

New York Rising
Community Reconstruction Program

Gerritsen Beach and Sheepshead Bay Conceptual Plan

October 2013



This document was developed by the Gerritsen Beach/Sheepshead Bay Planning Committee as part of the NY Rising 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 provided by the following consulting firms: URS Corporation, the LiRo Group, Jamie Caplan Consulting LLC, and AIM Development Group.



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.

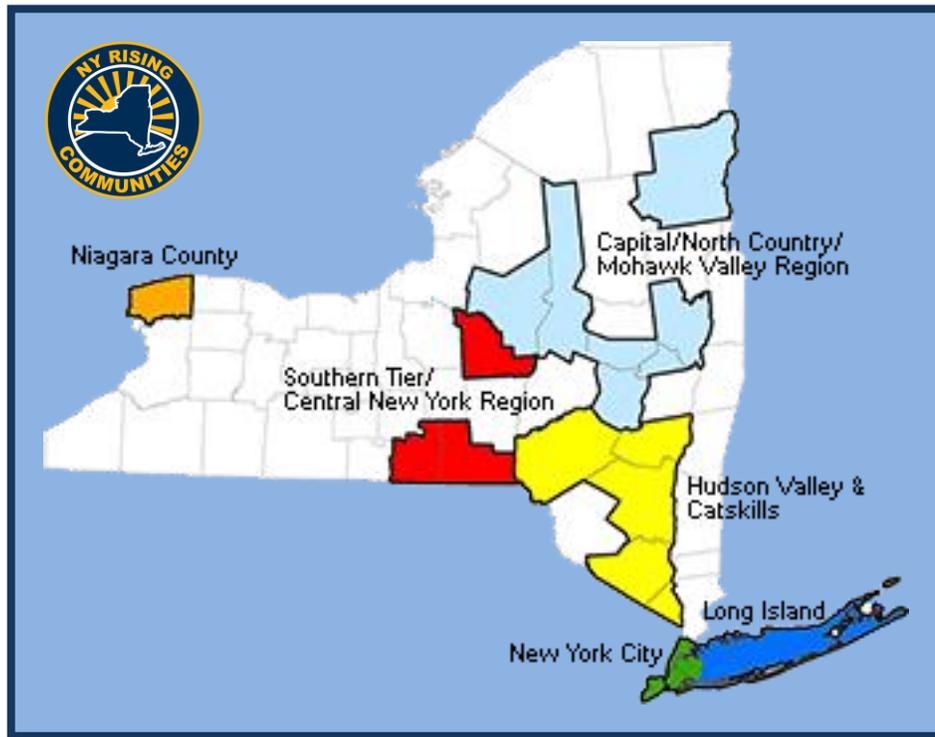
Implementation of the proposed projects and actions found in this conceptual plan is subject to applicable federal, state, and local laws and regulations. Inclusion of a project or action in this conceptual plan does not guarantee that a particular project or action will be eligible for Community Development 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



New York Rising Communities



StormRecovery.ny.gov/Community-Reconstruction-Program



Table of Contents

1	Introduction and Background	1
1.1	Conceptual Plan for the Gerritsen Beach and Sheepshead Bay NYRCR Plan	2
1.2	Geographic Scope of the Gerritsen Beach and Sheepshead Bay NYRCR Plan.....	2
1.3	Community Overview	5
1.4	Existing Development.....	7
2	Summary of the Effects of Superstorm Sandy	9
2.1	Superstorm Sandy.....	9
3	Summary of Relevant Existing Plans and Studies	12
4	Community Vision	14
5	Description of Assets and Risks	15
5.1	Identification of Assets.....	15
5.2	Identification and Understanding of Risk.....	20
6	Public Engagement Process	23
7	Identification of Needs and Opportunities	26
7.1	Community Planning and Capacity Building	26
7.2	Economic Development.....	27
7.3	Housing	28
7.4	Health and Social Services	28
7.5	Infrastructure	29
7.6	Natural and Cultural Resources	31
8	Key Strategies and Potential Projects to Implement Strategies	33
9	Potential Key Projects	39
10	Regional Perspectives	40
11	Process for Evaluating Potential Actions and Projects to Implement Strategies	42
11.1	Consideration of the Implementation Structure to Deliver Local Actions	43
12	Implementation Schedule	44
	Appendix 1: Plan Review	45
	Appendix 2: Community Asset Inventory (In Preparation)	49



Figures

Figure 1: Gerritsen Beach neighborhood 3
Figure 2: Sheepshead Bay neighborhood 4
Figure 3: Brooklyn Community District 15 land use map showing land use in the Planning Area 8
Figure 4: Building damage assessment from Superstorm Sandy for Gerritsen Beach and Sheepshead Bay (source: FEMA) 11
Figure 5: Preliminary asset inventory for Gerritsen Beach 18
Figure 6: Preliminary asset inventory for Sheepshead Bay 19
Figure 7: Gerritsen Beach Risk Assessment Map 21
Figure 8: Sheepshead Bay Risk Assessment Map 22
Figure 9: Strategy Implementation 42

Tables

Table 1: Gerritsen Beach and Sheepshead Bay Demographic Profiles 6
Table 2: New York State Department of State Risk Areas 20
Table 3: Strategies and Proposed Projects for Gerritsen Beach and Sheepshead Bay 34
Table 4: Sample Implementation Schedule 44



1 Introduction and Background

The State of New York is assisting communities to rebuild stronger, safer, and more resiliently using community-driven plans through the New York Rising Community Reconstruction (NYRCR) Program, an innovative post-disaster planning process. The plans will address damage resulting from Superstorm Sandy, future threats to community assets, and local economic opportunities.

In a manner consistent with the National Disaster Recovery Framework, the NYRCR Plans will include the risks and opportunities related to six Recovery Support Functions: Community Planning and Capacity Building, Economic Development, Health and Social Services, Housing, Infrastructure, and Natural and Cultural Resources. The NYRCR Plans will provide a blueprint to reduce threats to community assets and enhance the economic future of the community, based on recent disaster damage and future hazard vulnerabilities.

The NYRCR Plan for the communities of Gerritsen Beach and Sheepshead Bay will:

- Involve a locally driven grassroots development process
- Provide a Community Vision that addresses regional and community recovery and resilience
- Assess each community's vulnerability to the negative effects of future natural hazards
- Describe cost-effective strategies, projects, and actions that will increase the resilience of the two communities, provide protection to vulnerable populations, and promote sound economic development by protecting the communities' assets



Sheepshead Bay, NY

The State of New York has allocated nearly \$13.4 million in federal Community Development Block Grant Disaster Relief (CDBG-DR) funding to Gerritsen Beach and Sheepshead Bay, with each community eligible to receive approximately \$6.7 million. The Gerritsen Beach and Sheepshead Bay NYRCR Plan will identify additional potential funding.

With the successful completion of the NYRCR Plan, both communities will be better positioned to obtain funding to implement projects to improve their future and provide a methodology for project implementation.



1.1 Conceptual Plan for the Gerritsen Beach and Sheepshead Bay NYRCR Plan

This document contains the Conceptual Plan for developing the Gerritsen Beach and Sheepshead Bay NYRCR Plan. Development of the Plan will involve public involvement and the identification of assets, risks, strategies, needs and opportunities, and projects and actions that



Plumb Beach

support the six Recovery Support Functions. The Plan will be completed by March 31, 2014.

Each New York Rising Community has a Planning Committee that includes stakeholders from each community such as local residents, local officials, representatives of local organizations, and local business leaders. The development of the Plan will be led by the local Planning Committee.

The Planning Committee, led by the two Co-Chairs, will partner with experts from the Department of State, Department of Transportation, the New York State Homes and Community Renewal, and the consultant Planning Team.¹ The Planning Committee will represent the community in this process and will be assisted by the Planning Team.

1.2 Geographic Scope of the Gerritsen Beach and Sheepshead Bay NYRCR Plan

The Planning Committee identified the entire area of the Gerritsen Beach and Sheepshead Bay communities as the geographic scope of the NYRCR Plan, also referred to as the Planning Area. The Gerritsen Beach section is shown in Figure 1, and the Sheepshead Bay section is shown in Figure 2.

¹ The Planning Team, which consists of staff from URS Corporation, the LiRo Group, AIM Development, and Jamie Caplan Consulting LLC, was hired through a State process administered by New York State Homes and Community Renewal (NYS HCR) through its Office of Community Renewal and the Housing Trust Fund Corporation.





Figure 1: Gerritsen Beach neighborhood





Figure 2: Sheepshead Bay neighborhood



Determination of precise neighborhood boundaries can be a subjective process. For the purposes of this Conceptual Plan, the Planning Team considered Planning Committee and public input; New York City Department of City Planning Neighborhood Tabulation Areas; and Census Tract boundaries.

Gerritsen Beach is a peninsula that extends between Avenue U to the north, Burnett Street to the east, Plumb Beach Channel to the south, and Shell Bank Creek and Knapp Street to the west. The Gotham Avenue Canal extends eastward to Gerritsen Avenue, dividing the neighborhood between Gotham Avenue and Bartlett Place. Local residents often refer to the portion of the neighborhood north of the Canal as the “new section.” This area includes traditional city streets with stores, brick and frame houses, and sidewalks. The area south of the canal, or the “old section,” is popular for boating, fishing, and other marine uses. There are limited sidewalks in the small courts of the old section. The Gerritsen Creek estuary supports recreational fishing and is also a major spawning ground for various aquatic species.

Sheepshead Bay is defined as the area bounded to the south by the water body of Sheepshead Bay, to the west by Ocean Parkway, to the north by Avenue P, and to the east by Knapp Street and the Plumb Beach Channel. The Sheepshead Bay Marina, which is operated by the Department of Parks and Recreation, is a popular fishing, boating, and recreational area. While the marina has become more recreational in nature, it is still a working waterfront and thus maintenance of navigational facilities (channels, piers, etc.) is required for safe operation.

1.3 Community Overview

Gerritsen Beach has a population of approximately 6,700. Most of Gerritsen Beach is residential, with predominantly single-family homes. Developed in the 1920s as a planned community, Gerritsen Beach has hundreds of bungalows. Most were built before modern construction codes, are at low elevations, and are at risk of flooding.

Sheepshead Bay has a population of 124,500 who live in single-family homes, newer multi-family dwellings, and New York City-owned public housing and senior care facilities. Numerous bungalows are located along “courts” (pedestrian walks) north and south of Emmons Avenue, one of the main commercial corridors. Some of the courts are as much as 5 feet below the street grade and are at risk of flooding. Most of the commercial, office, public facility, and institutional spaces lie along the main commercial corridors, which include Coney Island Avenue, Emmons Avenue, Nostrand Avenue, Avenue U, Ocean Avenue, and Sheepshead Bay Road.

The demographic profiles of Gerritsen Beach and Sheepshead Bay are provided in Table 1.



Table 1: Gerritsen Beach and Sheepshead Bay Demographic Profiles

Demographic	Gerritsen Beach ^(a)	Sheepshead Bay ^(a)	Brooklyn ^(b)	New York City ^(b)
Population	6,700	124,500	2,505,000	8,175,000
Housing				
Number of households	2,600	49,200	908,000	3,050,000
Owner-occupied housing units	2,100	20,700	271,000	993,500
Percent homeowners	81%	41.5%	30%	33%

(a) <http://maps.nyc.gov/census/?searchType=AddressSearch&addressNumber=2001&street=oriental+blv&borough=brooklyn#>: Accessed November 1, 2013 by Census Tract

(b) Sources: U.S. Department of Commerce, U.S. Census Bureau, New York City, New York (2013). Available at <http://quickfacts.census.gov/qfd/states/36/3651000.html>, Accessed September 2013; and 2011 American Community Survey, 5-Year Estimate. Available at http://factfinder2.census.gov/bkmk/table/1.0/en/ACS/11_5YR/DP04/1600000US3651000%7C0400000US36, Accessed September 2013.



