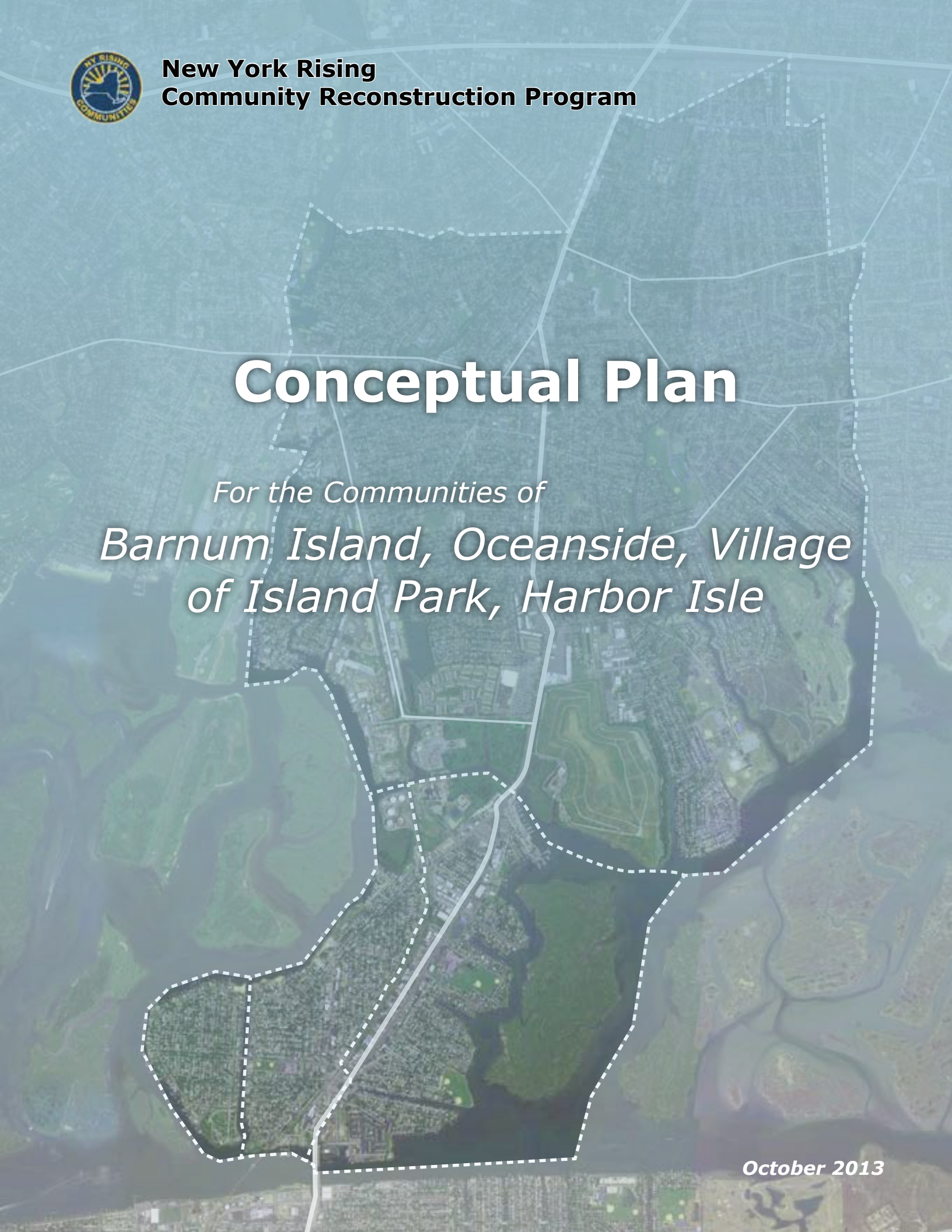
New York Rising
Community Reconstruction Program

Conceptual Plan

For the Communities of

Barnum Island, Oceanside, Village of Island Park, Harbor Isle



October 2013

This document was developed by the Barnum Island, Oceanside, Village of Island Park, and Harbor Isle 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, Sustainable Long Island, the LiRo Group 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.

