</td>
<td>Housing Unit</td>
<td>S</td>
<td></td>
<td></td>
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<tr>
<td>20</td>
<td>N+</td>
<td>Protect vital recovery functions</td>
<td>Develop a strategy to fund resiliency</td>
<td>OTHER</td>
<td>Y</td>
<td></td>
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<tr>
<td>21</td>
<td>N+</td>
<td>Protect vital economic corridors</td>
<td>Protect vital economic corridors</td>
<td>PP</td>
<td>?</td>
<td>SBS</td>
<td>M</td>
<td>H</td>
<td>H</td>
<td>M</td>
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</table>
Improve Recreation Areas

*Develop a Maintenance strategy for NPS lands*
Local Coastal Protection Strategies

Lower Spring Creek
Local Coastal Protection Strategies

Upper Spring Creek

- Army Corp Salt Marsh Restoration (~10 ac)
- Coastal Improvement I (~7 ac)
- Coastal Improvement II (~8 ac)
Local Coastal Protection Strategies

Alternative 1:
Natural Infrastructure (dunes/dune)
Capital Cost: $24 M
Annual O&M: $370K
400-ft high dunes: 36 M
Annual Ecological Services Benefits: $600K

Elements:
- Dune system with patchy dune vegetation
- Habitat corridor between streets and houses
- Dune/foredunes
- Storm water
- Trees and native grasses


Alternative 2:
Natural Infrastructure (wetlands)
Capital Cost: $21 M
Annual O&M: $270K
1.5 mi high dune: 35 M
Annual Ecological Services Benefits: $450K

Elements:
- 1.5 mi high dune, restored marsh
- Reforested wetlands
- Habitat corridor
- Natural drainage

Alternative 3:
Hybrid with removable wall
Capital Cost: $20 M
Annual O&M: $100K
Removable wall: 25 M
Annual Ecological Services Benefits: $275K

Elements:
- 1 mi high dune, naturalized with wetlands
- Reforested area
- Storm water
- Shrub

Alternative 4:
Hybrid with operable flood gates
Capital Cost: $24 M
Annual O&M: $400K
Operable flood gates: 25 M
Annual Ecological Services Benefits: $350K

Elements:
- 1.5 mi high dune, restored marsh
- Reforested wetlands
- Habitat corridor
- Natural drainage

Charles Memorial Park – with Breakwater

OPTION A
REINFORCED BERM AT SHORELINE
+ MARITIME FOREST

SECTION A

SECTION B

SECTION C
Create Oyster Reefs

ARTIFICIAL REEF / REEFBLK OYSTER REEF UNITS

Present Condition

- Mean Water Level
- High Velocity Tidal Wave Action
- Tidal Marsh Floor
- Erosion Scarp
- Bottom Scour

Immediately Post Installation

- Shell Apron Protects Against Scour
- Proposed Reefblk Placement (Location Varies)
- Mean Water Level
- Still Water Lagoon
- Commercial Oyster Bed
- Oyster Clusters
- Sediment Begins to Accrete After Placement of Reefblk

Post Installation

- Reefblk Unit Becomes Mature Oyster Reef
- Still Water Lagoon
- Native Vegetation Starts Growing in Sediment Accretion
- Shell Berm
- Shrub Vegetation
- Sediment Accretes to Create New Shoreline

*Source: COASTAL ENVIRONMENTS, INC.

Reefblk Layout 1

- Type: Tying Reefs 2 Each
- Contact Reef Units to Anchor Style Anchors w/ Gravine/Brass Cable

Reefblk Layout 2

- Note: Reef Unit Height May Vary from 24” to 36” Depending on Mean High Water Level (MHW), Units Will Stay Below MHW

Howard Beach Planning Committee Meeting 13
Protect Our Power Sources

- All Howard Beach substations are in the flood plain areas
- ConEdison has procured temporary water barriers (Tiger Dam) that can be deployed prior to a storm
- ConEdison is also making additional cosmetic improvements to its substation sites in Howard Beach

Raise 102\textsuperscript{nd}, Russell, 104\textsuperscript{th} Rd
Extend Howard Beach Train Station Platform
Extend Howard Beach Train Station Platform

Elevation of existing railway

6.5 ft high above existing ground

13.5 ft - NAVD88

7 ft - NAVD88

3 ft - NAVD88

0 ft - NAVD88

BFE + 2.5 ft sea level rise + 1 ft freeboard

Protect against 100 year flood with sea level rise

Mean high water
Create new pedestrian access
Regional Surge Protection: Jamaica Bay Surge Barrier

NYC “A Stronger, More Resilient New York” Comprehensive Coastal Protection Plan

“A Stronger, More Resilient New York” South Queens Initiative #1:
“Call for USACE to develop an implementation plan to mitigate inundation risks through Rockaway Inlet, exploring Surge Barrier and alternative measures”
Stop Localized Flooding

Howard Beach

Identify your recurring flooding and drainage concerns!