1.4 Existing Development

Gerritsen Beach is named for a 17th century settler, Wolphert Gerritsen, who built a house and mill on Gerritsen Creek. Until the 1920s, when a private developer developed a seasonal bungalow colony on the peninsula, Gerritsen Beach was predominantly marshland. The nationally prominent Whitney family had constructed a mansion with horse stables, servant quarters, carriage house, and private racetrack in Gerritsen Beach prior to this development, but these facilities, excepting the carriage house, were destroyed in the 1930s. By that time, Gerritsen Beach had more than 1,500 homes.

Most of Gerritsen Beach is residential, but there are pockets of commercial and office space along Gerritsen Avenue and along the neighborhood boundary on Knapp Street.

Sheepshead Bay began developing in the late 1870s and 1880s, partly because it became easier to travel between Brooklyn and New York City after the construction of the Manhattan Beach branch of the Long Island Railroad; the Brooklyn, Flatbush, and Coney Island Railroad (known as the BMT Brighton Line); the Ocean Parkway; and the Brooklyn Bridge. The surrounding area was a thriving seasonal bungalow community, anchored by the Coney Island Jockey Club's construction of its flagship track in Sheepshead Bay in 1880 until the State of New York banned gambling.

The race track was closed in 1924 and divided into 4,000 single-family lots. The Manhattan Beach Branch of Long Island Railroad ceased operation in 1926. Simultaneously, Coney Island connected to the mainland by infilling Coney Island Creek. In the early 1930s, New York City took control of Jamaica Bay and began developing the waterfront by expanding Emmons Avenue and redesigning the piers, which are still used today for daily party-boat fishing tours. There was extensive year-round habitation by the 1930s. The Shore Parkway was extended into the area in the 1940s, which made improved access and made the area more desirable. Following World War II, there was a significant housing shortage which led to increased residential construction in the planning area.

Sheepshead Bay is a much larger community than Gerritsen Beach, and its demographics, economics, and land uses vary to a much greater degree. Housing stock consists of single-family, multi-family, multi-story, and institutional housing, such as assisted living facilities. Sheepshead Bay also has a larger commercial sector, which is along Emmons Avenue. Gerritsen Beach, in contrast, is almost entirely composed of one- to two-family homes, has a small commercial strip, and is bordered by water on three sides.

Gerritsen Beach and Sheepshead Bay are part of Brooklyn Community District 15. Land uses in the district are shown on Figure 3. Land use in the Planning Area is regulated by New York City, with advisory review also conducted by Community Board 15 and by the Borough President.



Brooklyn Community District 15

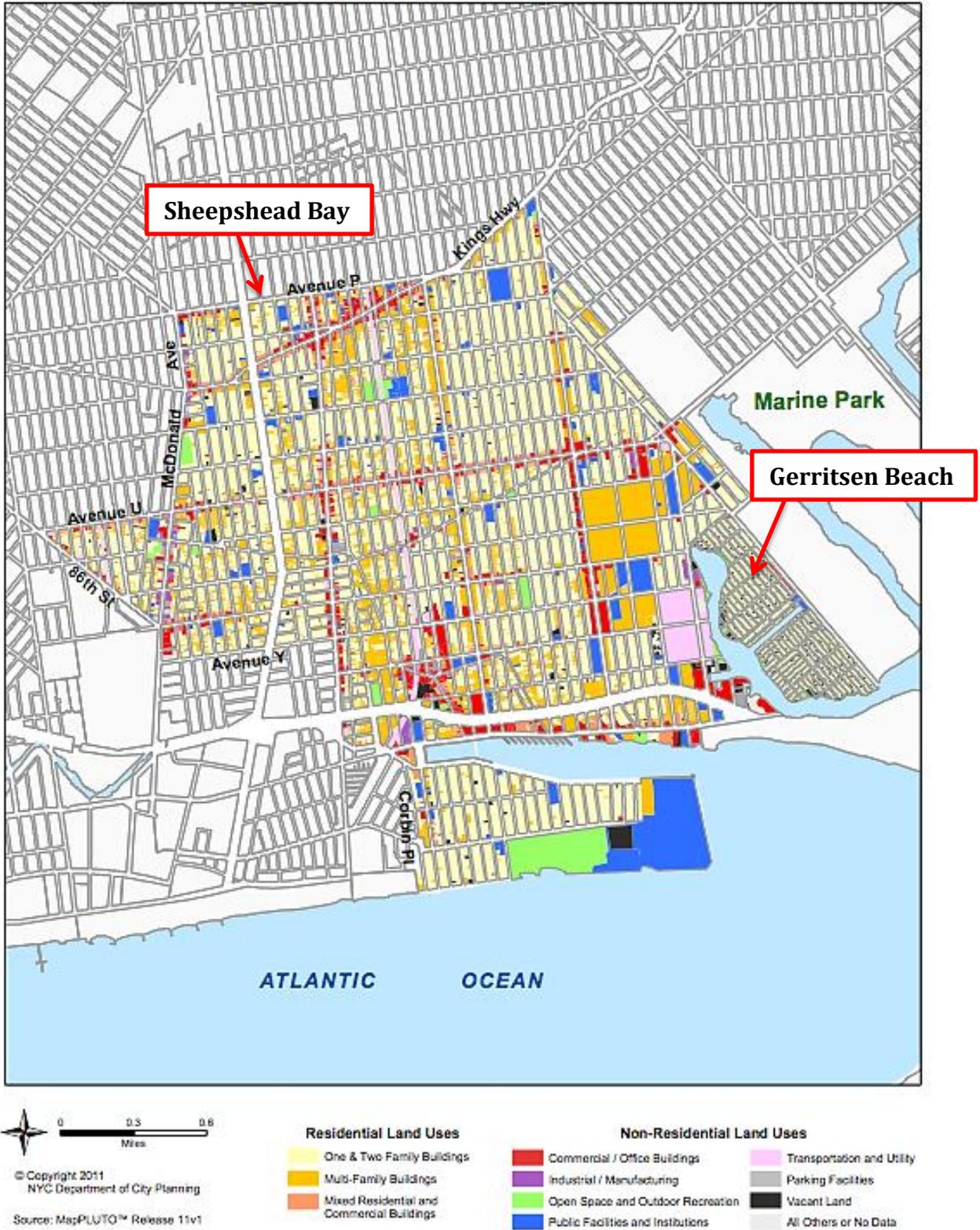


Figure 3: Brooklyn Community District 15 land use map showing land use in the Planning Area



2 Summary of the Effects of Superstorm Sandy

2.1 Superstorm Sandy

Superstorm Sandy struck New York on October 29, 2012, bringing a storm surge of 9 to 12 feet above normal tide levels from Kings Point on the western end of Long Island Sound to the Battery on the southern tip of Manhattan.²

Superstorm Sandy is the largest storm in New York’s recorded history to land ashore. The storm’s effects were devastating, causing widespread damage to lives, homes, businesses, core infrastructure, government property, and an economy just beginning to recover from a financial crisis. The storm caused 53 fatalities³, destroyed an estimated 305,000 homes⁴, affected more than 2,000 miles of roads, produced catastrophic flooding in subways and tunnels, and damaged major power transmission systems.

Fourteen counties in New York State were declared Federal disaster areas.⁵ Economic losses as a result of Superstorm Sandy are estimated to be between \$30 and \$50 billion, with an estimated \$10 to \$20 billion in insured losses.⁶ New York State Governor Andrew Cuomo stated the storm would cost New York State nearly \$42 billion, with the vast majority of damage centered on New York City and Long Island.⁷

The damage in Gerritsen Beach and Sheepshead Bay included:

- Utilities in basements in residential units were damaged by flooding in both communities.
- A substantial volume of floodwater entered both communities through stormwater outlets without flap valves or check gates. When water levels rose in Sheepshead Bay

² National Hurricane Center. *Tropical Cyclone Report Hurricane Sandy (AL182012) 22-29 October 2012* (February 12, 2013). Available at http://www.nhc.noaa.gov/data/tcr/AL182012_Sandy.pdf. Accessed October 2013.

³ Centers for Disease Control and Prevention. “Deaths Associated with Hurricane Sandy, October – November 2012.” *Morbidity and Mortality Weekly Report* (May 24, 2013). Available at <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6220a1.htm>. Accessed October 2013.

⁴ National Hurricane Center. *Tropical Cyclone Report Hurricane Sandy (AL182012) 22-29 October 2012*. (February 12, 2013). Available at http://www.nhc.noaa.gov/data/tcr/AL182012_Sandy.pdf. Accessed October 2013.

⁵ State of New York. *State of New York Action Plan for Community Development Block Grant Program Disaster Recovery*. Prepared by the New York Homes and Community Renewal Office of Community Renewal. Federal Register Docket No. FR-5696-N-01. April 2013

⁶ EQECAT. *Post-Landfall Loss Estimates for Superstorm Sandy*. November 1, 2012. Available at <http://www.eqecat.com/catwatch/post-landfall-loss-estimates-superstorm-sandy-released-2012-11-01/>. Accessed October 2013.

⁷ Kaplan, T. and R. Hernandez, “Cuomo Cites Broad Reach of Hurricane Sandy in Aid Appeal”, *New York Times* (November 26, 2012). Available at <http://www.nytimes.com/2012/11/27/nyregion/governor-cuomo-says-hurricane-sandy-was-worse-than-katrina.html>. Accessed October 2013.



and the creeks before the storm surge, water surcharged into the outlets and flooded streets and homes. This flooding affected first floor living areas in many homes without basements. Some level of flooding is already regularly associated with storms that occur during the full moon high tide in Gerritsen Beach.

- The stormwater infrastructure and conveyance system were damaged.
- Storm surge and floodwaters entered Gerritsen Beach by overflowing a low-lying area along the Belt Parkway east of Knapp Street at Plumb Beach and passing through the Belt Parkway bridge over the inlet.
- The multi-story and institutional housing in Sheepshead Bay was greatly affected by flooding in basements and first floors in buildings with mechanical systems on those floors. Damage to electrical panels, elevators, and sewer connections made buildings uninhabitable or greatly reduced their habitability for extended periods after the storm.
- Low-lying courts in Sheepshead Bay are up to 5 feet below street level and were inundated during Superstorm Sandy. The courts are not connected to New York City-maintained drains.
- The narrow courts in the old section of Gerritsen Beach are at low-grade elevations and were substantially flooded during Superstorm Sandy. These roadways are constructed of a thin layer of asphalt over a sand foundation, and are subject to shifting, potholing, and cracking. These conditions were worsened by inundation during Superstorm Sandy.

The US Department of Housing and Urban Development (HUD)⁸ provided the following statistics on the damage. Damage to housing units was most heavily concentrated in Gerritsen Beach south of Devon Avenue, where 1,378 of 1,601 (86.1%) of all housing units sustained some level of damage, including 195 units where flooding to first floor living space exceeded 4 feet. The percentage of damaged units in Sheepshead Bay tended to be lower, exceeding 50% only in one Census Block Group. This disparity is largely explained not by lesser damage patterns, but by a large number and density of medium-rise buildings in Sheepshead Bay, where upper floor units tended not to receive flood damage.

Figure 4 shows the structural damage assessment conducted by FEMA for Gerritsen Beach and Sheepshead Bay following Sandy, which classifies building damages into four categories: destroyed, major, minor, and affected.

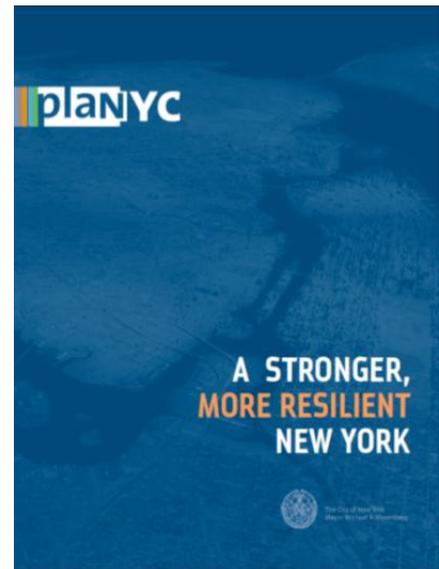
⁸ United States Department of Housing and Urban Development. *Sandy Damage Estimates by Block Group* (2012). Available at http://www.huduser.org/maps/map_sandy_blockgroup.html. Accessed October 2013.