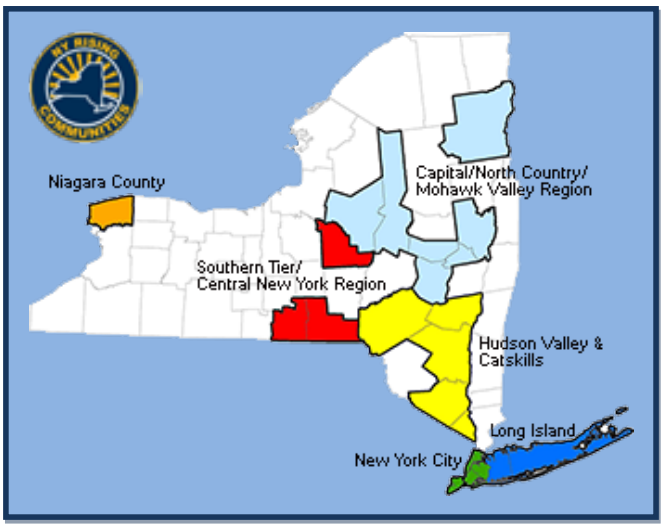
In the months ahead, communities will develop ways to implement additional strategies for economic revitalization, human services, housing, infrastructure, natural and cultural resources, and the community's capacity to implement changes.

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



Find out more at: StormRecovery.ny.gov/Community-Reconstruction-Program

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Planning Context

The New York Rising Community Reconstruction (NYRCR) Planning Area comprises the South Shore Long Island communities of Barnum Island, Oceanside, Village of Island Park and Harbor Isle. Island Park is an incorporated village, and the three adjacent communities are unincorporated hamlets located in the southern portion of the Town of Hempstead, in Nassau County.

Superstorm Sandy

Superstorm Sandy struck New York State on October 29, 2012, bringing a storm surge of 9 to 12 feet above normal tide levels.[1] As a result of the storm, there were 53 direct storm-related fatalities[2], an estimated 305,000 homes destroyed in New York State[3], and 14 counties declared as Federal disaster areas[4]. State-wide economic losses incurred by Superstorm Sandy are estimated between $30 billion and $50 billion, with an estimated $10 billion to $20 billion in insured losses (buildings, infrastructure, etc.).[5]

The Barnum Island, Oceanside, Village of Island Park, and Harbor Isle NYRCR Planning Area was severely damage by Sandy. Nearly all of Barnum Island, Island Park and Harbor Isle and approximately two-thirds of Oceanside were flooded (Figure 1). All of the communities in the NYRCR Planning Area except Oceanside suffered flood damage to more than 50 percent of their housing stock (see Table 1).

1. Tropical Cyclone Report Hurricane Sandy (AL182012) 22-29 (October 2012)
2. CDC (2013)
3. Tropical Cyclone Report Hurricane Sandy (AL182012) 22-29 (October 2012)
4. NYS HUD CDBG (2013)
5. EQECAT 2012

Floodwaters submerged many NYRCR Planning Area businesses. Structures housing restaurants along Reynolds Channel were destroyed and marinas suffered heavy damage. Further inland in Island Park, the downtown and the Long Beach Road and Austin Boulevard commercial corridors suffered heavy damage. In Oceanside, businesses located on Lawson Boulevard and Long Beach Road were flooded.

NYRCR Planning Area streets were flooded as tidal surges pushed waters into and overflowed creeks, stormwater catch basins and manholes. Throughout the event, water continued to rise, cresting curbs and entering homes and businesses. Some structures had four to six feet of water above the first floor and completely flooded basements. Some homes and business remain shuttered.

In addition to flooded homes and businesses, the NYRCR Planning Area experienced a major breakdown of critical infrastructure. In Island Park, roughly 600 homes were without power and another 7,500 lost power in Oceanside. It took more than

