

Howard Beach Community Reconstruction

Conceptual Plan
October 2013



This document was produced by the Howard Beach Planning Committee as part of the NYRCR Community Reconstruction (NYRCR) Program within the Governor's Office of Storm Recovery. The NYRCR Program is supported by NYS Homes and Community Renewal, NYS Department of State, and NYS Department of Transportation. Assistance was led by the following consulting firms: Parsons Brinckerhoff and HR&A Advisors, and supported by SCAPE Studio, OpenPlans, and Hammes Company. All photographs were taken by the planning team unless otherwise noted.



Foreword

The New York Rising Community Reconstruction (NYRCR) program was established by Governor Andrew M. Cuomo to provide additional rebuilding and revitalization assistance to communities damaged by Superstorm Sandy, Hurricane Irene, and Tropical Storm Lee. This program empowers communities to prepare locally-driven recovery plans to identify innovative reconstruction projects and other needed actions to allow each community not only to survive, but also to thrive in an era when natural risks will become increasingly common.

The NYRCR program is managed by the Governor's Office of Storm Recovery in conjunction with New York State Homes and Community Renewal and the Department of State. The NYRCR program consists of both planning and implementation phases, to assist communities in making informed recovery decisions.

The development of this conceptual plan is the result of innumerable hours of effort from volunteer planning committee members, members of the public, municipal employees, elected officials, state employees, and planning consultants. Across the state, over 102 communities are working together to build back better and stronger.

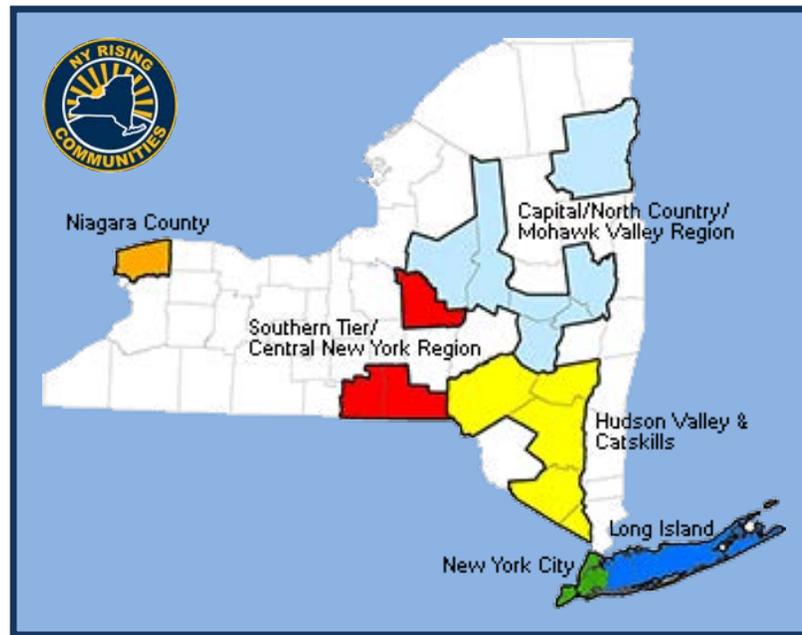
This conceptual plan is a snapshot of the current thoughts of the community and planning committee. The plans will evolve as communities analyze the risk to their assets, their needs and opportunities, the potential costs and benefits of projects and actions, and their priorities. As projects are more fully defined, the potential impact on neighboring municipalities or the region as a whole may lead to further modifications.

In the months ahead, communities will develop ways to implement additional strategies for economic revitalization, human services, housing, infrastructure, natural and cultural resources, and the community's capacity to implement changes.

Implementation of the proposed projects and actions found in this conceptual plan is subject to applicable federal, state, and local laws and regulations. Inclusion of a project or action in this conceptual plan does not guarantee that a particular project or action will be eligible for Community Development Block Grant – Disaster Recovery (CDBG-DR) funding. Proposed projects or actions may be eligible for other state or federal funding, or could be accomplished with municipal, nonprofit or private investment.

Each NYRCR Community will continue to engage the public as they develop a final plan for community reconstruction. Events will be held to receive feedback on the conceptual plan, to provide an understanding of risk to assets, and to gather additional ideas for strategies, projects and actions.

October 31, 2013



NYRCR Communities

Find out more at:

StormRecovery.ny.gov/Community-Reconstruction-Program



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I. Introduction

Program Overview

The New York Rising Community Reconstruction (NYRCR) Program was established to provide additional rebuilding and revitalization assistance to communities that were severely damaged by Superstorm Sandy, Hurricane Irene, and Tropical Storm Lee. The NYRCR Program will enable communities to identify reconstruction and resiliency projects that address current damage, future threats, and the community's economic opportunities. In connection with the program, New York State has allocated funds for community planning in 50 community planning areas across the state, 10 of which are in New York City.

New York State has allocated up to \$18.4 million to Howard Beach in Community Development Block Grant Disaster Recovery (CDBG-DR) funding from the U.S. Department of Housing and Urban Development (HUD). These funds can be used for a wide variety of projects, and Howard Beach will likely be eligible to receive additional project funding from federal, state, and local sources. The purpose of the NYRCR Program is to develop a prioritized list of projects for the allocated CDBG-DR funding and other sources.

As shown on the opposite page, this process will include five steps:

- Identify **Assets, Risks, Needs, Opportunities**
- Define **Community Vision**
- Identify, evaluate, and **Prioritize Projects and Actions**
- Identify **Funding Sources** and develop **Implementation Plan**
- Create **Final Community Reconstruction Plan**

The NYRCR Program will focus on needs, opportunities, and projects that address six recovery functions:

- Community Planning and Capacity Building
- Housing
- Economic
- Health and Social Services
- Infrastructure Systems
- Natural and Cultural Resources

Each NYRCR community is led by a Community Reconstruction Planning Committee (Planning Committee), made up of community leaders and residents. The Planning Committee takes the lead in developing the Conceptual and Final Plans.

The state has also provided each NYRCR community with a planning team to prepare a plan. The New

York State planning team includes: Regional Leads Claudia Filomena and Chelsea Muller; NYC Lead Planner Steve Ridler; and Howard Beach Community Planners Bonnie Devine and Amy DeGaetano. The planning team for Howard Beach is being led by Parsons Brinckerhoff (planning, coastal protection, infrastructure engineering, and natural/coastal management) and HR&A Advisors (project management, community planning, economic development, and housing analysis). They are being supported by SCAPE Studios (landscape architecture), OpenPlans (participatory mapping), and Hammes Company (healthcare).

By the end of this process, the NYRCR Program will produce two public deliverables:

- **Conceptual Plan, Fall 2013** – This document summarizes the work to date on Howard Beach's opportunities for rebuilding and resiliency after Superstorm Sandy. Led by the Howard Beach Planning Committee, this plan is based on deliberation during three planning committee meetings and one public meeting that were held in September and October 2013. A minimum of two more planning committee meetings and three more public meetings will be held through March 2014 to refine the plan and to propose concrete projects and actions and develop

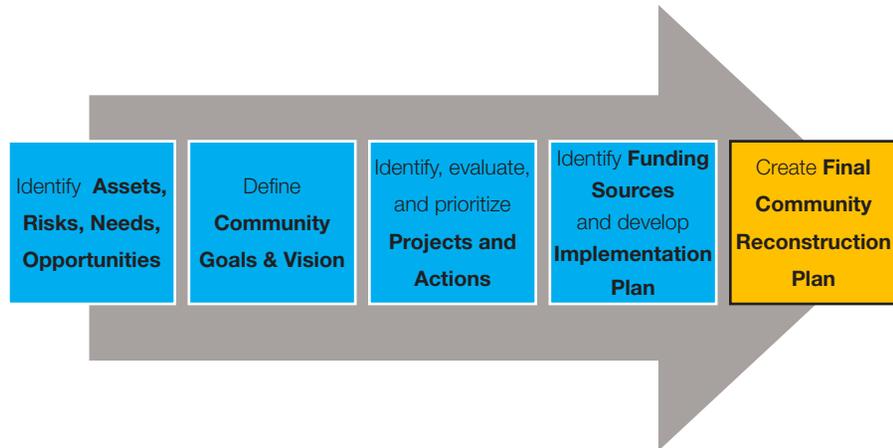


NYRCR Work Schedule

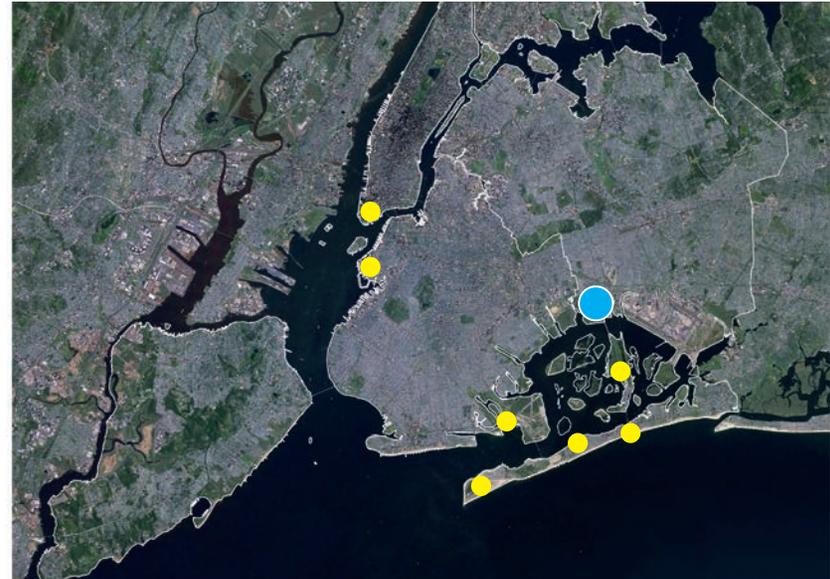
● Planning Committee Meeting
 ○ Public Meeting
 ● Deliverable Due Date

Deliverables	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.
Work Plan		●					
Vision, Assets & Risk Assessment	1	●					
Conceptual Plan		2	1	●			
List of Strategies			3	2	●		
List of Priority Projects					●		
Community Reconstruction Plan					4	3	5
						4	●

5-Step Process



NYRCR Communities in NYC





a final Community Reconstruction Plan.

The contents of this plan include the following:

1. Introduction
2. Community Context
3. Storm Impacts and Risk
4. Rebuilding and Resiliency Planning
5. Next Steps

- **Final Community Reconstruction Plan, Spring 2014** – This document will include more in-depth discussion of above, as well as:

Overview Geographic Scope of Plan

- Description of Storm Damage
- Critical Issues Community Vision
- Relationship to Regional Plans

Assessment of Risk and Needs

- Community Assets
- Assessment of Risk to Assets
- Assessment of Risk to Systems
- Assessment of Needs and Opportunities

Reconstruction Strategies

- Community Planning and Capacity Building
- Economic Development
- Health and Social Services
- Housing
- Infrastructure
- Natural and Cultural Resources

Implementation Schedule

- Schedule of Implementation Actions

Appendices

- List of CR Planning Committee Members
- Description of Public Engagement Process
- Description of Priority Projects and their Costs and Benefits
- Inventory of Assets

Approach to Public Outreach

Extensive public outreach and involvement is a key component of the NYRCR Program's planning process. This is a community-driven process that believes that outreach and community engagement are critical to creating neighborhood-specific ideas, setting direction, and ensuring the overall success of the program.