3 Summary of Relevant Existing Plans and Studies

This section contains a summary of the Planning Team’s review of plans and studies that are relevant to Gerritsen Beach and Sheepshead Bay.

The Planning Team reviewed available municipal and regional planning documents for information relevant to the NYRCR Plan. The documents included pre- and post-Sandy documents and information about projects in the Planning Area in various stages of planning and execution. Existing plans with direct or indirect connections to Gerritsen Beach and Sheepshead Bay were reviewed to identify community goals and ongoing or proposed projects. Some of the plans were at least 4 years old and thus did not address the effects of Hurricane Irene in 2011 or Superstorm Sandy in 2012.



Significant work related to planning since Superstorm Sandy has been completed, and several documents related to the storm and post-storm recovery have been developed by New York City. A *Stronger, More Resilient New York*⁹ produced under the Special Initiative for Rebuilding and Resiliency (SIRR) provides the most detailed analysis of the existing conditions, a risk assessment, and the initiatives that are focused on southern Brooklyn.

Many of the plans, including the SIRR effort, describe how the topography and pattern of development in Southern Brooklyn left the two communities vulnerable to damage from storm waves and flooding. A significant number of structures were not only built at low elevations and below sea grade, but before the implementation of modern construction codes. Bungalows and single-family homes, for example, were particularly hard hit by storm damage. The plans and studies detail how the Sheepshead Bay neighborhood, which includes the areas of Kings Bay and Plumb Beach, was impacted by floodwaters from Sheepshead Bay during Superstorm Sandy. A significant portion of the overall flood damage to Sheepshead Bay occurred in Kings Bay and Plumb Beach, which are on the waterfront. Simultaneously, Gerritsen Beach suffered when the storm surge in Gerritsen Inlet overflowed into the neighborhood and up Shell Bank Creek and into adjoining homes. Floodwaters also entered Gerritsen Beach from Plumb Beach and the Belt Parkway.

⁹ City of New York, *A Stronger, More Resilient New York*, Special Initiative for Rebuilding and Resiliency (2013). Available at <http://www.nyc.gov/html/sirr/html/report/report.shtml>. Accessed September 2013.



The studies provide quantitative data and assessments of Superstorm Sandy’s impact on infrastructure, city services, transit operations, commercial spaces, homes and residences, population displacement, and heat and power provision. Residential units and local businesses were greatly impacted in Gerritsen Beach. In Sheepshead Bay, many residents were displaced and commercial spaces were inundated. The studies also provide information on important assets and issues in the area, as well as projects and policies currently being implemented, such as sand restoration on Plumb Beach and public housing improvements in Sheepshead Bay. Additionally, plans and studies contain ideas and proposals for the neighborhoods, often in the context of addressing reconstruction and resiliency needs. Sample projects and proposals include home rebuilding programs, wetlands restoration, erosion control, affordable insurance policies, enhanced building code requirements, tidal barriers, bulkhead installation and repairs, and public safety measures.

Appendix 1 lists the documents that were reviewed and summarizes their contents. If additional plans are identified, they will be reviewed and incorporated into the NYRCR Plan.



4 Community Vision

At the October 4, 2013 meeting of the Planning Committee, the members listed key words, terms, and phrases that relate to their communities and the desired sustainability and resiliency outcomes. Using a consensus-based approach, the committee drafted a Vision Statement for Gerritsen Beach and Sheepshead Bay that was developed further with input from the community at Public Engagement Meetings on October 7 and 8, 2013.

The Vision Statement, incorporating public input, is:

**Gerritsen Beach and Sheepshead Bay
Vision Statement**

Our vision is to restore and build upon the historic uniqueness and diversity of our waterfront communities by promoting resilient, prepared, and deeply rooted neighborhoods that will ensure a stronger, safer, and brighter quality of life for future generations.



5 Description of Assets and Risks

This section describes the progress that has been made to date on the identification of community assets and the risk assessment of Gerritsen Beach and Sheepshead Bay.

5.1 Identification of Assets

The Community Asset Inventory will highlight the community assets (including critical facilities) that, if impaired as a result of hazard events, would compromise the essential social, economic, or environmental functions of the community. Critical facilities are defined as facilities that are crucial to emergency response functions following natural disasters, such as shelters, fire and police stations, health facilities, and vital infrastructure assets.

The Planning Team has identified a preliminary list of community assets in five of the six Asset Classes (Economic, Health and Social Services, Housing, Infrastructure Systems, and Natural and Cultural Resources), and mapped their locations, and the NYRCR Planning Committee has reviewed them. The next phase of the planning process will include the initial mapping of the locations of socially vulnerable populations.

The Planning Committee has done an initial review of the asset inventory maps and provided additional information. The planning process is likely to generate additional information related to assets, and the asset inventory maps are therefore likely to be revised.

Once the list of assets has been finalized, detailed information about each asset, landscape attributes in the vicinity of the asset, and vulnerability of the asset to flood damage will be collected for the Community Asset Inventory. Assets will then be prioritized based on factors such as importance to Gerritsen Beach and Sheepshead Bay, probability of being affected by flooding, and restoration time. The draft Community Asset Inventory is attached as Appendix 2 to this report.

The preliminary inventories of community assets for Gerritsen Beach and Sheepshead Bay are shown in Figures 5 and 6, respectively.

The following items summarize the preliminary list of community assets:

- **Economic:** The Planning Area's principal commercial corridors include Kings Highway, Emmons Avenue, Nostrand Avenue, Avenue U, Ocean Avenue, and Sheepshead Bay Road in Sheepshead Bay, and Gerritsen Avenue in Gerritsen Beach. Emmons Avenue houses a variety of water-dependent and water-enhanced uses, which include boat docking and storage; fishing charter businesses; restaurants; local and chain retail outlets; and a hotel. These uses are supported by the Emmons Avenue esplanade and Sheepshead Bay Footbridge, which attract high volumes of pedestrian



activity in warm-weather months. Similar boating and marine uses also proliferate in Plumb Beach Channel in Gerritsen Beach.

While Sheepshead Bay attracts high numbers of visitors from elsewhere in Brooklyn and New York City during summer months, businesses in Gerritsen Beach cater almost exclusively to local residents. The Gerritsen Avenue corridor serves a vital function to residents of that neighborhood as the only local source of goods and services, including groceries, pharmaceuticals, and restaurants and bars.

- **Health and Social Services:** The NYRCR Planning Area is home to six senior centers, five residential health care facilities, five residential adult care facilities, and three community residences for people with developmental disabilities.

The five public elementary schools in the Planning Area include one in Gerritsen Beach, which serves 459 pupils, and four in Sheepshead Bay, which serve 2,676 students. One intermediate school in Sheepshead Bay has 1,365 students, and a junior high school in that neighborhood has 560 students. Sheepshead Bay High School (SBHS), the large public high school in the Planning Area serves 1,168 students. Four other specialized high schools are co-located on the SBHS campus, including two charter schools, which serve much smaller populations.¹⁰

The 61st Police Precinct is headquartered in Sheepshead Bay. The planning area is also home to five fire stations, including the last remaining volunteer fire company in Brooklyn in Gerritsen Beach. There are a variety of assisted living and elder facilities in Sheepshead Bay.

- **Housing:** The occupied housing units in the Planning Area include a variety of building types, ranging from high-rise apartment towers to detached, one-to-three family structures. In Gerritsen Beach, detached single-family structures on relatively small, narrow lots predominate. As of the 2010 Census, there were 6,800 vacant housing units in Sheepshead Bay and 330 in Gerritsen Beach, which equates to a vacancy rate of 12.1% and 11.2%, respectively. This is notably higher than the overall New York City vacancy rate of 7.8%¹¹. Sheepshead Bay's two public housing developments encompass 34 medium-rise buildings and 2,199 apartments.¹²
- **Infrastructure Systems:** The Planning Area is served by numerous local bus lines, including two that access Manhattan via the Brooklyn Battery Tunnel. Two subway lines, including the B, which runs express to Manhattan during the week, serve four

¹⁰ www.schools.nyc.gov.

¹¹ U.S. Census, Summary File 1 (2010).

¹² <http://gis.nyc.gov/nycha/im/wmp.do;jessionid=52B59E41DC0482BD757BD99664D09C6E?>



elevated subway stations, all of which are located in Sheepshead Bay.¹³ The busiest station in the Planning Area, Kings Highway, served nearly 5.5 million riders in 2012. The limited access highway at the northern end of the planning area, the Belt Parkway, carries approximately 140,000 private vehicles per day.¹⁴

Additional natural and culture features such as Plumb Beach, which is part of the Jamaica Bay National Wildlife Refuge, and Marine Park serve important mitigation and water attenuation functions. These features are supplemented by a variety of structural features, including jetties, sea walls, and bulkheads. The quality and condition of these features is highly variable. The city is working cooperatively with various federal entities to effect improvements to Jamaica Bay that would increase the area's resiliency.

- **Natural and Cultural Resources:** The planning area was historically characterized by marshlands and wetlands. Intensive, urban-scale development has replaced or significantly degraded many of these assets. To assist with flood management and to enhance public recreation and access opportunities, the city is working to make improvements to the area's parklands.

The planning area has four branch libraries. One of them, the Gerritsen Beach Library, was closed for several months because of building and materials damage caused by Superstorm Sandy.

Once the list of assets has been finalized, detailed information about each asset, landscape attributes in the vicinity of the asset, and the vulnerability of the asset to flood damage will be collected for the Community Asset Inventory. Assets will then be prioritized based on factors such as importance to the NYRCR communities, the probability of being affected by flooding, and restoration time.

¹³ http://www.mta.info/nyct/facts/ridership/ridership_sub_annual.htm.

¹⁴ <http://nycroads.com/roads/belt/>.