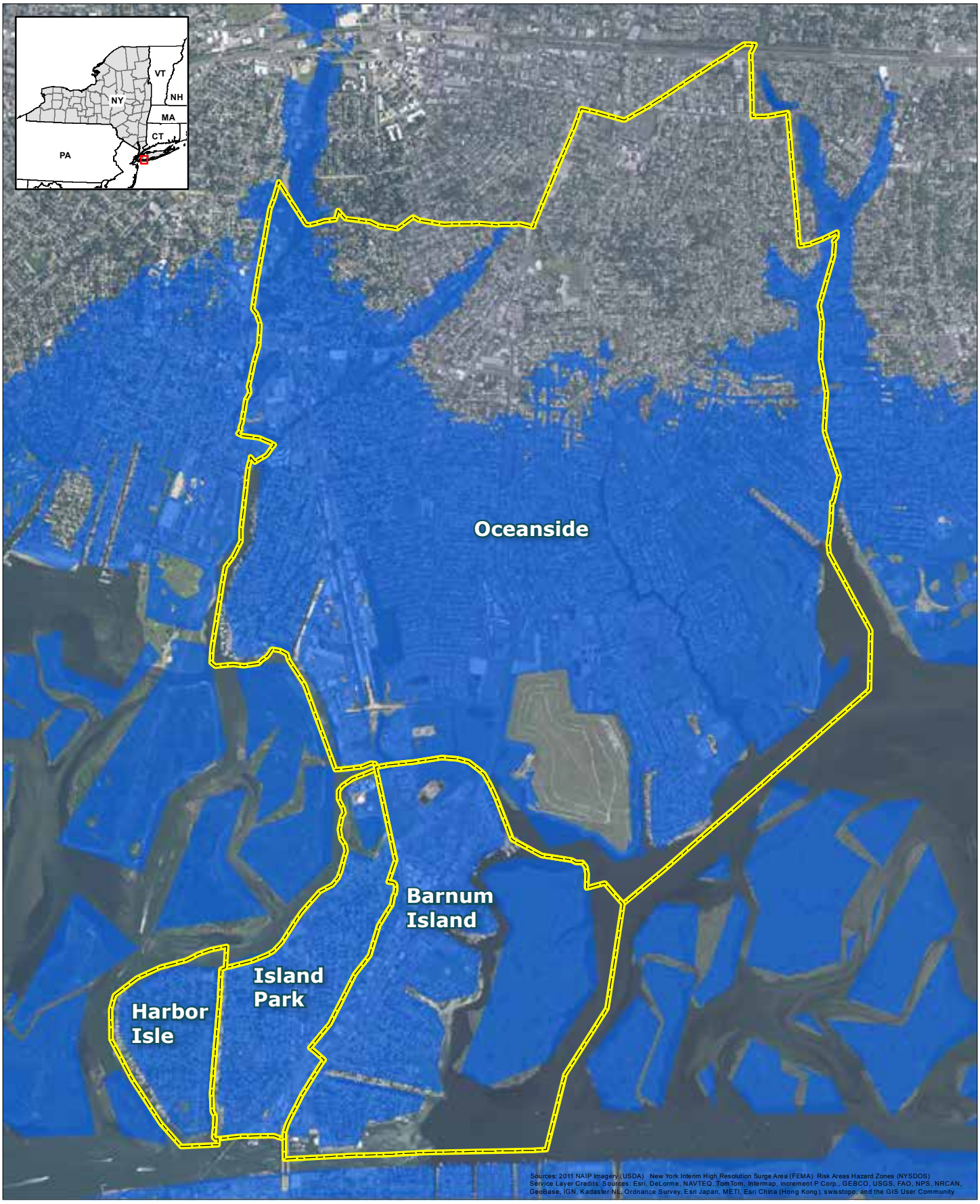
Table 1: FEMA-Reported Housing Units Damaged by Superstorm Sandy

Community	# Housing units damaged (wind and flood)	# Housing units suffering flood damage	# Housing units heavily damaged (more than 50 percent)	# of units with <4 feet of water	Total housing units in community
Barnum Island	937*	922	937*	160	923
Harbor Isle	436	431	436	44	468
Island Park	1,614	1,609	1,614	405	1,690
Oceanside	5,297	5,206	4,428	619	11,329

Source: FEMA Fact Packs; FEMA IA data compiled by US HUD

* This number did not come from FEMA Fact Packs. It was directly reported by US HUD.

Although the data in Table 1 was reported by the Federal Emergency Management Agency (FEMA), local information is more reflective of actual damages done to area housing stock. This revised data is being collected and will be included in the final NYRCR Plan.