At the heart of the public-outreach process is the Planning Committee. The Planning Committee is responsible for facilitating public discussion and providing a meaningful link between the planning team and the local community. At the inception of the program, New York State appointed the following Howard Beach Planning Committee members:

- Frances O. Scarantino (Co-Chair)
- John Calcagnile (Co-Chair)
- Andrew Baumann
- Betty Braton
- John Frazio
- Roger Gendron
- Frank Giglia
- Frank Gulluscio
- Edward Kalanz
- Frank Lombardi

Committees were developed through direct engagement with community leaders and community members. Howard Beach committee members are



community leaders, life-time residents and business owners who are active in the community. This committee has access to an extensive network that can be used to disseminate and gather information. The co-chairs of the Howard Beach Planning Committee have worked with the planning team to develop agendas for all meetings, and to provide input on draft documents and presentations prior to circulation and presentation at meetings. They also have spearheaded the outreach process for meetings, coordinating a strategy for publicizing meetings and the NYRCR Program to the Howard Beach community members.

Community Outreach Strategy

In consultation with the project team, the Planning Committee has developed and executed a comprehensive outreach strategy.

This strategy has entailed reaching out directly to several key community organizations, attending meetings of these groups to explain the project and promote meeting attendance, and strategically placing meeting announcements in local media and organizational bulletins. The Planning Committee have done this through distributing flyers by hand at churches and schools (to over 2,500 students), and presenting at meetings for civic organizations and fraternal/service organizations including the New Hamilton Beach Civic Association, the Rotary Club and Sons of Italy. The Planning Committee has also worked with local houses of worship to disseminate flyers and notices in bulletins, and has posted announcements for the public meeting on the New Hamilton Beach Civic Association's Facebook page

and monthly newsletter. Emails have also gone out to more than 700 families with children through the S.T.A.R.S. Youth Center email database.

Going forward, the Planning Committee will determine how to evolve their outreach strategies through the planning process after evaluating the level of turnout at the first and subsequent public meetings.

Public Feedback Opportunities

Thus far, two formal Planning Committee meetings and one public meeting have been held to jumpstart and structure the community visioning process for the area. The committee has met several times on its own to establish a plan of action and to set forth priorities and ideas.

Dedicated time is set aside at each meeting to incorporate public input.

Members of the public have attended the committee meetings and are welcome to attend the meetings of NYRCR communities outside of Howard Beach as well. The results of the committee meetings thus far include the following:

- **Planning Committee Meeting 1 (September 16, 2013):**
 - Reviewed NYRCR Program scope, workplan, and timeline
 - Discussed current issues post-Superstorm Sandy and began to identify needs related to knowledge gaps around

utilities/infrastructure and vulnerable populations

- Developed strategy for conducting outreach to vulnerable populations for input in asset maps, and to the local media for publicizing public meetings
 - Initial asset inventory and planning area boundary were presented for input and review
- **Planning Committee Meeting 2 (October 7, 2013):**
 - Reviewed asset maps and reported comments and priorities from asset inventory
 - Further brainstormed community needs and opportunities, and began to define a community vision
 - Discussed agenda for public meeting, venue, and outreach materials

Following these two Planning Committee meetings, the first public meeting was held on October 21, 2013. Each public meeting is designed to maximize interaction between members of the public, the Planning Committee, and the consulting team. The meeting was used to review the purpose, scope, and timing of the NYRCR Program and to gather public input around 1) assets; 2) needs and opportunities identified by the Planning Committee; and 3) short- and long-term goals to inform a community vision.



Four public meetings are projected to take place before submission of the Final Plan on March 31, 2014. A second public meeting will be held on November 18th to gather responses to the Concept Plan. A third meeting will focus on reviewing proposed strategies and projects, while the fourth will entail a review of the Community Reconstruction Plan.

Additional Opportunities for Public Input

The NYRCR homepage for each community is also a valuable online resource and is located at **<http://stormrecovery.ny.gov/community-reconstruction-program>**. It includes links for visitors to review information about the program, to directly contact the NYRCR staff, and to visit the program's Facebook page. Comments provided via the website are combined with other feedback from the public and incorporated into the plan in progress.

In addition to the NYRCR website and feedback e-mail address, another valuable source of public input will be the online interactive mapping tool, which can be accessed from a link on the NYRCR Community Reconstruction Program Howard Beach page: **<http://nyrisingmap.org/>**. The online maps were developed by OpenPlans, a non-profit organization with extensive experience building technology and tools to facilitate public input and community engagement. The team and Planning Committee plan to use this tool to solicit broad public feedback and to provide another way for community members to supply information and ideas for this planning process. The online map will allow users to click on assets in the community and give three forms of input:

- Confirm important community assets and information gathered about them
- Identify storm recovery and resiliency needs associated with assets or the community as a whole
- Provide ideas for rebuilding and resiliency associated with assets or the community as a whole

All community input is visible to all other map users, the Howard Beach Planning Committee, the planning team, and the state's NYRCR team. This allows other planning communities to view ideas and will facilitate regional Jamaica Bay planning discussions. The tool will be available through the duration of the program.

Compiled public input has been included in the Conceptual Plan, which will be posted online. Feedback on the plan can be given via info@stormrecovery.ny.gov, as well as at the public meeting.



Team referencing map of Howard Beach during site visit



II. Community Context

Geographic Scope

The Howard Beach planning area was defined by the Planning Committee and the state according to multiple factors: data on damage resulting from Superstorm Sandy, local understanding of community boundaries, areas inundated by Superstorm Sandy and where assets are most at risk, where residents and populations are at risk, and where key investments to improve the local economy and infrastructure can be made.

Howard Beach is located on the North East coast of Jamaica Bay. Bounded by Spring Creek and the former Pennsylvania and Fountain Avenue Landfill to the west, the right-of-way for the Metropolitan Transportation Authority’s A train line to the east, Conduit Avenue to the north, and Jamaica Bay to the south, the area is strongly defined by its

physical / infrastructural boundaries and has limited access points to surrounding communities. The Belt Parkway forms a strong dividing line between Lindenwood and the other neighborhoods within Howard Beach while Shellbank Basin and Crossbay Boulevard separate Old and New Howard Beach.

Key connections between Howard Beach and surrounding communities include the Howard Beach / JFK subway station as well as key road corridors. Cross Bay Boulevard, which runs north-south through the community, connects Howard Beach to the communities of Broad Channel and the Rockaway Peninsula to the south as well as the rest of Queens to the north. In the east-west direction, the Belt Parkway and Conduit Avenue / Nassau Expressway are the major thoroughfares.

Howard Beach is a true waterfront community with many residences built directly on the water and a variety of public and private access to the canals that network the community. Much of the community is built on land that was historically marshland, which was filled in the 1920s-1940s (as illustrated in the historical aerial images below).

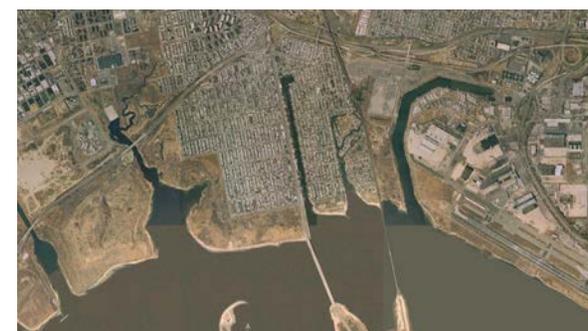
The map on the following page indicates the planning area designated by the Howard Beach Planning Committee. The committee will focus on assets, needs, opportunities, and strategies for the community within this planning area. It will also consider broader regional issues facing other Jamaica Bay communities.



Howard Beach 1924



Howard Beach 1951



Howard Beach 1996



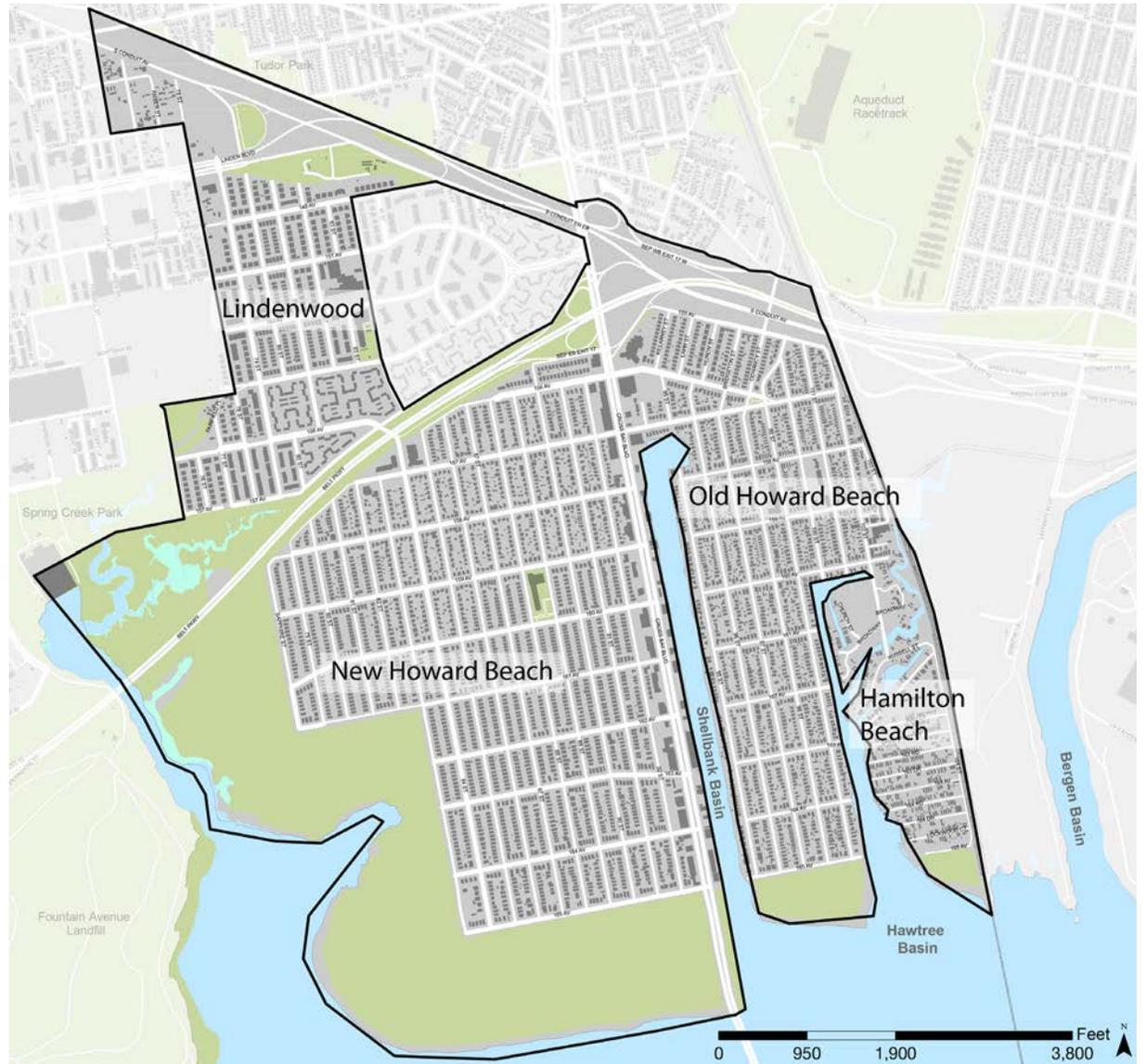
Rockwood Park Jewish Center



Typical Street View-Old Howard Beach



Con Edison substation-New Howard Beach



Howard Beach Planning Area and Neighborhoods



Community Overview

The Howard Beach planning area is made up of four communities: Lindenwood, (New) Howard Beach/Rockwood Park, Old Howard Beach/(Original) Howard Beach, and Hamilton Beach. While each of these individual communities has its own distinct character and even smaller communities within them, this overview provides a summary-level context and demographics. In 2010, the area was home to 21,020 residents, representing 7,893 households.