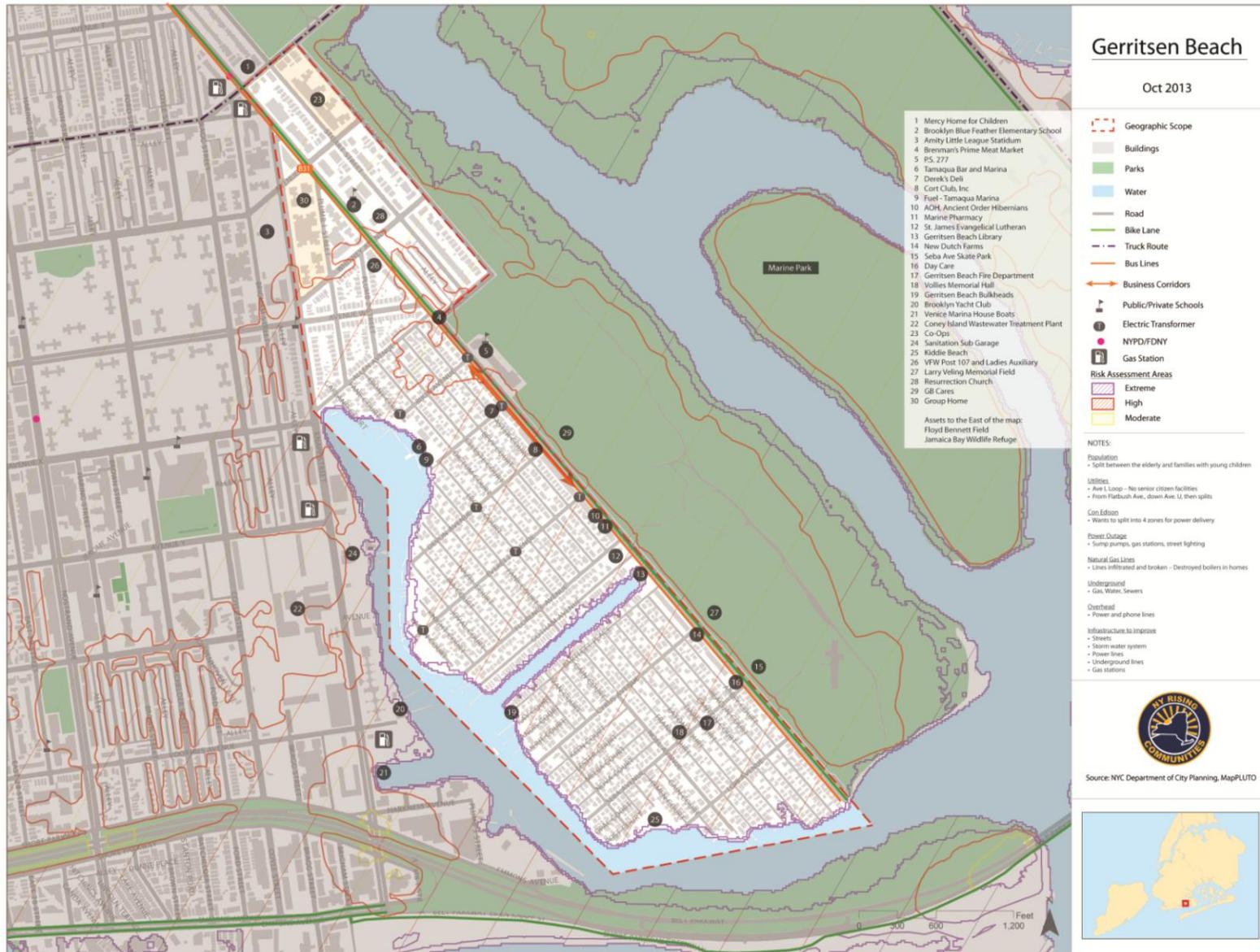


Figure 5: Preliminary asset inventory for Gerritsen Beach



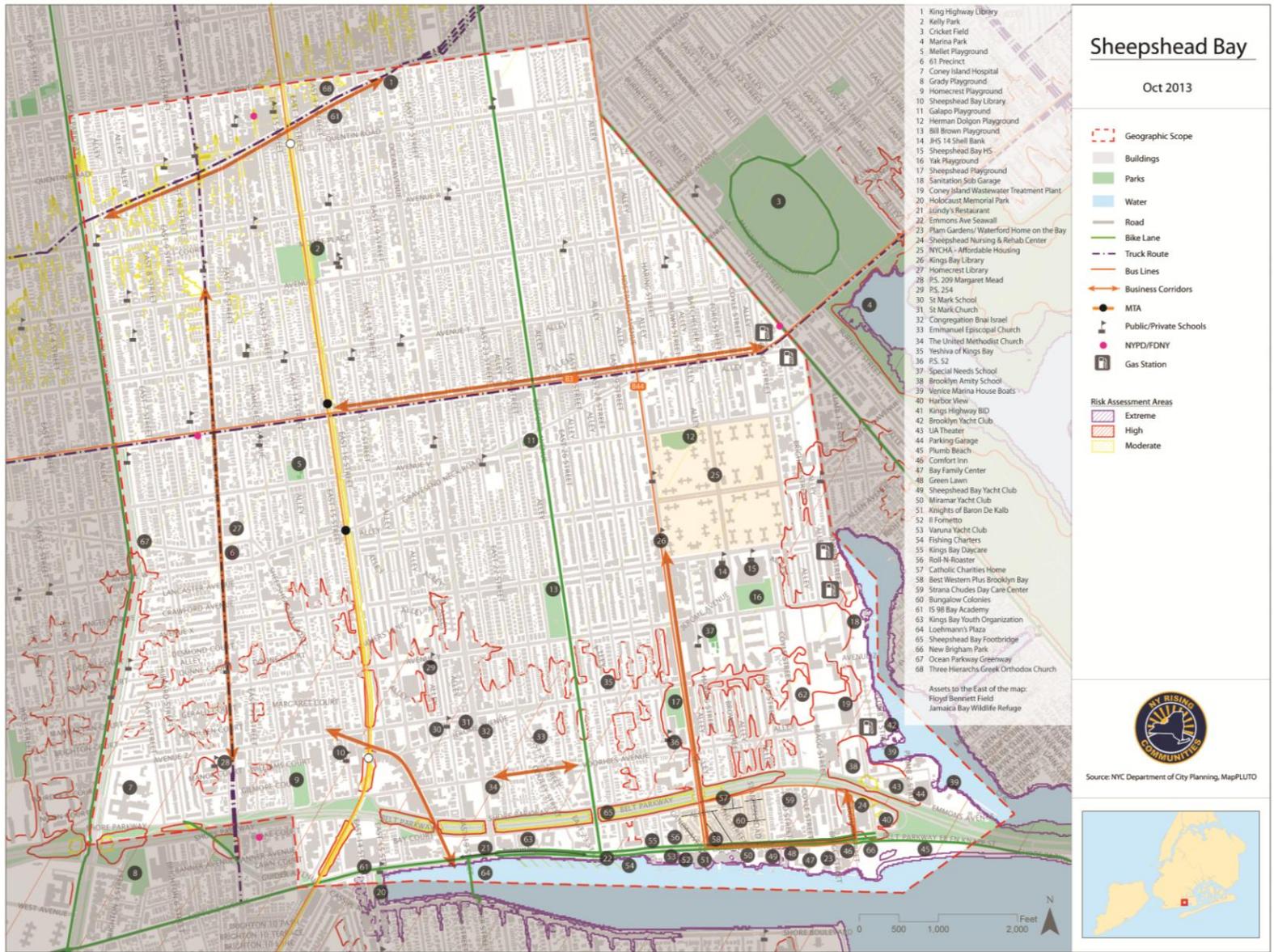


Figure 6: Preliminary asset inventory for Sheepshead Bay



5.2 Identification and Understanding of Risk

The Planning Committee has not finalized the risk assessment. The New York State Department of State developed a post-Sandy risk assessment. The existing Risk Assessment Maps for Gerritsen Beach and Sheepshead Bay (see Figures 7 and 8, respectively, on the following pages) show that nearly all of Gerritsen Beach and approximately one-third of Sheepshead Bay are in an Extreme or High Risk Area from flooding. The Department of State risk areas were developed based on the criteria in Table 2.

Table 2: New York State Department of State Risk Areas

Extreme Risk Area	High Risk Area	Moderate Risk Area
FEMA Coastal V Zones	FEMA 1% (100-year) annual flood risk (FEMA Zone V and Zone A)	FEMA 0.2% (500-year) annual flood risk
National Weather Service (NWS) advisory thresholds for shallow coastal flooding	Areas within 3 feet of elevation of NWS advisory thresholds for shallow coastal flooding	Areas within 3 feet of elevation of FEMA 1% annual flood risk (base flood elevations)
Areas within 3 feet of elevation of mean higher high water shoreline from the National Oceanic and Atmospheric Administration	—	Area bounded by <i>Sea, Lake and Overland Surges from Hurricane</i> (SLOSH) model Category 3 hurricane inundation zone
Areas prone to erosion	—	—

Source: New York State Department of State

FEMA = Federal Emergency Management Agency

NWS = National Weather Service

SLOSH = Sea, Lake, and Overland Surge from Hurricanes

After the NYRCR Conceptual Plan is finalized, a risk assessment to determine the potential impact of hazards on community assets will be conducted. The results will help guide the selection of proposed strategies, such as utility improvements and changes in the building environment, and the proposed strategies will be subjected to a cost-benefit analysis. The risk assessment will help the communities of Gerritsen Beach and Sheepshead Bay choose mitigation methods to reduce future risk. Input from the Planning Committee and the public on areas with the highest risk of flooding will be used to supplement the Risk Assessment Maps.



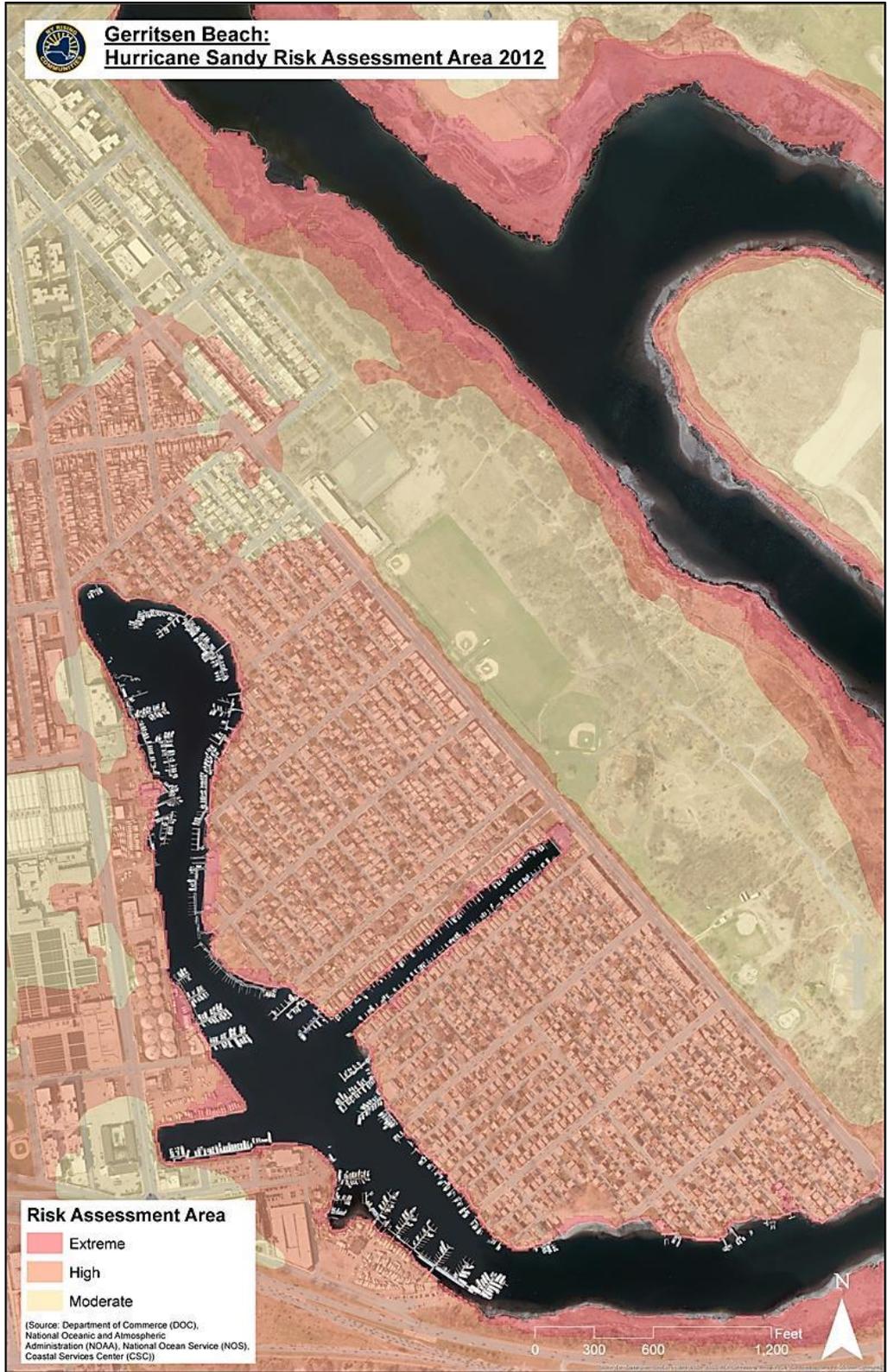


Figure 7: Gerritsen Beach Risk Assessment Map





Figure 8: Sheepshead Bay Risk Assessment Map



6 Public Engagement Process

The Planning Committee held meetings on September 17, October 4, and October 16, 2013. These meetings were open to the public, and attendees were invited to ask questions during and after the meetings, and observe work group activities. Input for the Vision Statement was also gathered at these meetings.

Public engagement events were held on October 7 and October 8, 2013, and attended by more than 150 residents of the two communities. The October 7 event was held in Sheepshead Bay, and the October 8 event in Gerritsen Beach. Both events opened with an introduction of the Planning Committee members, NYRCR staff, and the Planning Team consultants. An overview of the NYRCR planning process was given, followed by a report on the Committee's progress to date.