Legend

- Community Reconstruction Area
- New York Interim High Resolution Surge Area (Sandy 2012)

Figure 1: Storm Surge Extent

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Miles
1 inch = 0.5 miles

two weeks to fully restore electrical service to the NYRCR Planning Area. Power shortages were further complicated by failed communications systems. The Bay Park Wastewater Treatment Plant that serves the Planning Area failed. The surge from Superstorm Sandy caused the Bay Park Plant to go off-line for fifty-six hours. Even though Nassau County quickly mobilized a team to begin damage assessment and restoration of wastewater treatment, about 200 million gallons of raw sewage flowed into channels and waterways.

Austin Boulevard, Long Beach Road and Lawson Boulevard were impassable as were many other major streets in Island Park and southern Oceanside. These closures blocked evacuation routes for the NYRCR Planning Area and Long Beach, blocking escape and complicating emergency response.

Firehouses and emergency service facilities were heavily damaged during the storm. The Oceanside Fire Department Hose Company No. 1 and Southside Hose Company No. 2 were flooded, damaging six fire trucks. The Island Park Fire Department lost its entire first level, destroying its common room, department offices, a fire truck, an ambulance and two chiefs' cars. Island Park Village Hall was destroyed and awaits reconstruction. Long Beach Hospital was also heavily damaged and remains closed. While not located in the NYRCR Planning Area, it is the nearest hospital for many residents and the community relies on it.

Francis Hegarty Elementary School in Island Park had roughly four to six feet of water in its hallways, forcing the district to consolidate all of its classes in the middle school until repairs were completed in spring 2013. In Oceanside, Schools 4, 8 and 9 were damaged. Classes for School 8 were moved to School 6 for several weeks while repairs were made. In the October 9th Public Engagement Meeting, parents described the school relocations as detrimental to the health and welfare of the youth. Additionally many children suffered academic consequences from being out of school and/or falling behind in the curriculum, they also suffered emotional traumas: children lost connections to friends and family, and relationships with teachers were lost. NYRCR Planning Area schools responded well, providing counseling and social services for displaced youths.

Storm Drains Over Capacity, Waterview Road, Barnum Island

History and Demographic Profile

The tables in this section summarize key demographic data for each of the NYRCR Planning Area communities and for Nassau County.

Table 2: Community Demographics

Demographics	Barnum Island		Oceanside		Island Park		Harbor Isle	
	Total	Percentage	Total	Percentage	Total	Percentage	Total	Percentage
Population	2,020		31,078		4,635		1,224	
Race/Ethnicity								
White	1,914	94.8%	29,178	93.9%	3,479	75.1%	1,178	96.2%
African American	22	1.1%	190	0.6%	54	1.2%	4	0.3%
American Indian/ Alaskan Native	2	0.1%	0	0.0%	117	2.5%	0	0.0%
Asian	61	3.0%	719	2.3%	125	2.7%	20	1.6%
Hawaiian- Pacific Islander	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Other	11	0.5%	761	2.4%	655	14.1%	3	0.2%
Two or More	22	1.1%	230	0.7%	204	4.4%	18	1.5%
Hispanic of Any Race	73	3.6%	2,144	6.9%	1,215	26.2%	73	6.0%
Median Age	47		42.9		43.1		47	
Income								
Median Household Income	$86,483.00		$101,529.00		$74,005.00		$136,625.00	
Percent of Families with Median Income Below the Poverty Level	4.74%		1.90%		5.20%		5.32%	
Housing Information								
Households	843		10,954		1,487		470	
Owner Occupied Housing Units	728	86.4%	9,685	88.4%	974	65.5%	451	96.0%
Renter Occupied Housing Units	115	13.6%	1,269	11.6%	513	34.5%	19	4.0%
Average Household Size	2.4		2.84		3		3	
Median Home Value	$546,850		$476,900		$461,500		$489,400	