While incomes vary, the Howard Beach planning area is home to communities with a higher-than-average income when compared to Queens or New York City. The median household income in the area in 2012 was \$63,228, which was higher than Queens and New York City as a whole.

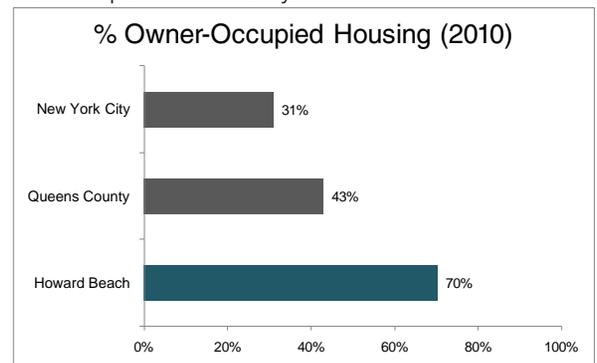
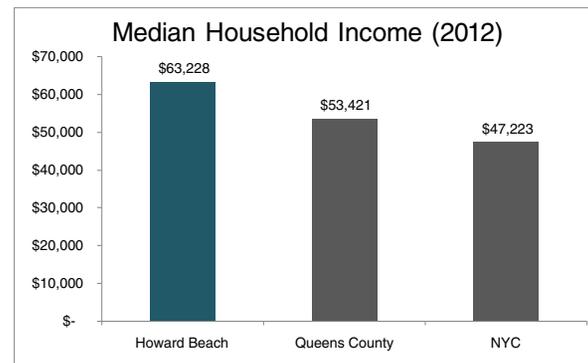
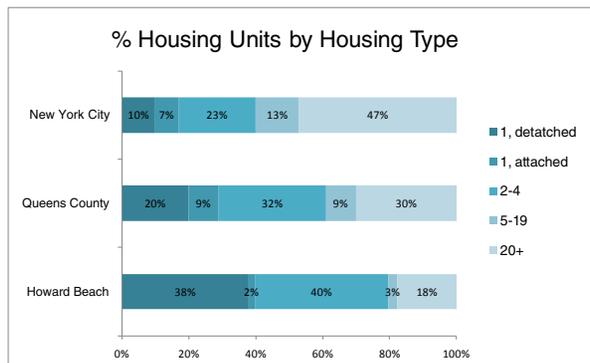
Sources: U.S. Census 2010; American Community Survey 2005-2009; ESRI 2012 Population Estimates; NYC Mayor’s Office SIRR Report

The population contains large percentages of all age groups with a high concentration of baby boomer residents. The median age in Howard Beach is 44.7 years, as compared to 35.5 in New York City as a whole and 37.2 for Queens. This suggests a large elderly population in the coming years and may require special consideration of accessibility challenges related to rebuilding and resiliency planning.

While lower than the citywide average, 88 percent of homes were built before 1960 and many are constructed of combustible materials. These characteristics were associated with greater damage from Superstorm Sandy’s impacts; the NYC Mayor’s Office’s Special Initiative for Rebuilding and Resiliency (SIRR) report found that 95 percent of buildings throughout New York City tagged by the NYC Department of Buildings as red (for structural damage) or destroyed were built before 1961.

While predominantly residential, Howard Beach includes small pockets of other uses, including a collection of commercial and retail uses along Cross Bay Boulevard. The area is zoned as a “lower-density residential district,” with 40 percent of the building stock comprising 2–4 family homes, and a further 38 percent made up of single-family detached houses. The majority (70 percent) of these homes are owner-occupied. Howard Beach also contains important recreational amenities, with residents owning boats docked in Shellbank Basin or Hawtree Basin, and flanked by Spring Creek Park and Charles Memorial Park. Because it is predominantly residential, Howard Beach residents frequently rely on retail amenities and other services outside of the community.

While limited in number, the community amenities and services available within Howard Beach are critical, especially in an emergency. This includes a volunteer firehouse, three Con Edison facilities, and several religious institutions, which were used as recovery centers after Superstorm Sandy.





View of Downtown Coleman Square



Rileys Yacht Club-Hamilton Beach



Gateway National Recreation Area parkland-Old Howard Beach



Retail along Cross Bay Boulevard



III. Storm Impacts and Risk

Summary of Storm Impacts

Local Impact*

The community of Howard Beach began feeling the effects of Superstorm Sandy well before the surge hit the Gateway National Recreational Area (GNRA), which rings the water side of the community. As a community that is prone to flooding even during moon-tide conditions, both flooding and sewer backup problems began well in advance of the surge.

A major problem in Howard Beach was the loss of power. There are three local Con Edison substations servicing Howard Beach. Two of these facilities were knocked out by the storm, rendering almost all of Howard Beach without power for the duration of the storm and for up to two weeks after the storm. When the surge hit, the greatest impact to the community came from the rising of

Shellbank and Hawtree Basins and flooding of Spring Creek, with the surge far exceeding any previously recorded flooding in Howard Beach and reaching entire neighborhoods outside the Federal Emergency Management Agency 500-year floodplain. While the entire community experienced flooding, the impact from floating debris was less severe than with beachfront communities, although it is unclear whether this was due to the fact that Howard Beach lies at the far interior of Jamaica Bay or whether gateway lands contributed to this result. As the surge hit, the greatest flooding came from the rise within the basins and not from the surge as it crossed the GNRA waterfront. Much of this area is left as wild and natural and presents a significant physical separation along the southern edge of Howard Beach from the water. Downed power lines also represented a significant challenge as the threat of electrocution slowed and stopped rescue and recovery efforts.

Recovering from the Storm

In the days following the storm, the community realized that there was neither a real plan for recovery nor a specific plan of action in place specifying a community gathering place for those in need after the storm. Without power and without a community gathering place, the local religious community, in addition to the local volunteer firehouse and youth center, stepped in and provided refuge and relief for the community.

Lingering Effects

The lasting damage of Superstorm Sandy continues in Howard Beach. Many homes and businesses took several months to clean up, become habitable, and reopen. Many are still rebuilding. Water in the gas lines continues to be a problem for many residents, which could affect their ability to effectively heat their homes this winter.



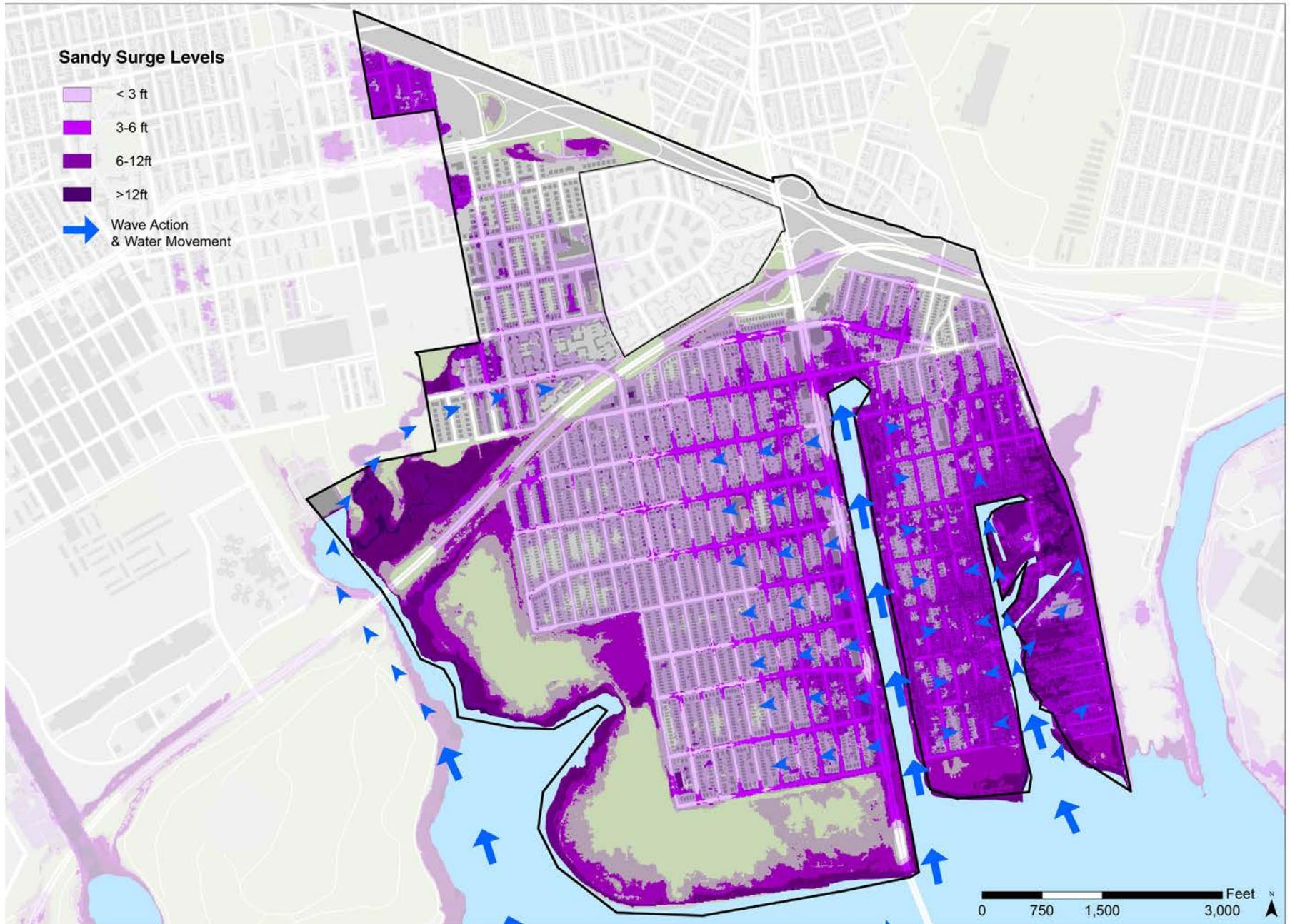
Community meeting during recovery effort



Damage to home in Hamilton Beach

Photo sources: Flickr, Pam Andrade

*Summary based on "A Stronger, More Resilient New York" (SIRR Report) and interactions with the community.



Sandy Inundation Map



Future Risk

The physical factors that led to the tremendous damage caused by Superstorm Sandy remain vulnerabilities in the community, and risks may increase in the future due to sea level rise.

The majority of the Howard Beach planning area lies in high risk zones, with most of Hamilton Beach and portions of Old Howard Beach in extreme risk zones according to NYS DOS risk analysis. Located on a peninsula constructed from landfill, Howard Beach is a low-lying community exposed to flooding from Jamaica Bay and the multiple channels that frame the neighborhoods. The natural area of Spring Creek Park which frames New Howard Beach is slightly elevated and has the potential to provide some protection from flooding and wave action from future storms.