Public engagement events held in Gerritsen Beach (top) and Sheepshead Bay (bottom), October 2013
Source: Bottom photo by Elizabeth Graham

Most of the meetings were devoted to facilitated breakout sessions at multiple tables, during which participants were asked for feedback on the Vision Statement, needs and opportunities, key strategies, community assets, and ideas for potential projects. The feedback helped guide the Planning Committee and has been incorporated into this Conceptual Plan, particularly with respect to needs and opportunities, key strategies, and project ideas. The local blog *Brooklyn Daily* published an article on the October 7 Public Engagement Meeting titled “Civic storm plans: Locals help state prepare for next Sandy.”¹⁵

The next public engagement event is scheduled for November 20, 2013. At this meeting, attendees will be given the opportunity to review and comment on the draft Gerritsen Beach and Sheepshead Bay Conceptual Plan.

¹⁵ Brooklyn Daily, “Civic storm plans: Locals help state prepare for next Sandy”, http://www.brooklyndaily.com/stories/2013/bn_stormrecoverymeeting_2013_10_11_bk.html. Accessed October 2013.



The methods to be used for engaging the community and soliciting feedback in advance of the November 20 meeting will include:

1. Translation of approved English language event flyers into Russian, Spanish, Chinese, and Arabic. Translators in these languages will attend the Public Engagement Meetings.
2. Prepare and display posters and flyers in English and translated languages.
3. Distribute five posters to each Planning Committee member for them to post.
4. Electronic distribution of information and flyers to the following:
 - a. Each Planning Committee member for distribution to their mailing lists/posting on their websites/Facebook pages (Events Calendar/Announcements)
 - b. NYRCR website
 - c. Each Planning Committee member's personal formal and informal networks
 - d. Nonprofit and community groups
 - e. Brooklyn Community Board 15
 - f. Community centers (e.g., Vollies Memorial Hall, Kings Bay Y, New York City Housing Authority [NYCHA] Senior Center)
 - g. Public libraries
 - h. Houses of worship
 - i. Civic and local homeowners' associations (e.g., Gerritsen Beach Property Owners, Sheepshead Bay/Plumb Beach Civic Association)
 - j. Fishing charter boat captains
 - k. Yacht clubs
5. Flyer distribution at:
 - a. Train stations
 - b. Supermarkets
 - c. Senior centers
 - d. Food kitchens/pantries (e.g., St. Marks)
 - e. Schools and daycare centers (e.g., Sheepshead Bay High School, J.H.S./I.S. 14, PS 52)
 - f. Developmentally disabled programs/service (e.g., HeartShare)
 - g. Offices of local elected officials



6. Posters to be hung at the following locations:
 - a. Mitchell-Lama building lobbies (e.g., Kings Bay)
 - b. LeFrak buildings
 - c. NYCHA building lobbies (e.g., Nostrand Houses)
 - d. Public libraries
 - e. Community centers (e.g., Vollies Memorial Hall, Kings Bay Y, NYCHA Senior Center)
 - f. Coney Island Hospital/Beth Israel Hospital (entrance and lobby)
 - g. Train stations
 - h. Senior centers/rehabilitation facilities
 - i. Senior living or assisted living facilities
 - j. Memorial site on Emmons Avenue
7. An official media alert to be distributed by NYRCR to the following local papers and news outlets:
 - a. Sheepshead Bites blog
 - b. *The Brooklyn Paper*
 - c. *The Russian Bazaar*
 - d. NYCHA Newsletter
 - e. *Brooklyn Penny Pincher*
 - f. Channel 12 News
 - g. News 1
 - h. Social Media – Facebook and Twitter
 - i. *Our News* – Gerritsen Beach



7 Identification of Needs and Opportunities

In the wake of significant flooding and storm damage from Superstorm Sandy, mitigating the risk of damage from future storms and increasing resilience have become community priorities for Gerritsen Beach and Sheepshead Bay

This section addresses reconstruction and capacity-building needs and opportunities to address resilience and mitigation issues in a comprehensive and effective manner. Information for this section was derived from a review of relevant plans and studies, three Planning Committee meetings in September and October of 2013, and two Public Engagement Meeting events (October 7 and 8, 2013).

This section represents an initial identification of needs and opportunities. The Planning Committee will finalize the identification by March 31, 2014. Needs and opportunities are listed according to the Recovery Support Functions: Community Planning and Capacity Building, Economic Development, Housing, Health and Social Services, Infrastructure, and Natural and Cultural Resources. Needs and opportunities for the Socially Vulnerable Populations support function will be added in the next phase of the study.

7.1 Community Planning and Capacity Building

Needs

- Protection from storm surge and flooding is a key priority and a primary concern of residents.
- Residents identified increasing general preparedness by developing community-based emergency response strategies as a priority.
- The community highlighted the need to improve communication systems.
- Gerritsen Beach and Sheepshead Bay need additional evacuation routes and methods in disasters and emergencies.
- Community relief and gathering centers are needed during and immediately after a disaster event.

Opportunities

- A cell phone notification program for emergency situations could be created. The community could install elevated backup generators on cellular towers in moderate- to high-risk areas.
- The street grid network within the Planning Area is well-connected, but access routes in and out of both Gerritsen Beach and Sheepshead Bay are limited during flood events.



Post-Sandy reconstruction offers an opportunity to improve access into and out of the area during emergency conditions. Opportunities to provide more comprehensive bus transit service north of the Belt Parkway in Sheepshead Bay should be explored.

- The community may wish to elevate Vollies Memorial Training Hall to prevent future damage and centralize emergency supplies and services.
- Emergency generators could be placed in all schools.
- A high-ground parking center could be built for residents.
- Power centers for charging phones, flashlights, and other emergency supplies during a crisis event could be installed.
- A program for community access to boats for evacuations could be designed and established.
- A disaster preparedness awareness program could be implemented.
- The Gerritsen Beach Library was recently reopened after significant renovation. The building could be floodproofed, and one or two stories could be added to serve as a community gathering location.

7.2 Economic Development

Needs

- Gerritsen Beach and Sheepshead Bay offer an attractive mix of commercial and recreational activities that are accessible to major public transportation lines, but the waterfront and local businesses have suffered since Superstorm Sandy. Infrastructure support and construction activities are needed to benefit the economy and rebuild the customer base.
- The resilience of key businesses and institutions in Gerritsen Beach and Sheepshead Bay needs improvement for future hazard events. A focus on continuity of business operations and re-opening after storms is needed.

Opportunities

- Sheepshead Bay could develop a merchant's association to enhance the business climate.
- Gerritsen Beach could develop a plan to support small businesses along Gerritsen Avenue.
- The NYRCR Plan should address opportunities to elevate power and utility infrastructure.
- Continuity plans for key businesses and institutions, such as pharmacies and banks, should be developed.



- The NYRCR Plan could address opportunities for the Metropolitan Transportation Authority (MTA) to provide additional express train and bus service on the weekends.

7.3 Housing

Needs

- Sheepshead Bay and Gerritsen Beach residents identified the need to develop and enforce zoning strategies that are storm resilient but preserve the character of the community.
- Residents also identified the need to provide assistance to seniors and young homeowners to repair and maintain their homes after disaster events.

Opportunities

- Resources and expertise could be secured to develop a grant and loan program that would support residents with elevating homes in high-risk areas.
- A flood insurance assistance program for residents in high-risk areas could be developed.
- A financial assistance program could be designed to help residents move mechanical systems to higher elevations.
- A financial assistance program could be implemented to help residents reduce the flood risk to structures through building retrofits (e.g., flood gates, building elevation, elevation of utilities).
- A program could be created to add or check the valves to the sewer lines for houses and residential units in affected areas.
- A mortgage assistance program and tax abatement program could be developed for seniors and young homeowners to reduce the financial burdens of home ownership during repair.
- A flood insurance assistance program for elderly and young homeowners could be developed and funded.
- Building owners should be encouraged to seek opportunities to increase energy efficiency as homes are rebuilt.

7.4 Health and Social Services

Needs

- Gerritsen Beach and Sheepshead Bay need alternatives for emergency care during disaster and emergency events.



- Additional services and resources are needed for elderly and other vulnerable populations in disaster and emergency events.
- Senior citizen homes and hospitals that serve vulnerable populations need to elevate the mechanical systems in their facilities.

Opportunities

- Mobile pharmacies and mobile medical vans could be activated in disaster and emergency events.
- A roster of seniors and people with mobility impairments could be compiled for evacuation or in-place care.
- The emergency response capacities of the city’s Community Emergency Response Teams (CERT) could be expanded to assist in the evacuation of seniors and people with mobility impairments.
- Emergency response capacity could be further enhanced by creating a new Sheepshead Bay/Plumb Beach CERT team.
- A community emergency plan could be developed that determines how to provide for and distribute food and water to vulnerable populations in disaster and emergency events.
- Senior centers could be used as emergency shelters in disaster and emergency events.
- A plan to elevate mechanical systems at senior facilities, such as Waterford on the Bay, Sheepshead, Sunrise, and Shoreview, could be developed.

7.5 Infrastructure

Needs

- The residents of Gerritsen Beach and Sheepshead Bay seek to mitigate future damage to community assets by enacting flood control and other preventative storm surge measures. Identified needs include:
 - Building and refurbishing dunes
 - Strengthening or constructing bulkheads
 - Constructing flood walls and levees
 - Installing breakwaters or jetties
 - Constructing flood gates
- Determine the feasibility and effectiveness of dredging key area waterways as a means to mitigate flooding during rainfall events.



- A need exists to mitigate future damage to the community by fortifying utilities against storm damage.
- Residents identified the need to prevent damage associated with flooding, especially when caused by backed-up sewers.
- A need exists to improve roadway conditions in both Sheepshead Bay and Gerritsen Beach.
- Stormwater management issues are the result of aging infrastructure, amount of impervious surface, and tidal water entering outfall areas.
- Flooding from the surrounding waterways occurred during Superstorm Sandy because of the lack of bulkheads and saltwater marshes. Bulkheads are in place to support outfall pipes, but they are discontinuous and have variable elevations. Bulkhead replacements and upgrades are needed.
- Water and sewer lines are undersized and incapable of handling current flow volumes.
- Backup power systems on ground floors were rendered inoperable by flooding during Superstorm Sandy.
- Critical facilities, utilities, and infrastructure should be designed to withstand larger peak volumes during storms, and should be elevated to mitigate flooding.
- The Belt Parkway, along the north shore of Jamaica Bay east of Knapp Street, has been threatened by erosion for decades. During Superstorm Sandy, the storm surge flowed over Plumb Beach and increased flooding in Gerritsen Beach.

Opportunities

- The U.S. Army Corps of Engineers (USACE) has an ongoing project to protect Plumb Beach along the Belt Parkway through the construction of stone groins, sand placement, and construction of a breakwater. These measures may help mitigate flooding from storm surge and will reduce risk to the roadway and buried utilities. The NYRCR Plan should evaluate whether additional sand placement or other protective measures are needed to reduce storm surge over Plumb Beach and Sheepshead Bay.
- The NYRCR Plan could advise of opportunities to build and refurbish sand dunes on the inlet by Marine Park.
- There is an opportunity to evaluate the strengthening and expanding of existing bulkheads, and the construction of new bulkheads, in both Sheepshead Bay and Gerritsen Beach.
- Flood walls or flood gates and a levee system could be constructed to prevent water from entering Gerritsen Inlet.



- Breakwaters and jetties could be installed in the region.
- Flood gates under the Belt Parkway could be constructed to protect the community.
- Flood gates could potentially be constructed by the Rockaways and Sandy Hook.
- Tide-flex valves on storm drain outfalls and inflatable rubber dams could be installed on stormwater pipes to prevent stormwater from infiltrating the pipes and flooding interior areas.
- Floodgates at the intersection of the Gotham Avenue Canal and Plumb Beach Channel could reduce interior flooding in Gerritsen Beach.
- A plan could be developed for backup power and telecommunications systems in local government-owned critical facilities. New York City and utility firms should implement a smart grid infrastructure and relocate utilities to enhance the resilience of the power grid.
- New York City should develop a maintenance plan to periodically inspect storm drains/outfalls and bulkheads to ensure they remain fully functional at all times.

7.6 Natural and Cultural Resources

Needs

- Residents identified the need for increased community connectedness in future events by building and restoring key facilities where the public can gather.
- The NYRCR Plan should help promote the cleanup and removal of floating hazards from local waterways.