Source: US Census Bureau, 2007-2011

Table 3: Nassau County Demographics

Demographics	Nassau County	
	Total	Percentage
Population	1,329,083	
Race/Ethnicity		
White	983,730	74.0%
African American	144,473	10.9%
American Indian/ Alaskan Native	1,861	0.1%
Asian	99,017	7.5%
Hawaiian- Pacific Islander	35	0.0%
Other	77,601	5.8%
Two or More	22,366	
Hispanic of Any Race	182,003	13.7%
Median Age	40.7	
Income		
Median Household Income	$121,567	
Percent of Families with Median Income Below the Poverty Level	3.40%	
Housing Information		
Households	442,833	
Owner Occupied Housing Units	363,366	82.1%
Renter Occupied Housing Units	79,467	17.9%
Average Household Size	3.0	
Median Home Value	487,900	

Source: US Census Bureau, 2007-2011

Barnum Island: According to the 2010 Census, 2,020 people reside in Barnum Island. The hamlet has its own fire district and contracts with the Village of Island Park Fire Department for emergency services. Barnum Island is included in the Island Park School District and ZIP code, though most of Barnum Island is separated from the Village of Island Park by the Long Island Rail Road (LIRR). Present day Barnum Island was part of "Hog Island," used by the Native Americans to raise pigs. It later became a small farming area. The island is named for clothier Peter C. Barnum and his wife Sarah Ann Baldwin Barnum, who owned large parcels of land in the area in the 1800s.

Oceanside: Of the four communities, Oceanside has the largest population with 31,078 residents, according to the 2010 U.S. Census. Oceanside is densely developed with residential neighborhoods and commercial corridors that serve area residents and the broader South Shore Region. An industrial area located on the Hog Island Channel takes advantage of deep water access provided by the Channel.

Originally known as South Bay, the area now known as Oceanside was established by the English government in 1674. Oyster fishing drove the local economy, and Mott's Landing was a favorite place to buy oysters. The name was changed to "Oceanville" in 1864 to reflect its water-based economy and to "Oceanside" in 1918. The end of World War II ushered in rapid growth. The 1945 population of approximately 10,000 residents doubled by 1950. Demand was so great that houses were built on garden plots, in back yards and other untraditional places. Eventually, changing building codes and new fill techniques made it profitable to build on the marshes, and marshes were filled to accommodate new development. [6]

6. http://www.1960sailors.net/09b_our_town_history.htm

Island Park: The Village of Island Park (Village) has a population of 4,635 according to the 2010 Census. The Village has its own elected government. The Island Park School District serves the children of Island Park, Barnum Island and Harbor Isle from kindergarten to eighth grade. High school students have the option of attending school in the Town of Hempstead or in the neighboring City of Long Beach.

From 1600s to the 1800s Island Park was a part of Hog Island and used for farming. In 1870, the Long Island Railroad laid a single track through Island Park to Long Beach and ran trains during the summer months. In 1921, the area was purchased by Island Park-Long Beach Corporation and renamed Island Park for the development of a resort center. The Island Park-Long Beach Corporation dredged the Island Park Canal and Island Park Bay and filled the low-lying marshlands.

During the 1920s, the southern area of Island Park experienced a major building boom and incorporated as a Village in 1926 with 1,000 residents. The local economy was driven by its waterfront location and recreational assets, including beaches, boating, fishing, and other water activities. Over time, the summer vacation homes turned into year-round residential properties. As the population center shifted from north to south, the railroad station was relocated from the northern end of Island Park to its present site.[7]

Harbor Isle: The 2010 Census counted 1,224 residents in Harbor Isle. Nearly all of the housing units in Harbor Isle are single-family homes, and 96 percent of all homes are owner occupied. The former Cibro Petroleum Terminal has been proposed for redevelopment as a 172-unit housing development with a mix of apartments and condominiums. At the time this Conceptual Plan was written, few details of Harbor Isle history (separate from those of the Village and Barnum Island) were available. This will be researched further for the full NYRCR Plan.

7. http://villageofislandpark.com/history.htm

Conceptual Plan Contents

This document is the NYRCR Conceptual Plan – an early outline for developing the full NYRCR Plan. This document is a framework for the full plan and will be used as a guide for more in-depth investigation of assets, needs, opportunities, risk, and potential future projects. The strategies and concepts presented in this plan are initial concepts that are expected to evolve throughout the planning process. Components of the Conceptual Plan include:

- The geographic scope of the plan
- The community vision as approved by the Committee
- A summary of existing plans and studies
- Identification and understanding of risk
- Identification of needs and opportunities
- Key strategies identified by the NYRCR Planning Committee
- Regional coordination needs
- A description of how the public has been engaged in development of the Conceptual Plan

NYRCR Planning Committee

To provide local knowledge and guidance in each NYRCR Plan, each NY Rising Community has a NYRCR Planning Committee that includes local residents, and leaders of community organizations and businesses in the community. The NYRCR Planning Committee led the development of the Conceptual Plan and will take the lead in developing the NYRCR Plan.