The objective of this map-based questionnaire is to identify the type and location of the various drainage-related problems you have described.

1. Underline the type and extent of the drainage issues.
2. Identify likely causes of these problems.
3. Suggest potential location-specific solutions.
4. Identify where additional information or study may be needed.

Using the dots provided on the map, please indicate where you experience the following types of flooding following a storm or rain event:

**Flooding in your home or business:**
- Sewer Backup in Building (through Toilet, Sink, Drain, Bathtub Drain)
- Water Entering Basement / Below-Grade through Foundation and/or Walls

**Flooding in the street / yards / parks:**
- Standing in Streets / Yards
- Ditched / Flooded Catch Basin
- Flooded in Streets / Yards
- Catch basin present
- Standing in Streets / Yards

- Water coming from overflowing manhole
- Ponding in Streets / Yards
- Water coming from nearby waterbody / waterway
Coleman Square Flooding

Permanent protection along open edge(s)
- Permanent flood barrier that would shield the area from common flooding

Deployable flood wall
- Models, such as an aqua fence, that can be set up to cover long distances before flooding expected to occur
Mitigation strategies for damage to homes

Tech assistance program:

- Develop a dedicated fund to support the relocation of home utilities to protect against future storm events
  - Could include a check valve program
Sewer System

Howard Beach Pumping Station

Recommended Adaptation Strategy:
Construct Barrier

Adaptation Cost:
$8,165,000

Jamaica Wastewater Treatment Plant

Use sandbags along the substation to minimize service disruptions in Queens during flood events, reduce sewage bypasses, and protect public health
Howard Beach relief campus

- Relief Center: Health and social services, food, water, supplies
- Clinic: Medical equipment and supplies
- Parking Lot: Staging area for relief operations
- Citibank: ATM access
- Public Library: Information and communications
- Waldbaums: Groceries, supplies, pharmacy
Howard Beach relief campus satellite system

- **Hub**: Main relief center that provides communication and distribution

- **Satellite**: A smaller distribution center linked to central hub that can also provide information and supplies
Bolster existing residential resiliency program(s)

Recommend expansion to housing programs, consider funding individual assistance programs available to entire community:

<table>
<thead>
<tr>
<th>Information &amp; Education</th>
<th>Homeowner Counseling</th>
<th>Audits &amp; Technical Assistance</th>
<th>Financial Assistance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Centralized information source for building owners and homeowners about existing programs</td>
<td>Subsidizing counseling program to help homeowners understand insurance, resiliency financing programs, and their own personal finance options to support recovery and resiliency investments.</td>
<td>Subsidizing audits and technical assistance, primarily in the focus area and for vulnerable populations</td>
<td>Subsidizing select capital improvements, e.g., backflow preventers. Tools might include: ▪ Grants ▪ Low-interest loans ▪ Government-backed loans ▪ Incentive</td>
</tr>
</tbody>
</table>

Community-wide | Individual assistance available community-wide | Individual assistance
Technical Assistance and Counseling for Homeowners

- Fund program that provides technical assistance for homes not eligible for Build It Back to:
  - Identify potential retrofits to mitigate against future storm damage
  - Provide elevation certificates
  - Possibly fund some capital interventions (e.g., backflow preventer valves)

- Expand existing counseling program to offer homeowners:
  - Individually-tailored counseling on insurance, financial and rebuilding issues
  - Assistance in determining financing strategies to pay for resiliency retrofits
Other projects

- Enhance the resiliency of NYPD Harbor Unit in New Howard Beach – new boats
- Enhance the resiliency of West Hamilton Beach Volunteer Fire Dept
Coleman Square - Cross Bay Blvd Economic Strategies

Streetscaping/Complete Streets pilot
• Complete Streets is an approach that plans for all modes of transit and incorporates design measures to create a more pedestrian-friendly environment
• Can incorporate soft landscaping to increase groundwater absorption and sloped streets to improve water drainage

Deployable flood wall
• Models, such as an aqua fence, that can be set up to cover long distances before flooding expected to occur

Creation of merchant association
• Could coordinate and implement corridor-level improvements and promote economic development