Opportunities

- The NYRCR Plan could recommend building an elevated community center on Lacon Court.
- A proposal could be enacted to establish new open space and a community center at the old Paradise Yacht Club.
- The community could rebuild the Round House on Plumb Beach, to be used as a center for environmental education.
- A community center could be established along Emmons Avenue to house a new CERT team for use in future storms.
- Additional funding should be allocated for construction of a comfort station at the site of the proposed Marine Park, in the area known as Brigham Park.



- The community may wish to secure funding for the maintenance and upgrade of the Veterans Memorials in Sheepshead Bay and Gerritsen Beach.
- Sand along the banks of Gerritsen Creek could be replenished.
- The salt marsh across from Gerritsen Beach and along the Belt Parkway could be stabilized.
- Plans and enforcement mechanisms should be developed to remove navigation hazards from Gerritsen Creek and other waterways.



8 Key Strategies and Potential Projects to Implement Strategies

The Planning Committee identified key strategies and the projects to implement them for six of the Recovery Support Functions. The Planning Committee and Planning Team will evaluate the proposed projects during the planning process and select projects to implement by March 31, 2014.

Table 3 lists the strategies and the projects proposed to implement them.



Table 3: Strategies and Proposed Projects for Gerritsen Beach and Sheepshead Bay

Recovery Function	Strategy	Proposed Project
Community Planning and Capacity Building	Increase community preparedness by developing community-based emergency response strategies	<ul style="list-style-type: none"> • Raise the Vollies Memorial Hall and add a second floor to prevent future damage and use it for centralized emergency supplies and services • Place emergency generators in all schools • Create a high-ground parking center for local residents in a central location for both communities • Create power centers for charging phones, flashlights, and other devices during an emergency • Install on-site power generation and storage equipment • Develop a program for community-accessible, small boats for evacuation • Expand the disaster-preparedness awareness capacities of the local CERT teams and the Gerritsen Beach Fire Department
	Improve communication systems between local community members	<ul style="list-style-type: none"> • Create a cell phone notification program for emergency situations • Install elevated backup generators (or other green technology measures such as urban windmills and solar panels) to cell towers in moderate- to high-risk areas
	Ensure adequate evacuation routes out of Gerritsen Beach and Sheepshead Bay	<ul style="list-style-type: none"> • Investigate and develop alternate routes out of Gerritsen Beach and methods of evacuation in emergency conditions
	Provide community relief and gathering centers for use during and immediately after a disaster event	<ul style="list-style-type: none"> • Flood proof the public library building and construct a second/third story • Flood proof the Volunteer Fire Department building • Explore possible resiliency upgrades to potential gathering centers



Recovery Function	Strategy	Proposed Project
Infrastructure	<p>Mitigate future damage to community assets by enacting flood control and other preventative storm surge measures, such as:</p> <ul style="list-style-type: none"> • Building and refurbishing dunes • Strengthening or constructing bulkheads • Dredging waterways • Constructing flood walls/levees • Installing breakwaters or jetties • Constructing flood gates 	<ul style="list-style-type: none"> • Build and refurbish sand dunes by Marine Park on the inlet <p>Strengthen, expand or construct bulkheads in several locations, including:</p> <ul style="list-style-type: none"> – Tamaqua Marina – Southern end of Gerritsen Avenue – Everett and Devon Avenues – Hazel Court – Sheepshead Bay bulkheads <ul style="list-style-type: none"> • Dredge specific locations, including Gerritsen Creek, Plumb Beach Creek, Sheepshead Bay, canals, and other surrounding waterways • Construct flood walls/levee system to prevent floodwaters from entering Gerritsen Inlet • Install breakwaters and jetties • Construct flood gates under the Belt Parkway at Gerritsen Inlet to protect communities • Construct a flood gate from the Rockaways, from Sandy Hook • Raise and shore up breached sections of the Belt Parkway • Shore up Plumb Beach with jetties • Install seawalls on Emmons Avenue and change barriers along the waterfront to keep floodwater out of surrounding streets
	<p>Mitigate future damage to the community by fortifying utilities against future storm damage</p>	<ul style="list-style-type: none"> • Encase utilities to protect against water damage in the high- to moderate-risk areas of Gerritsen Beach and Sheepshead Bay • Make other necessary improvements and repairs to sub-surface utility systems, including water, sewage, and gas • Raise utilities in the high- to moderate-risk areas of Gerritsen Beach and Sheepshead Bay • Micro power grid that can withstand storm surge, operate during and after flood conditions, and incorporates energy storage technology and is rechargeable through renewable energy as well as conventional methods • Micro cell-phone tower systems for improving emergency communication



Recovery Function	Strategy	Proposed Project
	Prevent damage associated with flooding caused by backed-up sewers or lack of coverage	<ul style="list-style-type: none"> • Improve the sewer system for both communities, including: <ul style="list-style-type: none"> – Adding cut-off valves to homes – Adding line capacity • Increase the capacity at the wastewater treatment plant to ensure that it can handle increased volume during flooding • Construct flood protection measures at the wastewater treatment facility • Install drain systems for all of the courts in Sheepshead Bay
Infrastructure (cont.)	Improve street conditions to improve access to both communities	<ul style="list-style-type: none"> • Repair potholes along major thoroughfares in Gerritsen Beach and Sheepshead Bay • Raise roadways such as the Belt Parkway • Protect bus service routes, including B44, B4, BM4, and BM3 • Reconstruct and raise streets in Gerritsen Beach, especially in the older section • Raise and repair sidewalk on both sides of Gerritsen Avenue
Housing	Provide home elevation and flood proofing assistance to residents in high-risk areas	<ul style="list-style-type: none"> • Develop a grant/loan program to help residents elevate homes in high-risk areas • Develop a flood insurance assistance program for residents in high-risk areas • Develop a financial assistance program to help residents elevate mechanical systems • Develop a financial assistance program to help residents waterproof structures • Develop a program to add check valves to the sewer lines of every house in affected areas
	Develop and enforce zoning strategies that are storm resilient and preserve the feel of the communities	<ul style="list-style-type: none"> • Enforce current zoning regulations for Sheepshead Bay • Inform individuals and developers by providing them with the technical assistance to comply with revised zoning regulations



Recovery Function	Strategy	Proposed Project
	Provide assistance to seniors and young homeowners to repair and maintain their homes post-natural disaster	<ul style="list-style-type: none"> • Develop a mortgage assistance program for seniors and young homeowners to reduce the financial burden of homeownership while they are making repairs to their homes • Develop a tax abatement program for seniors and young homeowners to reduce the financial burden of homeownership while they are making repairs to their homes • Develop and fund a flood insurance assistance program for elderly and young homeowners
	Encourage business growth in Sheepshead Bay and Gerritsen Beach	<ul style="list-style-type: none"> • Develop a merchant's association for Sheepshead Bay • Develop a plan to support small businesses along Gerritsen Avenue
Economic Development	Improve the resilience of key businesses and institutions in Gerritsen Beach and Sheepshead Bay	<ul style="list-style-type: none"> • Elevate power/utilities for supermarkets (such as Waldbaums/Stop and Shop) • Develop continuity plans for key businesses and institutions such as pharmacies and banks • Floodproofing/retrofit of businesses to reduce risk of interior flooding
	Improve access to the communities to increase tourism on weekends	<ul style="list-style-type: none"> • Work with MTA to provide additional express train/bus service on the weekend
Health and Social Services	Provide additional resources for the elderly and other vulnerable populations	<ul style="list-style-type: none"> • Activate mobile pharmacies • Activate mobile medical vans • Develop a roster of seniors and the mobility impaired for evacuation or in-place care • Activate CERT and Volunteer Fire Department responders to assist in the evaluation of seniors and mobility impaired • Develop an emergency plan to provide food and water to vulnerable populations • Use senior centers for emergency shelters
	Elevate mechanicals in facilities that serve vulnerable populations	<ul style="list-style-type: none"> • Develop a plan to raise mechanical systems at senior facilities, including Waterford on the Bay, Sheepshead, Sunrise, and Shoreview
	Provide alternatives for emergency care in Gerritsen Beach and Sheepshead Bay	



Recovery Function	Strategy	Proposed Project
Natural and Cultural Resources	Increase community connectedness by building and restoring key facilities for public gathering	<ul style="list-style-type: none"> • Build a community center on Lacon Court with self-sustaining power source • Create new open space and a community center at the old Paradise Yacht Club • Rebuild the Round House on Plumb Beach • Build a community center along Emmons Avenue
	Make the connection between the natural landscape and historical context	<ul style="list-style-type: none"> • Expand Marine Park (Brigham Park) and include funding for comfort stations • Secure funding for the maintenance and upgrade of the Veteran’s Memorials in Sheepshead Bay and Gerritsen Beach • Replenish sand on the shell bank along the Gerritsen Creek • Stabilize the salt marsh across from Gerritsen Beach and along the Belt Parkway
	Clean up and remove floating hazards from local waterways	<ul style="list-style-type: none"> • Remove floating/navigation hazards from Gerritsen Creek
Socially Vulnerable Populations	Increase the resilience of socially vulnerable populations before, during, and after storm events and floods	<ul style="list-style-type: none"> • Set up special needs registration so vulnerable people (disabled, low income) can identify themselves and receive needed services during emergencies (e.g., assistance with evacuation and transportation to inland hospitals if on a respirator) • Develop response teams to check on and assist populations on a continuous basis until power is restored • Develop Memorandums of Understanding with food assistance groups (e.g., Meals on Wheels) in advance to arrange for assistance for the elderly, particularly in walk-up buildings, when the power is out



9 Potential Key Projects

The Planning Committee has not finalized the identification of the potential key projects. Finalization is anticipated to occur by March 31, 2014.

The Planning Committee has begun discussions of projects that are underway (in or close to construction phase), ready to go (securing funding or will start soon), and planned (initial scope/plan to pursue in the next 6 months).

After a final determination of key projects, project descriptions will be developed and will include the following information:

- Project sponsor
- Project name and location
- Categorization according to the six Recovery Support Functions
- Brief project description
- Community benefits
- Sustainability factors detailed as part of a regional sustainability plan
- Economic impacts
- Environmental benefits
- Health and social benefits
- Support for project (high, medium, and minimal)
- Estimated project cost
- Potential sources of funding
- Initial feasibility assessment
- Status of implementation
- Implementation timeline: immediate (less than 2 years), intermediate (within 2 to 5 years), long-range (more than 5 years)
- Regional coordination
- Coordination with outside agencies
- Project impact
- Alternatives
- Context map



10 Regional Perspectives

The Planning Committee has found that some issues addressed in the NYRCR Plan transcend political and administrative boundaries and need to be coordinated on a regional basis. Regional coordination is already reflected in many non-Sandy-related efforts for southern Brooklyn, including the New York-Connecticut Sustainable Communities initiative, the Regional Planning Association's Fourth Regional Plan, and New York City-wide policy and planning initiatives such as PlaNYC and Vision 2020.

Coordination with the Southern Brooklyn Peninsula NYRCR Planning Committee on regional flooding issues and holistic infrastructure hardening and mitigation strategies is already underway. Members of the consultant Planning Team working on the Southern Brooklyn Peninsula plan have participated in several Gerritsen Beach and Sheepshead Bay Planning Committee meetings, and helped facilitate discussions with stakeholders during the initial round of public meetings in early October. In addition, members of the Gerritsen Beach and Sheepshead Bay Planning Team have participated in Southern Brooklyn Peninsula committee meetings and public engagement events.

As the planning process continues, the consultant team expects to have substantive conversations with the Southern Brooklyn Peninsula NYRCR Planning Committee and Planning Team on a broader range of issues with ramifications for both planning areas. These issues include: enhanced communications and emergency preparedness and response protocol; shared regional transportation opportunities and constraints; regional approaches to flood risk and storm surge reduction; and economic development challenges common to both areas.

Although both Gerritsen Beach and Sheepshead Bay fall under the general jurisdiction of New York City, each community is affected somewhat differently by ongoing or future citywide and regional planning initiatives.

The Committee's planning efforts will be coordinated, as needed, with a variety of stakeholders including:

- FEMA
- United States Army Corps of Engineers (USACE)
- MTA and MTA New York City Transit
- New York City agencies and departments
- Local economic development organizations and other non-governmental entities.