The Barnum Island, Oceanside, Village of Island Park and Harbor Isle NYRCR Planning Committee is led by three Chairs and is partnering with planning experts from the Department of State, New York State

Homes and Community Renewal, and the Consultant Planning Team. The NYRCR Planning Committee includes the following individuals:

- Tommy Asher, Co-Chair
- Anthony D'Esposito, Co-Chair
- Ray Pagano, Co-Chair
- Ellen Cutler Igoe, Oceanside
- Dan Ramos, Oceanside
- Ed Scharfberg, Oceanside
- Felicia Nicholas, Island Park
- Terry Reichel, Island Park
- Frank Bettineschi, Barnum Island
- Nina Hargrove, Barnum Island
- Chris Horvath, Harbor Isle
- Michael Scully, Harbor Isle

Next Steps

The planning process will include three more Public Engagement Meetings and several more meetings of the NYRCR Planning Committee. The next Public Engagement Meeting is scheduled for Wednesday, November 6, 2013, at 7:00 PM. On November 6, the public will review this Conceptual Plan, determine if the key strategies and potential projects and actions are consistent with community sentiment, suggest additional projects and actions, and provide additional information about damages and vulnerabilities.

The planning process defined by the NYRCR Program consists of seven steps:

Step 1: Organize for Action has been completed with the establishment of the NYRCR Planning Committee.

Step 2: Inventory Assets is well underway, as illustrated in Figures 4-8.

First Barnum Island, Oceanside, Village of Island Park, and Harbor Isle NYRCR Planning Committee meeting, September 12, 2013

Step 3: Assess Risk will occur as described in the Identifying and Understanding Risk Section of this document as GIS data about the exact location of assets relative to the shoreline, presence of shore defenses, and of protective vegetation are further developed to assign a hazard, exposure, and vulnerability score and calculate a risk score.

Step 4: Determine Needs and Opportunities is well underway as illustrated in the Identification of Needs and Opportunities Section of this document.

Step 5: Engage in Regional Planning Process to examine challenges that cut across political jurisdictions.

Step 6: Develop Strategies for Investment and Action began with the work of the NYRCR Planning Committee during September and October 2013 and will continue as the plan is developed. The Key Strategies, Actions, Potential Projects, and Innovations to Implement Strategies Section of this document summarizes the key strategies and suggested projects and actions that may be effective in realizing the strategies. The list of alternative projects and actions will expand as the process continues and project and actions that are most appropriate for increasing resiliency will be identified through quantitative and qualitative analyses. Throughout this process the NYRCR Planning Committee will continue to identify potential projects.

Step 7: Complete the NYRCR Plan will be accomplished by March 31, 2014. The NYRCR Plan will propose projects and actions that the communities of Barnum Island, Oceanside, Village of Island Park, and Harbor Isle have determined will most effectively enhance resilience.

Geographic Scope

The NYRCR Planning Committee adopted a Planning Area for the NYRCR Plan at its September 12, 2013 Kick-off Meeting. The NYRCR Planning Area encompasses the census-designated place boundaries of Barnum Island, Oceanside, Village of Island Park and Harbor Isle (Figure 2). The Committee's determination was based on tidal inundation and stormwater flooding and damage that occurred during Superstorm Sandy and a review of the Planning Context.

Oceanside Park Looking Towards Middle Bay

Legend

Community Reconstruction Area

Figure 2: NYRCR Project Area

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Miles
1 inch = 0.5 miles

Community Visioning

Discussion of a community Vision Statement began during the September 26, 2013 NYRCR Planning Committee Meeting. Key words for a vision statement were captured from the Committee with the intent of developing a statement that accurately portrayed a cohesive vision for the NYRCR Planning Area that also recognizes uniqueness of each of the four Planning Area communities. The word cloud shown in Figure 3 was developed to illustrate the NYRCR Planning Committee's most commonly used words.