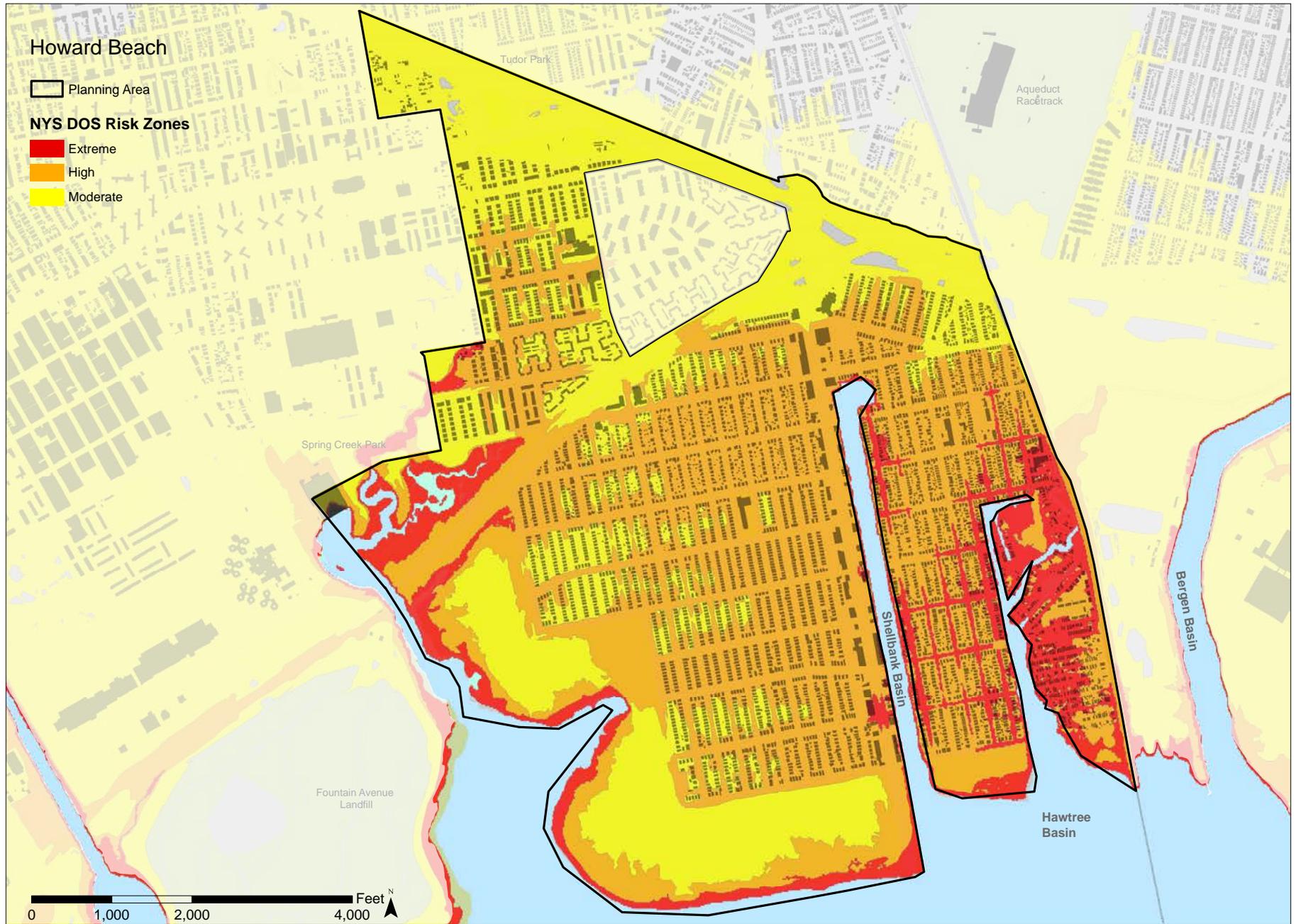
NY Department of State Risk Areas

While FEMA's flood insurance rate maps incorporate detailed analysis of possible storm scenarios, they do not consider future factors such as sea level rise. In order to map and assess risk, taking into account sea level rise and differences in exposure of the landscape, NYS Department of State developed its own Risk Assessment Area Mapping which takes additional factors into account. This includes a sea level rise estimate of three feet, areas expected to be inundated by a category 3 hurricane, areas subject to shallow coastal flooding, and areas of the coast subject to shoreline erosion. Considering these factors, as well as the FEMA flood zones, the state established three risk assessment areas:

- **Extreme:** Areas currently at risk of frequent inundation and vulnerable to erosion and heavy wave action (in the FEMA V-zone), subject to shallow coastal flooding, or likely to be inundated in the future due to sea level rise (assumption of 3 feet).

- **High:** Areas outside the Extreme Risk Area that are currently at risk of frequent inundation (in the 100 year floodplain, the FEMA A-Zone) or at future risk of shallow coastal flooding with sea level rise (assumption of 3 feet).
- **Moderate:** Areas outside the Extreme and High Risk Areas but currently at moderate risk of inundation from infrequent events (in the 500 year floodplain) or at risk of being in the 100 year floodplain with sea level rise (assumption of 3 feet), and any areas expected to be inundated by a category 3 hurricane.

A more detailed description of the State's Risk Assessment Area Mapping Methodology can be found on the NYRCR website, as can a link to an online viewer for the risk assessment area maps, at <http://stormrecovery.ny.gov/community-reconstruction-program>





IV. Rebuilding and Resiliency Planning

Process Overview

As previously mentioned, the NYRCR Program contains 5 key steps for rebuilding and resiliency planning. This section summarizes the outcomes of the two steps of the NYRCR Process that have been completed thus far: Identifying Assets, Needs and Opportunities, and Defining Community Goals and Vision.

Through a series of Planning Committee and Public meetings, the community:

- **Identified community assets and risks, noting** places or resources within the

community that residents value and/or deem at risk.

- **Defined community needs and opportunities** by evaluating the issues and challenges as well as the resources presented by the unique landscape, housing, economies, demographics, and services within the community. These recovery and resiliency needs and opportunities may be associated with a specific asset or apply to a community as a whole.

- **Established a vision** for resiliency and recovery in Howard Beach.

The results of this collective work will support the next steps in the rebuilding and resiliency planning process, starting with drafting strategies and identifying potential projects in November 2013. Content completed in the first two steps will evolve through the process and revised content will be presented in the Final Community Reconstruction Plan delivered at the end of March 2014.



Photo credit: Chris Sanchez, NYC sharpshooter



Community Asset Overview

Assets include a variety of places and resources within a community. They may facilitate economic and social activities in a community or may refer to critical infrastructure required to support those activities. Assets may also be part of the built or the natural environment.

The goal of the asset inventory process is to assemble a complete description of the assets located within a community, targeting assets whose loss or impairment due to flood and storm events would compromise essential social, economic, or environmental functions or critical facilities of a community. The inventory aims to include sufficient information to assess risk to the assets under current and future conditions.

The asset inventory has been developed based on a combination of public data and input from

the Planning Committee and the public. The first draft of an asset inventory was presented at the first Planning Committee meeting. **The inventory was organized in line with the six recovery functions framing the NYRCR Program: Community Planning and Capacity Building, Economic Development, Health and Social Services, Housing, Infrastructure, and Natural/Cultural Resources.**

The inventory and associated maps were initially generated using publicly available land use and infrastructure data to identify assets within the planning study area. (The primary data source used was the New York City Department of City Planning's MapPluto data, release 13v1.) The building class values in the MapPluto data were assigned to the appropriate asset class categories

defined in the NYRCR guidance. The maps were then refined by input from the committee.

The maps were subsequently presented to the public at the first public meeting, where community residents identified any missing assets and identified priorities. The Planning Committee then reviewed and confirmed the inventory.

Additional public input on assets was captured through an online community asset map located at <http://nyrisingmap.org/>.

This interactive map will be available as an online reference throughout the NYRCR process.



Economic

Economic assets are concentrated in three primary locations across the Howard Beach planning area: Coleman Square; along 153rd Avenue in Lindenwood; and most significantly, along the length of Cross Bay Boulevard. All three were deemed important community assets.

Coleman Square, the smallest commercial hub in the planning area is vulnerable. While the area is in Zone A by FEMA designation, New York State's risk analysis deems it as an extreme risk area. It is located on the eastern edge of Old Howard Beach, just at the main artery that leads into Hamilton Beach, behind the tip of the Hawtree Basin and not far from other inlets in the basin. The area surrounding Coleman Square floods regularly on moon tides and flooded significantly during Superstorm Sandy. Though small, it serves as an important local point for basic goods and services, along with containing a war memorial of historical importance to community residents. The Square remains an important resource for the residents of Old Howard Beach and the surrounding blocks of Hamilton Beach.

The commercial hub in Lindenwood sits at a less vulnerable location and has served as a critical gathering place during emergency events. It is located in the middle of Lindenwood, between largely single-family residential neighborhoods to the west and large multifamily co-op apartments to the east. The area includes a grocery store, banks, restaurants, and medical offices. This commercial area is partially in Zone A, and all of it is in the 500-

year floodplain due to its location to the north of the waterways that weave into the community from Old Mill Basin and Spring Creek. While the hub did flood during Superstorm Sandy, it was one of the only areas that did not fully lose power, and as a result, it served as a critical location for residents to get emergency supplies and food and even power after the storm. Given its location, this commercial area is least vulnerable and important to sustain through an emergency.

The long strip of retail along Cross Bay Boulevard that runs through the middle of Howard Beach serves as the commercial lifeline for the community. There is an abundance of shops, restaurants, banks, community facilities, and other businesses on both sides of the boulevard, with the businesses to the east abutting Shellbank Basin. Some of the businesses along the basin have taken advantage of waterfront access. In addition to the economic assets, the boulevard itself is a critical connector between Howard Beach and the rest of Queens, especially because the Belt Parkway forms a barrier within Howard Beach that separates Lindenwood from the New Howard Beach community. The boulevard represents the only access point for Broad Channel, and only one of two roadways across Jamaica Bay to the Rockaways. All of the businesses along Cross Bay Boulevard are at high risk due to their proximity to Shellbank Basin.

Health and Social Services

The New York Fire Department and New York Police Department Harbor Unit on Cross

Bay Boulevard, and West Hamilton Beach Volunteer Fire Department were identified as critical assets. Both fire departments are located in high-risk areas and efforts should be made to enhance their resiliency.

There are a large number of houses of worship throughout the community that serve as important community gathering places on a regular basis as well as in an emergency. Additionally, there are a number of schools, organizationally owned facilities, and community centers throughout the planning areas as well as the office of Senator Addabbo in Howard Beach, which served a vital role in recovery after Sandy.

With its rich set of community and social service assets, Howard Beach was served during the recovery from Superstorm Sandy by its strong social networks and various common spaces, enabling it to informally organize around both physical and social structures. However, more formal, protected centers need to be developed to better serve all of the communities during and after an emergency.

Housing

Much like many other communities hard hit by Superstorm Sandy, housing was deemed more critical than any other asset in the community by both the Planning Committee and the public.

The majority of the residential neighborhoods across Old Howard Beach, New Howard Beach, Hamilton Beach and Lindenwood were



Economic, health & social services and housing asset map



severely flooded. While Spring Creek Park and the GNRA lands at the southern edge of Howard Beach helped to stem much of the direct surge of water, significant amounts of water pushed through the channels and basins surrounding these parklands and water flooded through all of the streets, in some cases coming from multiple sides. The communities surrounding Shellbank Basin and especially Hawtree Basin experienced the greatest inundation from the storm. Additionally, many of the single-family homes were built before 1960, which are at greater risk of structural damage.

The Howard Beach planning area is made up of largely single-family residences, with the exception of a cluster of large multifamily co-operative buildings on the east side of Lindenwood. During Superstorm Sandy, these large multifamily buildings did not flood and were able to maintain power. They are only partially in the 500-year floodplain. As such, they have been excluded from the NYRCCR Program planning area.

Infrastructure

Cross Bay Boulevard is the main access route to Queens, and 104th Street is the only north-south road in Hamilton Beach; both of these assets were deemed critical and both were compromised in Superstorm Sandy.

Three Con Edison substations in the community and a NYC Department of Environmental Protection pumping station were also deemed critical and at high risk.

In addition, the community highlighted **the footbridge on 163rd Avenue,** which provides an east-west connect to Hamilton Beach **as well as the Howard Beach/JFK Airport station,** as the only subway station in the community.