Some or all of the above entities will be contacted for information about the status of proposed or ongoing regional or citywide capital projects with potential implications for the Gerritsen Beach and Sheepshead Bay NYRCR Plan.

Perhaps more significantly, potential projects and strategies identified through the planning process may require buy-in and active collaboration from the relevant entities on the above list. Given the uniquely complex structure of New York City, the importance of active communication and collaboration cannot be overstated.



11 Process for Evaluating Potential Actions and Projects to Implement Strategies

The Planning Committee has not finalized the process for evaluating potential actions and projects to implement the strategies. The process is anticipated to be finalized by March 31, 2014.

The Planning Committee will prioritize the strategies under consideration during the development of the NYRCR Plan using knowledge gained from the visioning process, information in the Community Asset Inventory, the needs and opportunities assessment, the risk assessment, and agreed-upon metrics such as cost and time frame, which were identified through the outreach process.

Strategies may include bricks-and-mortar projects, policy decisions, political cooperative efforts, or other actions. Actions will be discussed in terms of reconstruction category, community benefits, support for the project, estimated project cost, funding, feasibility assessment, implementation, regional and outside agency coordination, project impacts, and alternatives. The process will also include a cost-benefit analysis for recommended capital projects and a suitable equivalent analysis for non-capital projects.

The result will be a prioritized list of projects, investments, and initiatives that includes detailed project descriptions, a list of potential funding sources, and a ranking for implementation.

Figure 9 shows the three-step process for implementing the strategies.

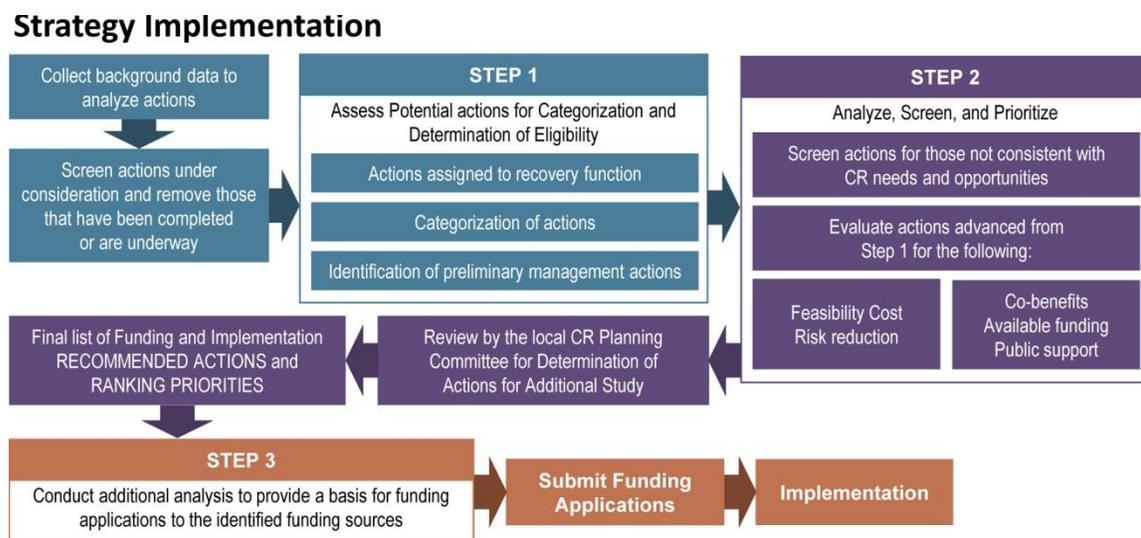


Figure 9: Strategy Implementation



11.1 Consideration of the Implementation Structure to Deliver Local Actions

The New York City neighborhoods designated as NYRCR planning communities face a unique challenge with respect to plan implementation. With limited exceptions, New York City neighborhoods are not empowered units of local government. Neighborhoods may affirm their capital needs and priorities at the Community Board level, but certain projects may only be possible with the active support of the City of New York.

Therefore, coordination with the City is critical to ensure that certain elements of the NYRCR Plan have a realizable path to implementation. It is anticipated that the final NYRCR Plan will complement and build upon the goals and vision articulated by New York City in its many recent comprehensive planning endeavors.



12 Implementation Schedule

The NYRCR Plan will include an implementation schedule that will summarize the strategies and actions and list the target dates for implementation, responsible implementing parties (individuals or organizations), and potential funding sources. Table 4 is a sample schedule. As the Conceptual Plan is developed further, the necessary information will be identified and added.

Table 4: Sample Implementation Schedule

Recovery Function	Strategy	Action	Target Date	Responsible Parties	Potential Funding
Community Planning and Capacity Building					
Economic Development					
Housing					
Health and Social Services					
Infrastructure					
Natural and Cultural Resources					
Socially Vulnerable Populations					



Appendix 1: Plan Review

No.	Reviewed Plan/Study	Date	Relevant Information
1	New York City Natural Hazard Mitigation Plan	2009 ⁽²⁾	<p>This plan contains geographic and demographic information about New York City including profiles of natural hazards (e.g., coastal erosion, coastal storms, drought, earthquakes, extreme temperatures, flooding, windstorms/tornadoes, and winter storms), and actions the City is taking or could take to protect people and property from the effects of those natural hazards. The New York City Office of Emergency Management is currently collaborating with the New York City Department of Community Planning to complete an amended HMP that will be published in 2014.</p> <p>http://www.nyc.gov/html/oem/html/planning_response/planning_hazard_mitigation.shtml</p>
2	Plan New York City [PlaNYC]	2007 ⁽¹⁾⁽²⁾	<p>This plan describes New York City initiatives to incorporate resilience into comprehensive citywide planning initiatives. Although dated, the plan continues to govern municipal agency activities and is used as the basis for new plans and initiatives. New York City continues to prepare annual reports describing progress in reaching plan objectives. The Special Initiative for Rebuilding and Resiliency (SIRR) report, <i>A Stronger, More Resilient New York</i> (described below), neither replaces nor supplants PlaNYC. Rather, it provides a list of projects and recommendations specific to the goal of rebuilding from Sandy and increasing citywide resilience against future storm/flooding events.</p> <p>http://www.nyc.gov/html/planyc2030/html/theplan/the-plan.shtml</p>
3	Plan New York City [PlaNYC: A Stronger, More Resilient New York]	2013	<p>New York City issued this document on June 11, 2013. Mayor Bloomberg created the SIRR to address how to create a more resilient city in the wake of Superstorm Sandy, with a long-term focus on preparing for and protecting against the impacts of climate change.</p> <p>The document includes a discussion of citywide initiatives and the following issues: Sandy impact; climate analysis; citywide infrastructure and the built environment, including coastal protection and buildings; economic recovery (insurance, utilities, liquid fuels, and healthcare); community preparedness and response, including telecommunications, transportation, and parks; environmental protection and remediation, including water and wastewater and other critical networks; rebuilding and resiliency plans for Brooklyn and Queens waterfront, east and south shores of Staten Island, South Queens, Southern Brooklyn and Southern Manhattan; funding; and implementation.</p> <p>Chapter 17 covers Southern Brooklyn (pages 336-364) and addresses Gerritsen Beach and Sheepshead Bay and the four communities in the Southern Brooklyn Peninsula planning area, all of which were severely affected by Superstorm Sandy. The chapter includes a brief history of this portion of Brooklyn and includes discussions on the area's characteristics, a damage assessment, citywide initiatives for increasing resiliency, and most importantly for this NYRCR Plan, a number of project recommendations.</p> <p>http://www.nyc.gov/html/sirr/html/report/report.shtml</p>



No.	Reviewed Plan/Study	Date	Relevant Information
4	Sustainable Communities: Climate Resilience Studies – Urban Waterfront Adaptive Strategies	2011 ⁽²⁾	<p>Urban Waterfront Adaptive Strategies helps guide planners and policymakers in New York City and beyond in identifying and evaluating potential coastal protection strategies. The report identifies a range of potential adaptive strategies, including interventions inland, at the shoreline and in the water and analyzes each for its ability to protect waterfront communities by reducing flooding from storm surge and high tides or absorbing destructive wave forces. This study was funded through a Department of Housing and Urban Development (HUD) Sustainable Communities Regional Planning Grant to the New York-Connecticut Sustainable Communities Consortium. New York City was represented in the consortium by the Department of City Planning, the primary author of this study. Recommendations from this document were incorporated into <i>A Stronger, More Resilient New York</i>.</p> <p>http://www.nyc.gov/html/dcp/html/sustainable_communities/sustain_com7.shtml</p>
5	Sustainable Communities: Climate Resilience Studies – Designing For Flood Risk	2013	<p>This report contains key design principles in flood-resistant construction in urban areas. It provides an overview of regulatory requirements for construction in flood zones under the National Flood Insurance Program and explores the effects of flood-resistant construction standards on built forms and the creation of a vibrant streetscape and public realm. The report also has recommendations for incorporating the principles into zoning to enable more versatile and desirable design solutions for flood-resistant construction. Recommendations from this document were incorporated into <i>A Stronger, More Resilient New York</i>.</p> <p>http://www.nyc.gov/html/dcp/html/sustainable_communities/sustain_com6.shtml</p>
6	Consolidated Plan [New York City HUD Application]	2013	<p>The 2013 Consolidated Plan is the City of New York’s annual application to HUD for the four Office of Community Planning and Development entitlement programs: Community Development Block Grant, HOME Investment Partnership), Emergency Solutions Grant (formerly the Emergency Shelter Grant), and Housing Opportunities for Persons with AIDS. The change in the Emergency Shelter Grant program’s name reflects the change in the program’s federally mandated focus from addressing the needs of homeless people in emergency or transitional shelters to helping families and individuals quickly regain stability in permanent housing after experiencing a housing crisis and/or homelessness. The 2012 Plan represents the fourth year of a 5-year strategy for New York City’s Consolidated Plan years 2010 through 2014. The 5-year strategy was articulated in Volume 2 of the 2010 Consolidated Plan.</p> <p>http://nyc.gov/html/dcp/html/pub/conpln2013_amend.shtml</p>



No.	Reviewed Plan/Study	Date	Relevant Information
7	Vision 2020: New York City Comprehensive Waterfront Plan	2011 ⁽²⁾	<p>Authored by the New York City Department of City Planning, this citywide plan addresses a range of coastal zone development, preservation, and enhancement goals. Plan recommendations relevant to the Planning Area are in the sections describing Brooklyn Reach 15, 3.b for Calvert Vaux Park, and Reach 16 for Coney Island to Sheepshead Bay and Gerritsen Beach. Reaches refer to segments along the shoreline (see page 150).</p> <p>http://www.nyc.gov/html/dcp/html/cwp/cep_2.shtml</p>
8	2013 Community Development Block Grant Disaster Recovery Action Plan and Amendments	2013	<p>This Action Plan details how New York City plans to spend the \$1.7 billion grant from HUD for eligible Superstorm Sandy disaster recovery and rebuilding activities. The Action Plan, including amendments, describes how the City will use the funding to help New Yorkers rebuild their homes, businesses, and communities and addresses housing, business, infrastructure, and resiliency programs. Based on continued outreach and planning, the Action Plan may be amended and will undergo a review and approval process described in the Citizen Participation Plan.</p> <p>http://www.nyc.gov/html/cdbg/html/plan/read.shtml</p>
9	New York City Hurricane Sandy After-Action Report	2013	<p>This after-action report is a high-level summary of recommended improvements to New York City's operations before, during, and immediately following Superstorm Sandy and was developed by the Mayor's Office with input from the many City agencies that responded and continue to participate in the City's recovery from the storm. The report includes discussions on health care, public safety, sheltering, response and recovery, and ongoing activities.</p> <p>http://www.nyc.gov/html/recovery/downloads/pdf/sandy_aar)5.2.13.pdf</p>
	Homecrest (adopted on 2/15/2006)- New York City Department of City Planning	February 2006	<p>The proposed rezoning would preserve the existing neighborhood scale and character with lower density and contextual zoning districts. The proposal preserves residential development options on selected wide streets with existing apartment buildings -- Ocean Avenue and Kings Highway -- and side streets near the subway station.</p>
	Sheepshead Bay (adopted on 2/15/2006)- New York City Department of City Planning	February 2006	<p>The Department of City Planning proposes to rezone portions of eight blocks and amend the Special Sheepshead Bay District in the south Brooklyn neighborhood of Sheepshead Bay/Plumb Beach in Community District 15. The rezoning area is generally bounded by East 27th Street on the east, Emmons Avenue on the south, Shore Parkway on the north and the mid-block east of Ford Street on the east.</p> <p>To protect this predominantly low-rise area from out-of-character development, the existing R5 zoning – which permits new housing of all types, including small multi-family apartment houses – would be changed to zoning districts that limit new residential development to one-and-two family houses. In addition, a zoning text amendment would modify the boundaries of the special district to assure against incompatible development.</p>