Figure 3: Community Visioning Word Cloud

The words were then used to create three draft vision statements, which were presented for public input at the Public Engagement Meeting on October 9, 2013. The public was given the option to support one of the three statements or add information, words, phrases or ideas to the sample vision statements presented below:

- **Draft vision statement #1:** *"A vibrant, coastal community comprised of unique and diverse neighborhoods where residents, businesses, and visitors alike can flourish in a safe atmosphere of economic and environmental sustainability, and enjoy opportunities for recreation and natural beauty."*
- **Draft vision statement #2:** *"Vibrant, diverse and tight-knit communities that follow their own unique path to foster a safe environment and resilient infrastructure so that each community can thrive, and bounce back better in the face of adversity."*
- **Draft vision statement #3:** *"Create a physically safe and protected environment that sustains our friendly, diverse and economically vibrant coastal communities and enables our residents and businesses to flourish and our natural beauty to shine through."*

The NYRCR Planning Committee considered these three statements along with information gleaned from the Public Engagement Meeting. The Committee developed a final vision statement, shown below, that incorporates the priorities of the community and reflects public sentiment.

Final Vision

"Enhance the quality of life and chart a course towards the future by creating solutions to rebuild and revitalize two communities that are enriched by the diversity of their residents. Facilitate positive, innovative change that will provide an environment that is SAFE and an infrastructure that is RESILIENT, so that each community can thrive, sustain itself in the face of adversity and preserve its uniqueness and charm."

Summary of Existing Plans and Studies

The Planning Team reviewed existing plans and programs to identify the communities' previously determined goals and ongoing or proposed projects. The review identified few existing planning mechanisms for the NYRCR Planning Area. While many plans directly or indirectly address the South Shore region of Long Island and Nassau County, few apply to the communities of the NYRCR Planning Area. Regional plans include both pre- and post-Superstorm Sandy documents and contain some ideas and directions that may be useful for the NYRCR Planning Area but are generally not directly applicable. The Planning Team also reviewed plans applying to neighboring areas such as Long Beach because the overarching policies may affect this NYRCR Plan's communities. The results of the review are shown in Table 4 below.

The Nassau County and Long Island planning documents contain few specific references to the NYRCR Planning Area, which is not surprising given their broad geographic scope. The NYRCR Plan will create the first comprehensive planning document that specifically addresses the issues and needs of the communities of Barnum Island, Oceanside, Village of Island Park and Harbor Isle. The Plan will put them in the context of Nassau County and broader region to create linkages between local and regional projects and leverage partnership opportunities.

Table 4: Plan Review Results for Barnum Island, Oceanside, Village of Island Park and Harbor Isle, NY

Planning Document	Relevant Information
Village of Island Park, Preliminary Damage Assessment, Resulting from Superstorm Sandy, 2013	Describes the damage from storm surge and major flooding that inundated the entire Village for extended periods. Documents the extent of the damage, lists the probable cause for each instance of damage, and recommends appropriate repairs and solutions in the categories of structural/bulkhead damage, pavement damage, street lighting damage and beach erosion.
Village of Island Park – Infrastructure Projects	Describes several infrastructure projects that the Village had begun planning before Superstorm Sandy: County-funded installation of 51 catch basin inserts, six swirl separators, and one trailer-mounted catch basin insert. Other projects include a pump station at Sagamore Road outfall, beach nourishment and bulkhead replacement at Little Beach, clogged sewer and drainage ditch maintenance issues at Quebec Road and Nassau Lane, road and parking resurfacing, renovation of Village Hall, firehouse structural fixes and LIRR drainage improvements. After Superstorm Sandy's extensive damage, a Letter of Intent was submitted for projects to be funded under FEMA's Hazard Mitigation Grant Program: (1) generator installation at DPW building, (2) bulkhead replacement at Little Beach, (3) bulkhead replacement at Redford Road, Norfolk Road and Rizkin Place, and (4) demolition and construction of Village Hall.