Natural and Cultural

The Howard Beach community has a number of natural resources, such as **Spring Creek Park, Gemini Fields, and Gateway National Recreation Area. There are two recreational facilities located within the Gateway National Recreation Area, Charles Memorial Park and Hamilton Beach Park.** The residents have expressed concern about the lack of maintenance in the parks in Gateway National Recreational Area. Hamilton Beach Park was damaged during Sandy and the residents have not been allowed to make the necessary repairs. The community highly values these assets and would like to protect them as part of larger asset and community resiliency projects, in addition to the parks that provide a natural barrier against future storm surge.

Shellbank and Hawtree Basins are also critical natural assets to the community, providing access to boating, fishing and other water-based recreational activities.

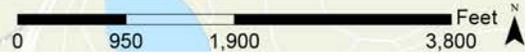


Infrastructure

ID	asset name
D 1	Howard Beach-JFK Airport Station
D 2	NYC Transit-A Line
D 3	NYC MTA Power Station
D 4	Foot Bridge
D 5	Consolidated Edison Substation
D 6	Consolidated Edison Substation
D 7	Consolidated Edison Substation
D 8	DEP Pumping Station
D 9	Canal Aerator Pump
D 10	Gas Stations
D 11	Airtrain JFK
D	Buckeye Pipeline (not shown)

Natural and Cultural

ID	asset name
E 1	Spring Creek Park Addition
E 2	Gemini Fields
E 3	Gateway Nat. Rec. Area - Charles Memorial Park
E 4	Gateway Nat. Rec. Area - Hamilton Beach Park
E 5	Gateway National Recreation Area
E 6	Gemini Fields/Cedar Lane Stables



Infrastructure systems and natural & cultural asset map



Needs and Opportunities

Needs and opportunities represent what a community needs to be safe and sustainable through both weather-related events as well as impacts from ongoing climate change and/or what opportunities that exist within a community that could be taken advantage of or more fully developed to better address the community's resiliency goals, such as underutilized assets, land or other resources.

Identifying these needs and opportunities is an important part of the NYRCR process because the list **reflects the community's opinion regarding known or discovered risks, issues or challenges, unmet demands, as well as untapped potential or opportunity** across the neighborhoods and networks of the community.

The Planning Committee drafted an initial list of needs and opportunities based on risks, the asset inventory, and the first-hand experiences of living in the community. The list, categorized by the six recovery functions, was vetted and updated by residents at the public meeting. These needs and opportunities will form the basis for structuring project proposals designed to fulfill community needs and to build upon and take advantage of opportunities that exist within the community.

In determining their needs, the community first identified three major issues:

- **Surge and flooding** – The surge extended deep into the community, extending up and out from the two basins that are so important to the character, daily life, and quality of the area, as well as through the flooding of Spring Creek, which pushed water into Lindenwood and flooded the Belt Parkway from the north.
- **Power outages** – Most of the community lost power, and power was not restored for weeks after the storm.
- **Sewer back-up** – Much of the community suffered from sewer backups as a result of Superstorm Sandy.

The community then determined three overarching needs:

- **Protect homes, businesses, and critical infrastructure from surge.**
- **Create a resilient power supply for the community.**
- **Prevent sewer backups.**

Beyond this initial focus, a more detailed analysis showed many significant local and specific needs that the community is hoping to address through this plan. A needs and opportunity assessment was conducted for both the committee and for the public meeting, which helped to draw out a wide range of both physical and community capacity building needs. **The following listing**

of Needs and Opportunities is sorted by the NYRCR recovery functions in the following order: economic, health and social services, housing, infrastructure systems, and natural and cultural resources.

Economic

There is a need to protect the businesses along Cross Bay Boulevard; further protection of the Boulevard itself is critical to ensuring access in and out of the community, especially in an emergency. To this end, the Shellbank Basin bulkhead, which protects Cross Bay Boulevard, needs to be evaluated and methods of flood protection improved. It is currently uneven in height and quality, and standards or codes are not in place to ensure maintenance of the wall. Different sections are owned by a mix of businesses and individuals, resulting in inconsistent protection and high-risk points where the bulkhead is weaker or absent. Depending on the options and methods for building up the bulkhead, there may also be a need to create a barrier at the mouth of the basin where it meets the bay. Finally, the individual businesses may need to take steps to strengthen their buildings to become more resilient.

Coleman Square also needs to be strengthened. Larger-scale infrastructure projects that block or manage the incoming water of Hawtree Basin may provide sufficient protection; however, due to its extreme vulnerability, the commercial area may have additional needs and may need to consider



Howard Beach

□ Planning Area

Assets

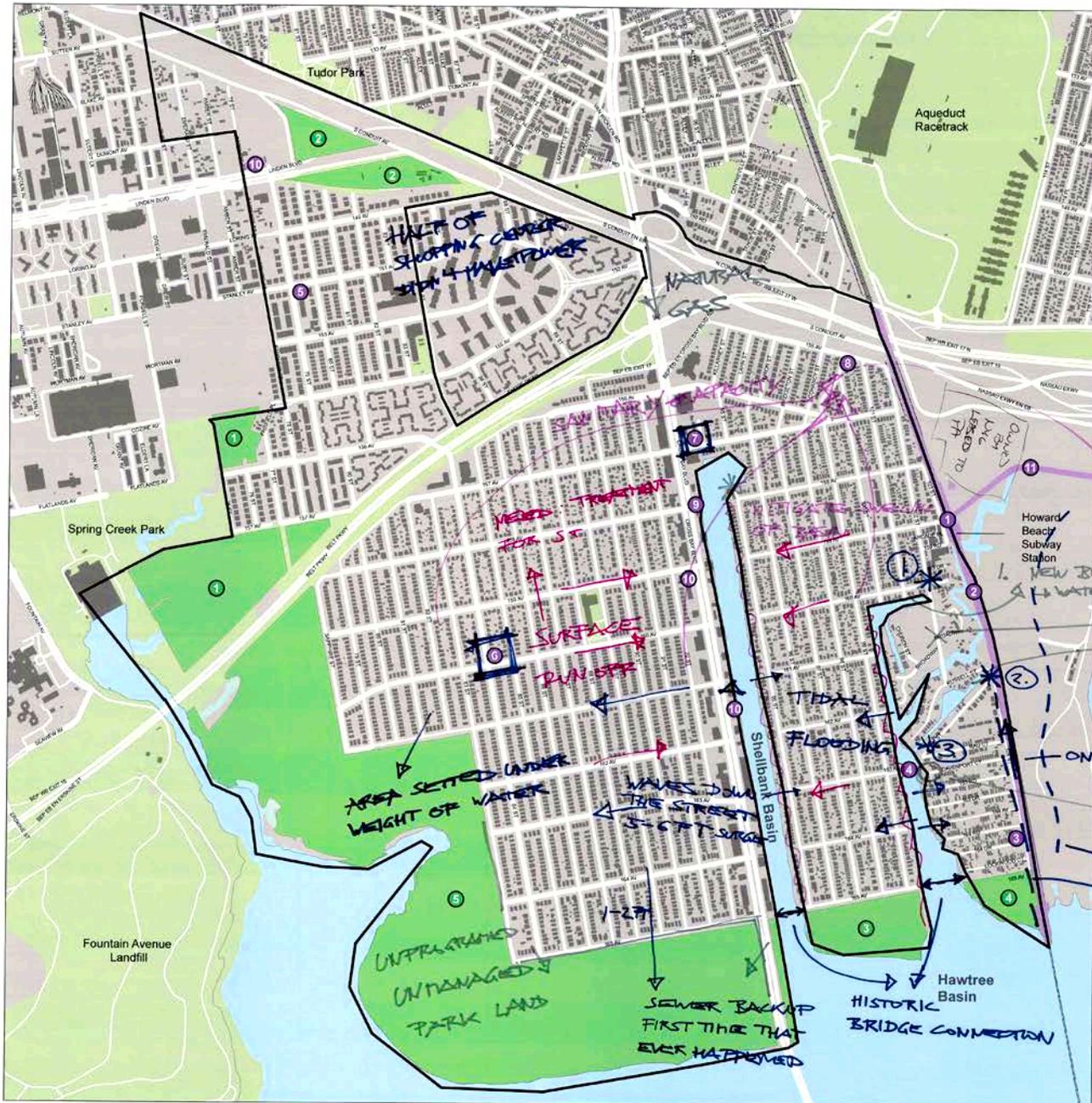
- D - Infrastructure Systems
- E - Natural, Recreational, and Arts

Natural / Recreational / Arts

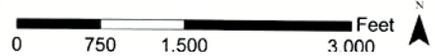
ID	asset name
E 1	Spring Creek Park Addition
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D 4	Foot Bridge
D 5	Consolidated Edison
D 6	Consolidated Edison
D 7	Consolidated Edison
D 8	DEP Pumping Station
D 9	Canal Aerator Pump
D 10	Gas Stations
D 11	Airtrain JFK



1. NEW BULL...
 2. WATER FLOWS AROUND A
 → LIMITED ACCESS
 → DRAIN IS 2. POINT OF FLOODING → THROUGH FIRE
 * FULL MOON TIDE FLOODING
 - ONLY ACCESS
 → CHECK VALVE FIXED FLOODING ISSUE
 - HIST. CREEK
 → BARRIER BOUNCED WATER BACK



Community marked up infrastructure systems and natural & cultural asset map identifying need and opportunities



solutions that do not fully attempt to keep the water out, but adapt to occasional inundation.

Health and Social Services

Overall, the Howard Beach planning area has a diverse set of community and social service assets, but it is lacking in healthcare facilities.

What is now a senior-living facility at the top of Cross Bay Boulevard was once a hospital and healthcare facility, and there are few health facilities beyond some private practices scattered throughout the community. Many residents need to leave the area to access health services. During Superstorm Sandy, emergency health services were provided mostly by outside assistance. Furthermore, the majority of health and social assets are located upland in the community, so residents living closer to Spring Creek Park and Jamaica Bay do not have the same access to those services. To ensure sufficient emergency care during a life-threatening weather-related event, health services in the area need to be expanded. Undeveloped land at higher elevation, such as in Lindenwood, may serve as a good location for such facilities.

With a high proportion of seniors in the area, senior health and social services in the area especially need to be expanded. This population may require additional assistance in the event of an emergency. A large baby boomer population in the area also indicates that senior healthcare and social service infrastructure is important to have in-place for years to come.

Existing facilities that provide emergency services need to be made more resilient. The New York Fire Department and New York Police Department Harbor Unit on Cross Bay Boulevard, along with the West Hamilton Beach Volunteer Fire Department are located in high-risk areas and need to be made more flood-proof, as well as have a reliable power supply and emergency supplies. The same applies to the large number of houses of worship in the area that served as important gathering places during Superstorm Sandy.

Community members also expressed a need for additional resilient community centers that could function as shelters or service centers

during and after emergency events. There is an opportunity to create a dual- or multi-purpose service center(s) in the underdeveloped spaces at the top of Cross Bay Boulevard, between 155th Ave and South Conduit, as well as around the bend at the end of the block where 155th meets 102nd and 101st streets. FEMA, Red Cross and the City used the open spaces at the top of the Cross Bay as a staging area during Superstorm Sandy, which served as a critical hub not just for the Howard Beach communities, but also for Broad Channel and all of the Rockaways. There is also a need and opportunity to create a new multi-purpose center at the southern end of New Howard Beach along Spring Creek Park. According to the Planning Committee, the Community Board, on behalf of the community, has requested the city create such a facility. There is a strong desire in the community to continue to pursue plans for a community facility that could double as a safe, resilient building for emergency and post-storm needs in all sections of the planning area.