No.	Reviewed Plan/Study	Date	Relevant Information
	Department of Transportation Belt Parkway Bridges- New York City Department of Transportation	2013	Gerritsen Inlet Bridge (replacement bridge) Construction contract 2A: duration June 2012–April 2016 Landscaping contract (2016–2018) Nostrand Avenue Bridge, no schedule.
	Shore Parkway Greenway Connector Master Plan (2005)- New York City Department of City Planning	July 2005	The Shore Parkway Greenway Connector Master Plan examines existing conditions, highlights opportunities, and presents recommendations, to guide the implementation of new or improved bicycle facilities on a five-mile route along the missing inland section of one of the City's premier waterfront greenways located in southern Brooklyn.
	Plumb Beach, NY Shoreline Protection Project Continuing Authorities Program- Hudson-Raritan Estuary Comprehensive Restoration Plan, USACE	December 2009	Involves the construction of two permanent stone groins at each end of the beach to help mitigate erosion in the long run. It also involves the construction of a permanent stone breakwater in the water off the severely eroded area parallel to the beach to mitigate future sand loss. Phase I was completed in late 2012 and involved placing approximately 127,000 cubic yards of sand in the severely eroded Plumb Beach area along the Belt Parkway, a busy highway and a critical piece of the city's Infrastructure Systems. The sand was placed just prior to Hurricane Sandy's arrival and helped prevent serious damage to the Belt Parkway. Phase I also involved the installation of a temporary geotube groin structure to help mitigate the loss of Phase I sand until the completion of Phase II. This temporary geotube will be removed in Phase II when the permanent stone groin is constructed in its place.
	Marine Park- Hudson-Raritan Estuary Comprehensive Restoration Plan, USACE	December 2009	Salt Marsh Restoration
	White Island (located within Marine Park) – Hudson-Raritan Estuary Comprehensive Restoration Plan, USACE	December 2009	Coastal Grassland Restoration. The majority of the island (63 acres) is mostly a monoculture of <i>phragmites</i> . 150,000 cubic yards of sand were placed by USACE, at White Island in the Jamaica Bay complex took place as part of the marsh restoration initiative. Restoration is currently underway by New York City DPR.
	Gerritsen Bay Inlet, Dead Horse Bay- Hudson-Raritan Estuary Comprehensive Restoration Plan, USACE	December 2009	Salt Marsh Restoration
	Plumb Beach (Within the GNRA)- Hudson-Raritan Estuary Comprehensive Restoration Plan, USACE	December 2009	Restoration of coastal fringe/dune habitat, potential off-shore reef.



Appendix 2: Community Asset Inventory (In Preparation)

Gerritsen Beach-Community Asset Inventory (*in preparation*)

Asset Types:

- A. Economic B. Health and Social Services
 C. Housing D. Infrastructure
 E. Natural and Cultural Resources F. Socially Vulnerable Populations

Asset Name	Address	Hazard type (flood, surge, erosion etc.) and risk (H/M/L)	Critical Facility (yes/no)	Type of Asset	Community Value (H/M/L)
St. James Evangelical Lutheran	2776 Gerritsen			E	
Gerritsen Beach Library	2808 Gerritsen			E	
PS 277	2529 Gerritsen			B	
Brooklyn Blue Feather Elem. School	2335 Gerritsen			B	
Vollies Memorial Hall	43 Seba Avenue			B	
Engine Company 321	2165 Gerritsen			B	
Gerritsen Beach FD	52 Seba Avenue			B	
Gerritsen Beach Bulkheads				E	
Marine Park	Shore Pkwy., Avenue U, Filmore Avenue. btw. Brigham Street., Gerritsen Avenue., and Flatbush Ave.			E	
Tamaqua Bar and Marina	84 Ebony Street			A	
Fuel - Tamaqua Marina	84 Ebony Street			A	
Brooklyn Yacht Club	3147 Voorhies Avenue			A	



Asset Name	Address	Hazard type (flood, surge, erosion etc.) and risk (H/M/L)	Critical Facility (yes/no)	Type of Asset	Community Value (H/M/L)
Gerritsen Avenue Commercial Corridor				A	
Brenman's Prime Meat Market	2496 Gerritsen Avenue			A	
Derek's Deli	2602 Gerritsen Ave.			A	
Cort Club, Inc.	2648 Gerritsen Ave.			B	
Doreen Greenwood Real Estate and Business Center	2738 Gerritsen Ave.			E	
ACH, Ancient Order Hibernians	2750 Gerritsen Ave.			B	
Marine Pharmacy	2758 Gerritsen Ave.			A	
New Dutch Farms	2876 Gerritsen Ave.			A	
Seba Avenue Skate Park				E	
Little Einstein Day Care	2934-6 Gerritsen Ave.			F	
Venice Marina House Boats	3939 Emmons Avenue			E	
Co-ops				C	
Kiddie Beach				E	
VFW Post 107 and Ladies Auxiliary				B	
Larry Veling Memorial Field				E	
Resurrection Church	2331 Gerritsen Avenue			E	
GB Cares				F	
Floyd Bennett Field				E	
Jamaica Bay Wildlife Refuge				E	
B31 Bus				I	
Gas stations	Knapp Street			A	



Sheepshead Bay-Community Asset Inventory (in preparation)

Asset Types:

- A. Economic B. Health and Social Services
 C. Housing D. Infrastructure
 E. Natural and Cultural Resources F. Socially Vulnerable Populations

Asset Name	Address	Hazard type (flood, surge, erosion etc.) and risk (H/M/L)	Critical Facility (yes/no)	Type of Asset	Community Value (H/M/L)
Kings Highway Library	2115 Ocean Avenue			E	
Kelly Park	Ave S bet E 14 Street and E 15 Street			E	
Cricket Field	East 33rd Street			E	
Marine Park	Shore Pkwy., Avenue U, Filmore Ave. between Brigham St., Gerritsen Avenue, and Flatbush Avenue.			E	
Mellett Playground	Ave V between E 13 St and E 14 Street			E	
61 Precinct	2575 Coney Island Avenue			B	
Coney Island Hospital	2601 Ocean Parkway			B	
Grady Playground	Brighton 3rd Street			E	
Amity Little League Stadium	2213 Brigham Street			E	
Homecrest Playground	Belt Parkway, Williams Court between E 12 Street and Homecrest Avenue			E	
Sheepshead Bay Library	2636 E 14 Street			E	
Galapo Playground	Bedford Avenue and Avenue V			E	
Herman Dolgon Playground	Avenue V, Nostrand, and Batchelder St			E	
Bill Brown Playground	1818 Voorhies Avenue			E	



Asset Name	Address	Hazard type (flood, surge, erosion etc.) and risk (H/M/L)	Critical Facility (yes/no)	Type of Asset	Community Value (H/M/L)
JHS 14 Shell Bank	2424 Batchelder Street			B	
Sheepshead Bay HS	3000 Avenue X			B	
Yak Playground	Batchelder, Avenue X			E	
Sheepshead Playground	Ave Z, Nostrand Ave to E 29 Street			E	
Sanitation Sub-Garage	Knapp Street			D	
Coney Island Wastewater Treatment Plant	3021 Knapp Street			D	
Holocaust Memorial Park	60 W End Avenue			E	
Lundy's Restaurant	1901 Emmons Avenue			E	
Emmons Avenue Seawall	Emmons Avenue			D	
The Waterford on the Bay	2900 Bragg Street			F	
Sheepshead Nursing & Rehab Center	2840 Knapp Street			B	
NYCHA-Nostrand and Sheepshead Bay	2955 Avenue W			F	
Kings Bay Library	3650 Nostrand Avenue			E	
Kings Bay Library	3650 Nostrand Avenue			E	
Homecrest Library	2525 Coney Island Avenue			E	
P.S. 209 Margaret Mead Library	2609 East 7th Street			B	
PS 254 Dag Hammarskjold School	1801 Avenue Y			B	
St. Mark School	2602 E 19th Street			B	



Asset Name	Address	Hazard type (flood, surge, erosion etc.) and risk (H/M/L)	Critical Facility (yes/no)	Type of Asset	Community Value (H/M/L)
St. Marks Church	2609 East 19th Street			E	
Congregation Bnai Israel	Ocean Avenue			E	
Emmanuel Episcopal Church	2646 East 23rd Street			E	
The United Methodist Church	3087 Ocean Avenue			E	
Yeshiva of Kings Bay	2611 Avenue Z			B	
PS 52 Sheepshead Bay	2675 E 29 Street			B	
Special Needs School				F	
Brooklyn Amity School	2727 Coney Island Avenue			B	
Venice Marina House Boats	3939 Emmons Avenue			A	
Harbor View Home for Adults	3900 Shore Parkway			F	
Kings Highway BID				A	
Brooklyn Yacht Club	3147 Voorhies Avenue			A	
UA Theater	3907 Shore Parkway			A	
Parking Garage	3907 Shore Parkway			D	
Plumb Beach	Gateway National Recreation Area			E	
Comfort Inn	3218 Emmons Ave			A	
Bay Family Center	3154 Emmons Avenue			B	
Green Lawn Bungalow Colony	Emmons Avenue and Batchelder			C	
Sheepshead Bay Yacht Club	3076 Emmons Avenue			A	



Asset Name	Address	Hazard type (flood, surge, erosion etc.) and risk (H/M/L)	Critical Facility (yes/no)	Type of Asset	Community Value (H/M/L)
Miramar Yacht Club	3050 Emmons Avenue			A	
Knights of Baron DeKalb	3000 Emmons Avenue			A	
Il Fornetto	2902 Emmons Avenue			A	
Varuna Boat Club	2806 Emmons Avenue			A	
Fishing Charters	Emmons Avenue			A	
Kings Bay Daycare	3495 Nostrand Avenue			F	
Roll-N-Roaster	2901 Emmons Avenue			A	
Catholic Charities Home	3730 Shore Parkway			F	
Best Western Plus Brooklyn Bay	3003 Emmons Avenue			A	
Strana Chudes Day Care Center	2791 Ford Street			F	
Bungalow Colonies	South of Belt Parkway			C	
IS 98 Bay Academy	1401 Emmons Avenue			B	
Loehmann's Plaza	2807 East 21st Street			A	
Sheepshead Bay Footbridge	Between Emmons Avenue and Shore Boulevard			E	
New Brigham Park	Corner of Brigham Street and Emmons Avenue			E	
Ocean Parkway Greenway	Ocean Parkway			E	
Three Hierarchs Greek Orthodox Church	1724 Avenue P			E	



Asset Name	Address	Hazard type (flood, surge, erosion etc.) and risk (H/M/L)	Critical Facility (yes/no)	Type of Asset	Community Value (H/M/L)
Floyd Bennett Field	Gateway National Recreation Area			E	
Jamaica Bay Wildlife Refuge	Gateway National Recreation Area			E	
Engine Co. 246, Ladder 169	2732 E 11 Street			B	
Engine Co. 254, Ladder 153	901 Avenue U			B	
Engine Co. 276, Ladder 156, BN 33	1635 E 14 Street			B	
Sheepshead Bay				E	
Commercial Corridor	Kings Highway			A	
Commercial Corridor	Emmons Avenue			A	
Commercial Corridor	Nostrand Avenue			A	
Commercial Corridor	Avenue U			A	
Designated Scenic Landmark	Ocean Parkway			E	
Gas Stations	Knapp Street			A	
B44 and B3 buses	East 33rd Street			I	