House under renovation-Old Howard Beach



Ballfield at Gateway National Recreation Area



View of Howard Beach JFK Airtrain and Subway Station



St. Helen's Church and School



Housing

There is a lack of clear information and training around how to rebuild damaged homes. The Planning Committee has expressed confusion and frustration around understanding building code changes and the financial implications of raising or not raising homes within the boundaries of the FEMA flood map. The community needs help better understanding the issues and implications associated with flood insurance. There is an opportunity to create training and communication programs to help individuals understand and make decisions about their homes.

Given the dense residential fabric across the blocks of Howard Beach, the community needs to better protect its housing assets. Protecting homes can be achieved in numerous ways, ranging from large infrastructure projects to flood-proofing first floors, to, in some cases, raising homes to a higher elevation. All options should be explored and evaluated as part of the next steps in the NYRCR Program.

Finally, there is a need for no-cost or low-cost financing to help people fund housing resiliency improvements. The sources of this financing could come in the form of low-cost loans from community banks, or tax-incentive programs from the government.

Distributed across the planning area, commercial hubs serve as important service centers for surrounding residents, and require bolstering in some way. The value of these economic assets

is extremely high—due to their concentration, diversity of services offered, location, and economic contribution to the community—and they need to be better protected. Because of its less at-risk location and the important role it played during Superstorm Sandy, the Lindenwood commercial area needs to be bolstered to ensure even better service provision during an emergency. In addition to maintaining the existing economic assets, it is worth evaluating what else the commercial hub needs to expand its value in an emergency, such as backup generators, emergency medical supplies, or additional food. There is an opportunity to make this a stronger economic anchor for the community.

Infrastructure Systems

The Planning Committee noted that much of the Howard Beach planning area was built on low-lying marshland, and the area has been experiencing minor flooding problems for several years as a result. Howard Beach is a mostly established community, much of its housing having been built prior to the 1980s, with infill individual tear-downs and upgrades making for most of the recent development activity. The supporting storm and sanitary systems for development were built out as the development expanded south from the Belt Parkway towards the waterfront. Superstorm Sandy brought into sharp focus the challenges this community faces from rising waters and flooding. Solutions to the flooding problem will need to focus on the streets and the storm and sanitary infrastructure and will likely require both short-term, small-scale and potentially long-term larger-scale interventions. The opportunity for a combination

of green and grey solutions, utilization of the broad stretch of open space along its edge, and rethinking the drainage strategy for its streets may all play a role in mitigating some flood activity. However, Howard Beach cannot change the fact that it is a flat, low-lying community that sits along the edge of a large water body that lets out into the Atlantic Ocean.

The community must be strengthened at the edge. Indications from the storm are that the surge manifested itself through water rising out of Shellbank and Hawtree Basins. Once topped, the floodwaters flowed out across this mostly flat community. Additional flooding back-ended into the community through Spring Creek, which lies at the far western edge of the community.

There are some areas within the community where houses are set right on the water, without basements, where elevating the homes may in the short-term or long-term pose the most resilient local solution. However, much of the community consists of traditional single and two family wood frame and brick constructed homes with basements, typologies that do not lend themselves to being elevated. For this reason, a more formal edge strategy for protection against surge is warranted.

There is a need for storm-resistant power stations and a resilient power supply. The power went out on Howard Beach as local electrical power stations that had previously seemed safe from flooding were in the path of the flooding in Howard Beach. There are three power substations



in Howard Beach, and it appears that all were completely or partially compromised during the storm. These three locations could be the focus of specific short-term local protection interventions to ensure that power is maintained.

An effective strategy to mitigate against sewer back-up is needed. There is a need to understand how the community is impacted by sewer back-up. A continual problem for some residents, sewer back-up was a widespread problem during Sandy.

Natural & Cultural Resources

Open space in the community was more successful than other areas at guarding against inundation and provides an opportunity for surge protection. It is important to note that while any strategy to protect against flooding at Shellbank and Hawtree Basins and Spring Creek will be challenging, the large tracts of open space, primarily within the National Park Services' Gateway National Recreation Area, were much more successful in holding back the surge waters.

The active recreational park space in Howard Beach needs a better maintenance regime. As the community addresses coastal resilience strategies, there is a need to form a more effective ongoing maintenance strategy in the parks that are

managed by the National Park Service in Howard Beach. This will be especially important if park space is expanded as part of the protection effort.

Coordination with other communities is needed to develop a regional strategy for protection of Jamaica Bay. As the Howard Beach community thinks about local protection strategies, there is a recognition that a more regional protection strategy should be considered. Coordinating the approach between local and regional strategies will be very important to the community.

Multiple agencies at the local, state, and federal level are already working on solutions for making Jamaica Bay more resilient. These efforts will be watched closely as this project progresses.



Public Meeting 1: Needs and Opportunities Comments*

Overall

Neighborhood quality

“sidewalks are cracked”

Overall

Improve street tree maintenance

“Remove over grown trees”

“Cutting trees/maintenance creates probs. in storms if not cut back”

Infrastructure

Provide storm surge protection

“Prevent surge and future flooding - sewer drainage”

“Build a seawall around Charles Park”

“Levy’s on dams on 95th & 99th Str & Hamilton”

Infrastructure

Improve water drainage

“clean out storm sewers before a storm”

“Fix-sewers (near 95th st)”

“Stop flooding on 99th St”

“Close off sewer into canal. Duck flap.”

“stop flooding in Coleman Square”

Infrastructure

Protect Streets

“Raise streets max 1ft in Hamilton Beach”

“Road raised on 102nd St and 160th Ave going out of community”

“raise boardwalk along Gateway Park”

Infrastructure

Improve mass transit

“Improve transportation system”

“Better transportation system”

Health and Social Services:

Support Community resources

“Churches very imp. for information”

“Protect and preserve community organization (Our Lady of Grace)”

Health and Social Services:

Improve communications

“where to go, what info on help; communication resources”

“communication sources - something set up ahead of time so people know where to go”

Housing

Help understanding/complying with new regulations

“Aid in helping raise home to meet new FEMA flood map”

“Not a lot of the houses can be raised”

“Tell is what can we do to reduce flood insurance cost. High cost will kill the area”

Housing

Continue/complete Recovery

“Homes are not fixed yet”

“Demolish home that are no longer habitable in Hamilton Beach, etc.”

Housing

Assist vulnerable populations

“need a better handle where vulnerable population are & where mobility-impaired are”

*Representative list of needs and opportunities provided by the community at Public Meeting 1.



Community Vision

The Howard Beach community is a grouping of primarily residential neighborhoods, consisting of young people, families and senior citizens living in a waterfront setting on the northern edge of Jamaica Bay. The four neighborhoods of Lindenwood, New Howard Beach (Rockwood Park/Spring Park), Old Howard Beach and Hamilton Beach (Ramblersville) have united to work together towards a coordinated set of community goals that benefit the greater good of the community.

In response to the devastating impacts of Superstorm Sandy, preservation of the area's physical assets is critical, but the vision for this community extends to the social, cultural, and demographic characteristics that define this particular place and make it a special home to its inhabitants. The vision for resilience focuses on protecting its homes, businesses, and critical infrastructural systems against future storm events and safeguarding its commercial core, which provides for its senior and other vulnerable populations. Howard Beach is also

looking to more effectively manage and activate its open spaces and community assets to enhance quality-of-life while providing a resilient place for future generations to live, work and enjoy the truly unique and beautiful assets available to this place.

The committee has documented a preliminary vision statement to capture the essence of this philosophy:

“To be a vibrant and sustainable community that enables residents and visitors to enjoy the bounty of its commercial strip and the natural beauty of Jamaica Bay.”



View of Joseph P. Addabbo Memorial Bridge from Gateway National Recreation Area



V. Additional Considerations

Regional Perspectives

Jamaica Bay and Rockaway Peninsula Overview

Connected hydrologically and ecologically, Jamaica Bay is a unifying feature tying together six NYRCR community planning areas: Breezy Point, Rockaway West, Rockaway East, Broad Channel, New and Old Howard Beach, and Gerritsen Beach/Sheepshead Bay. A seventh planning area, Brighton Beach, Coney Island, Manhattan Beach, and Sea Gate, is also in close proximity at the mouth of the bay. With their shared shoreline, these communities share climate change-related risks, and collaboration can produce solutions that address recovery and resiliency needs affecting the bay as a whole.

Regional Resiliency Issues

Situated on land that originally made up a series of barrier islands and marshland, these Jamaica Bay communities have a similar geomorphology and feature soft, marshy soil. At the lowest elevation of any area in New York City, many of them are located at sea level, making some vulnerable to flooding even during normal high tides. Broad Channel, New and Old Howard Beach, and Hamilton Beach feature housing and important commercial corridors adjacent to the waterways or on piers and are protected by varying types of built bulkheads, barrier walls, and stilts. The bay feeds into inlets and basins in New and Old Howard Beach that can be a regular source

of flooding in addition to posing serious risk during elevated tides and emergencies. Sheepshead Bay and channels bordering Gerritsen Beach were also sources of flooding during the storm.

Communities along the bay side of the 11-mile-long Rockaway Peninsula are also at risk.

Some communities sit directly on open beaches and others are buffered by open space and marshland, but the bulk of the bayside is protected by a seawall which was overtopped during Sandy. Many natural and constructed protective features around the bay are insufficient, aging, or inadequately maintained, leaving significant flooding risk for all of these communities.

On the ocean side, the Rockaway Peninsula faces risks due to its extensive unobstructed coastline.

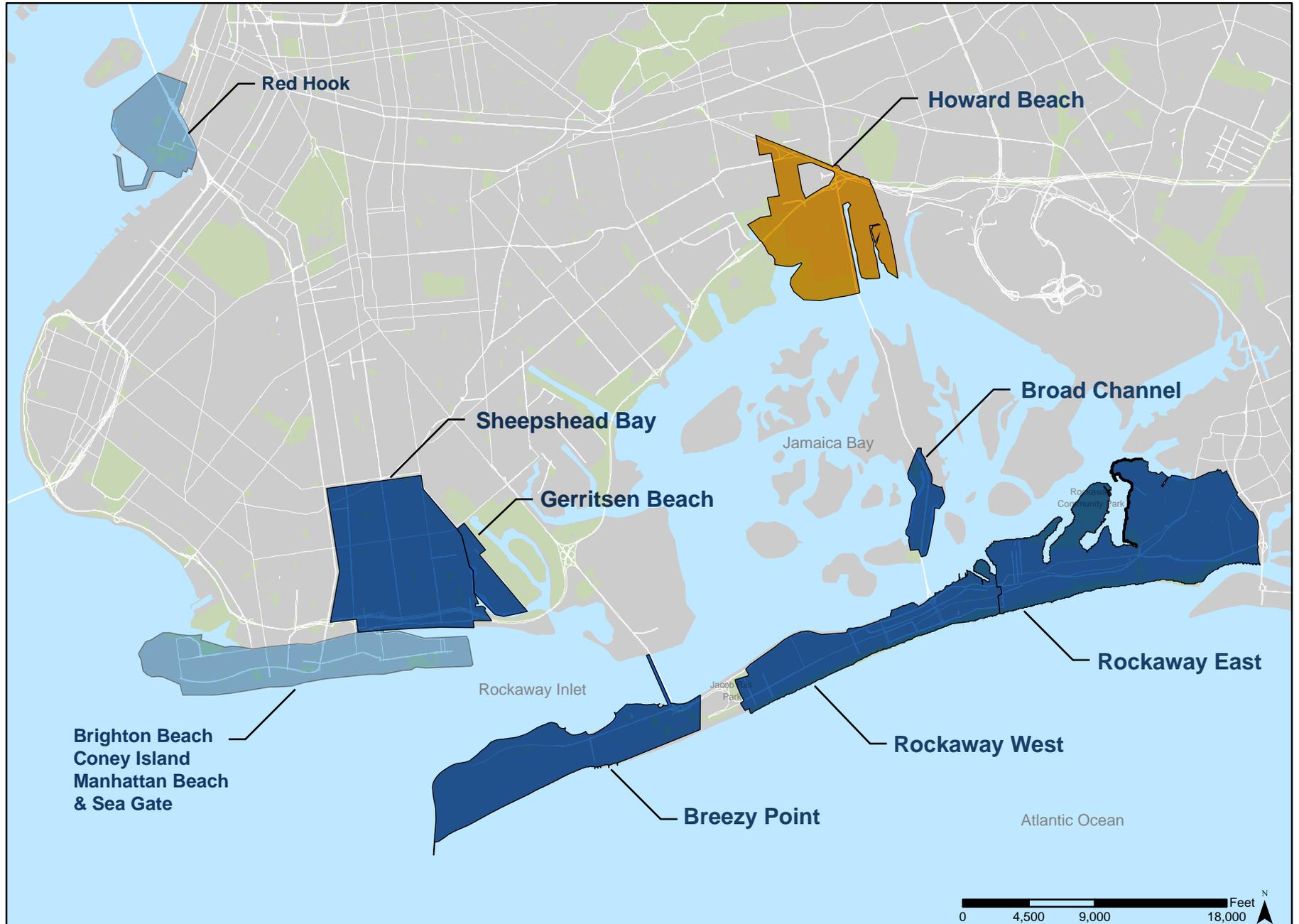
While much of the coastline contains beaches, many lack extensive protective features and experience regular erosion. At the same time, the Rockaway Peninsula provides valuable protection to communities within the bay, acting as a barrier island and reducing surge and wave heights within the bay itself. The beach nourishment and dune-building efforts being undertaken by the United States Army Corps of Engineers (USACE) on the Rockaway Peninsula therefore have potential risk-reducing impacts for all communities on the bay.

All of the Jamaica Bay communities suffered significantly during Superstorm Sandy, some from flooding or surge and some from wave action damage. According to an assessment conducted by NYC Department of Buildings, 37 percent of the buildings destroyed during Hurricane Sandy were located in this region. Homes, businesses, beaches and parklands, schools, roadways, and mass transit were all damaged; the area also endured one of the most extensive and long-lasting power outages in the City.

Flooding risks are likely to be exacerbated throughout the bay by projected sea level rise associated with climate change. According to FEMA's Preliminary Work Maps, the 100-year floodplain in the area has expanded for the borough of Queens by 40 percent since 1983, and floodplain expansion has been especially dramatic for the Jamaica Bay/South Queens area.

Many Jamaica Bay communities also face insufficient emergency access. Single access routes to communities such as Breezy Point and Broad Channel and certain parts of Old Howard Beach, including bridges and roadways that were damaged or flooded, also constrained emergency response and hindered evacuation.

There are also ecological factors to consider: Jamaica Bay is a tidal estuary. Though severely





degraded over the 19th and 20th centuries, it is still a dynamic ecosystem providing critical habitat to a variety of species, including a number of protected and threatened birds and other species who inhabit both the beach and bay. Habitat loss and degradation of the bay's chemical, physical and biological environment has largely been due to human activities, although by the city and federal agencies over the last two decades have yielded dramatic improvements in the bay's water and habitat quality.

In this hydrologically connected system, projects and interventions in one area of the bay can have ecological and coastal protection ramifications across the estuary. The cumulative impact of individual projects implemented in different locations around the bay can be greater than the sum of their individual impacts. At the same time, interactions between projects can sometimes have negative effects including, though rarely, induced wave or surge activity.

Because of these interdependencies, the six NYRCR bay communities will form a Jamaica Bay NYRCR Working Group. The group will review respective Conceptual Plans and assess opportunities to strategically protect their communities in concert. These regional strategies will be included in the Final Community Reconstruction Plans.

To maximize benefits and minimize risk, coordination among efforts by NYRCR communities as well as the various City, State

and Federal agencies active within the bay will be needed. The newly formed Jamaica Bay Resiliency Institute, established through an initiative to be led by CUNY in partnership with NYC, the National Parks Service (NPS), and Trust for Public Land, among other organizations, is a potential partner and presents an opportunity for NYRCR communities in Jamaica Bay to collaborate with other organizations and agencies.

Existing Plans, Studies, and Projects

In order to avoid duplication of plans and to best identify how the NYRCR Program may fill existing gaps, the consulting team has reviewed past and ongoing plans, studies, and projects in Howard Beach and surrounding areas. Major existing plans, studies, and projects in Jamaica Bay and citywide are described below. Relevant plans and projects specific to Howard Beach are also described in more detail in the matrix that follows.

Jamaica Bay Initiatives

NYC Department of Environmental Protection's Jamaica Bay Watershed Protection Plan. Authorized in 2005 and initially published in 2007, the plan is intended to support restoring and maintaining the water quality and ecological integrity of the bay. A number of ongoing initiatives driven by this plan include wastewater treatment upgrades, green infrastructure and other stormwater management improvements

and a variety of ecological improvements and pilot projects.

Gateway National Park General Management Plan. The majority of the undeveloped land in and around the bay is part of Gateway National Recreation Area, one of the nation's few urban national parks, encompassing 26,607 acres in Brooklyn, Queens, Staten Island and New Jersey. Given this large presence, the National Parks Service will be an important player in resiliency efforts in the bay. The park is currently updating the General Management Plan, which has been prepared over the last four years and will guide future management of the park. The public comment period for the Plan's EIS concluded on October 22, 2013.

USACE Efforts. The USACE is also a major player in both coastal protection and ecological restoration efforts within Jamaica Bay. In addition to the emergency beach nourishment and dune construction projects completed and ongoing on the Rockaway Peninsula, the USACE has a number of ongoing studies and projects in the bay which could provide resiliency benefits for NYRCR communities. These include studies that pre-dated Superstorm Sandy as well as post-Sandy updates to the previous plans and studies.

Hudson Raritan Estuary (HER) Comprehensive Restoration Plan (CRP). Adopted in 2009, the HER-CRP was developed in collaboration with federal, state, municipal, and non-governmental organizations as well as other regional stakeholders. It sets forth a consensus vision, master plan and



strategy for ecosystem future restoration in the New York/New Jersey Harbor. In Jamaica Bay, the plan identified 39 potential restoration sites. Some of these restoration projects have been acted upon, but most have not.

Jamaica Bay, Marine Park and Plumb Beach, New York Ecosystem Restoration Feasibility Study. The study is a joint undertaking of the USACE and the NYCDEP and is intended to provide an expedited limited reevaluation of USACE restoration projects in the bay to address post-Sandy changes. The interim draft report identified 8 priority restoration sites (550 acres) from the HRE-CRP recommendations, 6 of which are in NYRCR Communities: Dead Horse Bay, Paerdegat Basin, Fresh Creek, Spring Creek, Hawtree Point, Bayswater State Park, Dubos Point, and Brant Point. In addition, the feasibility study will look at Marsh Island Restoration Projects and two other restoration projects being undertaken under the USACE's Continuing Authorities Program – Gerritsen Creek and Upper Spring Creek, as well as ongoing USACE Storm Reduction Studies and Navigation projects in area.

East Rockaway Inlet to Rockaway Inlet (Rockaway Beach). This project is a reevaluation of the recommendations of the existing USACE plan for the area in light of the impacts of Sandy. Phase 1, for which the draft report should be completed this Fall, looks at Beach Nourishment and additional erosion control and/or storm damage risk reduction measures on the ocean side of the Rockaway Peninsula. Phase 2, for which the

draft report is expected in October of 2015, will investigate flooding on the Jamaica Bay side of the peninsula and evaluate potential coastal storm risk management reduction measures.

Additional Citywide Initiatives

Special Initiative for Rebuilding and Resiliency.

On June 11th, Mayor Michael Bloomberg announced the release of "A Stronger, More Resilient New York," (SIRR Report) forming New York City's plan for rebuilding post Sandy and ensuring resiliency into the future. The plan contains actionable recommendations both for rebuilding communities in the City impacted by Sandy and for increasing the resiliency of buildings and infrastructure city-wide. All NYRCR communities within the city will need to coordinate their proposed projects with the initiatives proposed in the City's Plan. Specific initiatives for Howard Beach proposed in the SIRR Report are summarized in the "Existing Plans and Projects" table at the end of this section. More broadly, the plan lays out numerous city-wide initiatives to improve resiliency for systems including coastal protection, buildings, insurance, utilities, liquid fuels, healthcare, telecommunications, transportation, parks, water and wastewater and other critical networks which NYRCR communities will need to coordinate with their own proposals.

Particularly relevant to NYRCR communities are ongoing and potential future updates to the building and zoning code. The City's Building Resiliency Task Force identified 33 recommendations to the City Council. Many of these recommendations are still in various

states of review by the council, but five initiatives have been passed. In addition, the Department of City Planning's Flood Resilience Zoning Text Amendment was approved by city council on October 9th. The report and latest updates on implementation can be found on the SIRR website: <http://www.nyc.gov/html/sirr/>.

NYC Recovery Program. In addition to resiliency, the City has launched several initiatives to help residents across the five boroughs recover from the damage caused by Sandy. The City's "Build It Back" program seeks to assist homeowners, landlords, and tenants whose homes were damaged by Sandy. The NYC Recovery Program is also offering business loans and grants to small business owners damaged by Sandy. Most of these recovery programs support resiliency investments and will help improve individual homes and businesses in the communities surrounding Jamaica Bay. More information on the NYC Recovery program can be found here: <http://www.nyc.gov/html/recovery/>.

FEMA Flood Maps and Flood Risk Assessment. FEMA describes its assessment of flood risk through flood maps referred to as Flood Insurance Rate Maps (FIRMs). These maps are used by the National Flood Insurance Program (NFIP) to set flood insurance rates. When Superstorm Sandy hit New York City, the FIRMs in use were based on information from 1983. Sandy inundation extended well beyond what these maps estimated would be the 100 year floodplain, calling attention to the fact that an update to these maps was needed. In fact,



before Hurricane Sandy, FEMA had begun a coastal flood study to update FIRMs for portions of New York and New Jersey using improved methods and data to better reflect coastal flood risk.

After Sandy, FEMA first released Advisory Base Flood Elevation (ABFE) maps based on the partially completed flood study for certain communities which were designed to help in rebuilding and recovery efforts. In June of 2013, FEMA released preliminary work maps for New York City, including the full results of the coastal flood study. The preliminary work maps are based on the same underlying data as the earlier ABFE maps, but include the results of a more refined analysis of shoreline conditions, including the effects of erosion and wave runup. The maps are a “draft” product that FEMA shared in advance of the preliminary FIRMs, which are expected to be released by the end of 2013. The final updated FIRMs are anticipated to be released in 2015. These final FIRMs will guide new Flood Insurance rates for homeowners and businesses in the floodplain.

FEMA’s flood maps do not take into account future conditions and thus do not factor in potential sea

level rise. The New York City Panel on Climate Change (NPCC) is continuing to analyze potential climate change impacts on New York City, namely sea level rise. The NPCC released a report “Climate Risk Information 2013: Observations, Climate Change Projections, and Maps” in conjunction with the SIRR Report and provides New York City’s estimates for sea level rise over various time frames. They are expected to update these estimates in the near future. In addition, New York City has hired the Steven’s Institute of Technology to map flood zones with added sea level rise for future decades. This is being done within the NPCC framework and will be reported and released through NPCC this winter.

In summary

Key takeaways from review of existing plans, studies, and projects that specifically address Howard Beach include:

- Planning for Jamaica Bay restoration and resilience is already being carried out, led by USACE.
- Infrastructure projects – including roadway, transit, sewer, and bulkhead – are in design or under construction.

Based on review of existing plans and initial engagement, existing gaps in planning include:

- Surge protection for the Shellbank and Hawtree Basins, and Spring Creek.
- Resiliency of the commercial corridors including Cross Bay Boulevard and Coleman Square.
- Hardening of community social services and evacuation plans for disabled and senior populations.
- Determining funding and priority of Jamaica Bay resilience restoration projects.

Existing plans, studies, and projects are summarized in the below matrix indicating the organization leading the planning process, key analysis and proposed initiatives, the Recovery Functions these initiatives address, and the status of the plan, study, or project.



Detailed List of Plans and Projects

Plan/Project Name	Lead Organization(s)	Initiative Description	6 Recovery Functions						Sub-Category (Pre-Planning, Planning, Under Construction, Complete/In Operation)	Status (Pre-Planning, Planning, Under Construction, Complete/In Operation)
			Community Planning & Capacity Building	Economic Development	Health & Social Services	Housing	Infrastructure	Natural & Cultural Resources		
A Stronger More Resilient New York (SIRR Report)	OLTPS	Call for USACE to develop an implementation plan to mitigate inundation risks through Rockaway Inlet, exploring a surge barrier and alternative measures					X		Coastal Protection	
A Stronger More Resilient New York (SIRR Report)	OLTPS	Raise bulkheads in low-lying neighborhoods across the city to minimize inland tidal flooding					X		Coastal Protection	
A Stronger More Resilient New York (SIRR Report)	NYCEDC / OLTPS	Develop an implementation plan to address frequent tidal inundation in Broad Channel and Hamilton Beach, incorporating international best practices					X		Coastal Protection	
Comprehensive Restoration Plan (CRP) for the Hudson Raritan Estuary	USACE	CRP SITE 104. Spring Creek						X	Ecological Restoration, Coastal protection	Southern portion has been funded for restudy/reformulation by USACE as part of the Jamaica Bay Feasibility Study.
Comprehensive Restoration Plan for the Hudson Raritan Estuary	USACE	CRP SITE 160. BERGEN BASIN						X	Ecological Restoration	
Comprehensive Restoration Plan for the Hudson Raritan Estuary	USACE	CRP SITE 161. HAWTREE POINT						X	Ecological Restoration	This site has been funded for restudy/reformulation by USACE as part of the Jamaica Bay Feasibility Study.



Plan/Project Name	Lead Organization(s)	Initiative Description	6 Recovery Functions						Sub-Category (Pre-Planning, Planning, Under Construction, Complete/In Operation)	Status (Pre-Planning, Planning, Under Construction, Complete/In Operation)
			Community Planning & Capacity Building	Economic Development	Health & Social Services	Housing	Infrastructure	Natural & Cultural Resources		
James Court roadway and bulkhead (HWQ11841)	NYCDDC, NYCDOT	Roadway and sidewalk reconstruction of James Court from 104th Street to the Hawtree Basin bulkhead, including reconstruction of the bulkhead.					x		Transportation	In design; to be completed by June 2016
Rehabilitation of intercepting sewers in 157th Avenue (PS-312WQ)	NYCDDC, NYCDOT	Rehabilitation of intercepting sewers in 157th Avenue (btw. 95th & 96th St)					x		Stormwater management	In design; to be completed March 2016
Storm sewer in 95th Street (SEQ2001490)	NYCDDC, NYCDOT	Storm sewer construction. Includes storm sewer extensions and related water main work in 95th street and vicinity.					x		Stormwater management	In pre-design; to be completed January 2017

Lead organizations referenced in chart:

OLTPS - NYC Office of Long-Term Planning and Sustainability

NYCEDC - NYC Economic Development Corporation

USACE - U.S Army Corps of Engineers

NYCDDC - NYC Department of Design and Construction

NYCDOT - NYC Department of Transportation



VI. Preliminary Projects and Strategies and Next Steps

The Howard Beach community has already identified a number of critical needs, focused both on physical infrastructure and community capacity building. Keeping with their vision of solving critical needs with a combination of short- and long-term strategies, the initial project opportunities involve both shorter-term actions and longer-term interventions. The over \$18 million in CDBG-DR funds available for the community will help to support the short-term strategy that the community is formulating.

While the community planning process is focused on fully fleshing out needs and opportunities, even at this early stage, the needs suggest a number of project proposals that warrant further review and refinement.

The following proposed projects are set forth in no particular order.

Preliminary Projects

Infrastructure

Develop a protection strategy for local power stations.

One clear need is to keep the lights on throughout future storm events. During Sandy, and for weeks after, the power was knocked out and took significant time to get back on line. Although more research is needed, the opportunity to solve this problem locally exists. There are three substations in Howard Beach, at least two of which were taken

out by floodwaters. All three now sit within the high-risk zone in Howard Beach. Either through protection of these facilities or through the possible relocation of one or more facilities to higher ground, a much more resilient power infrastructure can be achieved.

Increase access to isolated sections of the community – especially Hamilton Beach.

The long basins that stretch deep into Howard Beach reduce the ability for automobiles and pedestrians to move laterally—east to west through the community. The lack of mobility is a concern during evacuation and in general when considering the need to build for resilience. The issue is particularly acute in Hamilton Beach, where the Hawtree Basin extends inward as a creek, leaving a single means of egress out of this residential area along 104th Street.

If this road becomes impassable, Hamilton Beach will be cut off. The only other means of egress is a pedestrian bridge at 163rd Avenue. Building additional egress into and out of this community should be a priority. New egress could also be combined with protection strategies if set along the coastal edge of the community.

Raise low-lying streets.

Much of Howard Beach was built on former marshland. Over the years, the marshland has settled, making a low-lying area even lower. The

community leaders note that many streets are set well below the intended elevation and that there may be opportunity to raise low-lying streets to protect against flooding.

Natural and Cultural Protect the edge.

The entire edge of Howard Beach consists of parkland (either natural area or beach) or water basins. When Superstorm Sandy struck, the main flooding came in through the basins and not over the coastal edge. There is significant room between where housing ends and the coastal edge where on-land protection strategies can be integrated into the park space. The community has noted that they would like a better long-term park maintenance strategy, and this strategy could be incorporated into a coastal protection strategy to both protect the edge and greatly enhance the park amenity that can be such a value to the community. However, the critical protection point lies at the water line along the Shellbank and Hawtree Basins and along Spring Creek. It was along these waterways where the water poured into the community. Protection to hold back the water along these basins will be vital to any coastal protection strategy. One additional consideration to support a coastal protection strategy is that there is height along both edges of the community. On the west is the Penn and Fountain landfill, the highest point in this mostly low-lying region. On the east is the right-of-way for the A subway line. Between these edges lie the three



waterways and an extensive length of beachfront and wetland property.

Health and Social Services

Expand healthcare and social infrastructure to support the community's senior population.

The community has noted that there is a significant senior population in Howard Beach. During and after the storm, when the community realized the extent of the damage and destruction, it became apparent that very little information about the location and needs of the senior community was available. Coupled with the lack of infrastructure to support the senior population in Howard Beach, the community wants to first understand the needs of its senior population and then develop strategies and infrastructure to support that community. For example, there may exist an opportunity to expand the health services already provided by the senior-housing development in the area to serve a larger population, either through enlarging the existing facility or building new facilities in the underbuilt space surround the housing.

Build dual- or multi-purpose service center(s).

There is a need for additional community centers that can double as gathering and food distribution centers during the event of an emergency. Permanent, resilient structures could be built out in identified open spaces or they could simply be used as storage spaces for emergency equipment and

supplies. Additionally, there is community demand for a new multi-purpose center at the southern end of New Howard Beach along Spring Creek Park, which could double as a resilient shelter and gathering place both during and after emergency events.

Enhance the resiliency of the New York Fire Department and NYPD Harbor Unit facility on Cross Bay Blvd. and the West Hamilton Beach Volunteer Fire Department.

Both fire departments and police departments were identified as critical assets by community members and are located in high-risk areas. Making these buildings more resilient could include strengthening the buildings themselves to ensuring sufficient emergency supplies and backup generators.

Economic

Protect commercial areas and corridors, such as Cross Bay Boulevard and Lindenwood commercial area.

This should entail efforts to make buildings in these areas more resilient, including flood-proofing ground floors, in addition to ensuring power, medical, and food supply for the area through backup generators, emergency medical supplies, or additional food. Cross Bay Boulevard, as the road that serves as the primary access point into and out of the community, particularly needs to be strengthened and protected. To this end, the Shellbank Basin bulkhead, which protects Cross

Bay Boulevard, must be improved and its height made more consistent. Depending on the options and methods for building up the bulkhead, other potential projects may include creating a barrier at the mouth of Shellbank Basin where it meets Jamaica Bay.

Surge protection for Coleman Square.

Protecting this commercial and transportation hub may entail larger-scale infrastructure projects that block or manage the incoming water of Hawtree Basin. Due to the area's extreme vulnerability, however, projects that adapt to some level of inundation should also be considered.

Training and communication programs around rebuilding program and financing options.

The Planning Committee expressed confusion and frustration around understanding building code changes and the financial implications of raising or not raising homes within the boundaries of the FEMA flood map. There is an opportunity to create training and communication programs to help individuals understand the issues and implications around flood insurance and making improvements to their homes. There may also be an opportunity to create an assessment and appraisal program to help residents gain access to experts who can help them understand the real physical risks and needs for their homes.



Housing

Project: Low-cost financing to help residents fund housing resiliency improvements.

Financing could come in the form of low-cost loans from community banks or the government or through tax-incentive programs.

Next Steps

The Conceptual Plan is the first critical milestone in the NYRCR effort. The next step in the plan will be to evaluate these proposal concepts and any others brought forth by the community through our next public meeting. These proposals will be researched to understand their ability to reduce risk, whether they are technically feasible, their order-of-magnitude cost, whether there is a funding source and/or funds available, and what co-benefits can be achieved.

Short-term and long-term projects will then be coordinated to formulate an overall plan of action for resilience for the community. There will be three additional public meetings to refine the plan and the

projects. The Community Reconstruction Plan will be completed on March 31st of 2014.

Implementation Planning

After defining priority projects and actions, the Committee will utilize the expertise of its planning team to identify a path towards implementation.

The goal for the implementation plan will be to achieve actionable results for the community which focuses on four core components: **regulation, funding, complementary programs, and building capacity to implement.**

The plan will identify:

- Order-of-magnitude project costs associated with implementing resiliency projects
- Potential funding sources for projects
- Detailed work plan outlining activities to implement proposed actions including regulatory actions and program development as well as infrastructure investment
- Responsible parties for each of the activities to be conducted in accordance with the recommended project

- Target goals, timelines and project budget for each responsible party
- Process for amending the work plan should timeline lapse or costs exceed projected budgets

To accomplish certain infrastructure projects, regulatory and legislative changes may be required. In these instances, the plan will include the process for which these changes can be achieved. Regulatory and legislative changes could include changes to current zoning and/or permitted uses in a specific area. The implementation plan will identify the regulatory and legislative entities that will be engaged to initiate the changes as well as the community representative who will champion and push for the appropriate regulatory or legislative change. The implementation plan will consider Howard Beach's resources and identify if implementation can be achieved with existing resources or if additional staff will be required, and if so, the mechanisms for securing and managing the additional resources.