Planning Document	Relevant Information
Nassau County Master Plan Update, 2010	Summarizes ongoing planning initiatives in the entire County. Notes the absence of community-level land use or master plans for Oceanside, Barnum Island, Harbor Isle and Island Park. Notes that the Village of Island Park has a zoning map and local building administrator who issues permits for construction.
Nassau County Hazard Mitigation Plan, 2007	Provides historical data on hazard impacts to the communities; supplies risk assessment information (critical facilities located in flood-prone areas, coastal erosion projections, etc.); identifies hazard mitigation opportunities through capital improvements. Mentions Barnum Island, Harbor Isle, Island Park and Oceanside in the vulnerability assessment but does not identify specific mitigation actions for the communities.
Nassau County Stormwater Management Plan	Contains an inventory of stormwater facilities in the County and mentions County-level capabilities such as the Multi-Year Capital Spending Plan whereby drainage improvement projects are proposed, authorized and constructed.
Coastal Protection Study Long Beach – Oceanside Shore Protection Plan and Bayside Flood Protection Plan, 2009	Provides planning guidance for bayside flood protection in Long Beach. The information is relevant, as that area can affect communities on the other side of the bay.
A New Vision For Long Island's Economy- The Strategic Economic Development Plan For Nassau & Suffolk Counties, 2011	Provides an overview of Long Island's economic development history and plans for the future. Mentions infrastructure and stormwater management issues as deterrents to economic growth, especially for Nassau County.
Long Island 2035: Securing a Sustainable Future	Provides a series of policies and strategies to help communities prepare for the changing economic, social and environmental context. Recommendations include developing a climate change resilience plan that addresses sea level rise, and coordinating emergency preparedness across jurisdictions.

Planning Document	Relevant Information
Long Island South Shore Estuary Reserve: Comprehensive Management Plan	The vision of the plan is to preserve, protect, and restore the ecosystem of the Long Island South Shore Estuary Reserve. Specific goals include reduce both nonpoint and point source pollution, improve the estuarine health of the bay, restore and protect coastal habitats, and increase open space preservation.
South Shore Blueway Trail Draft Plan	Nassau County, the Village of Freeport, Town of Hempstead and Town of Oyster Bay are planning a water trail encompassing the western bays of the South Shore Estuary Reserve stretching 18 miles from the western border of the Town of Hempstead to the Nassau/ Suffolk county line. The South Shore Blueway Plan is the result of a community-wide trail planning process that establishes 22 access points, identifies gaps and provides site concept designs for seven new sites needed to complete the trail. The proposed South Shore Blueway Trail will provide residents and visitors the opportunity to enjoy the scenic views, wildlife, cultural history and great new recreational opportunities. This eco-tourism water trail concept will provide the tools to support conservation of precious habitat while providing new options for active recreation.

Identification of Assets

When community services and functions were lost during Sandy and Irene, residents began to identify the components of their communities that are most important to protect for the future. The NYRCR Planning Committee sees value in every single aspect of Barnum Island, Oceanside, Village of Island Park and Harbor Isle and is working to identify the components that are most important to maintain.

The NYRCR Planning Committee has spent considerable time identifying assets, and it was an important element of the October 9, 2013 Public Engagement Meeting; however, the NYRCR Planning Committee is still working to develop a complete inventory of the assets to be considered in the NYRCR Plan. Further development of this element will take place between now and November 30, 2013. The information and maps on the following pages summarize the inventory process to date.

Under the NYRCR planning process, five asset classes will be addressed:

- **Economic:** Office buildings, business and industrial parks, manufacturing, warehouses, storage facilities, grocery stores, restaurants, banks, lodging, storefronts, downtown centers, and seasonal/tourism destinations. These assets are shown in Figure 4.
- **Health and Social Services / Socially Vulnerable Populations:** Schools, healthcare, day care, elder care, emergency operations, government and administrative services, media and communications, police, fire and rescue; with a special focus on assets predominantly providing services for people with disabilities, low-income populations, the elderly, young children, the homeless, and people at risk of becoming homeless. These assets are shown in Figure 5.

Oceanside Marine Nature Study Area

Legend

- Community Reconstruction Area
- Economic Corridor
- Commercial / Office
- Industrial / Manufacturing
- Public Services
- Marina

Figure 4: Economic Assets

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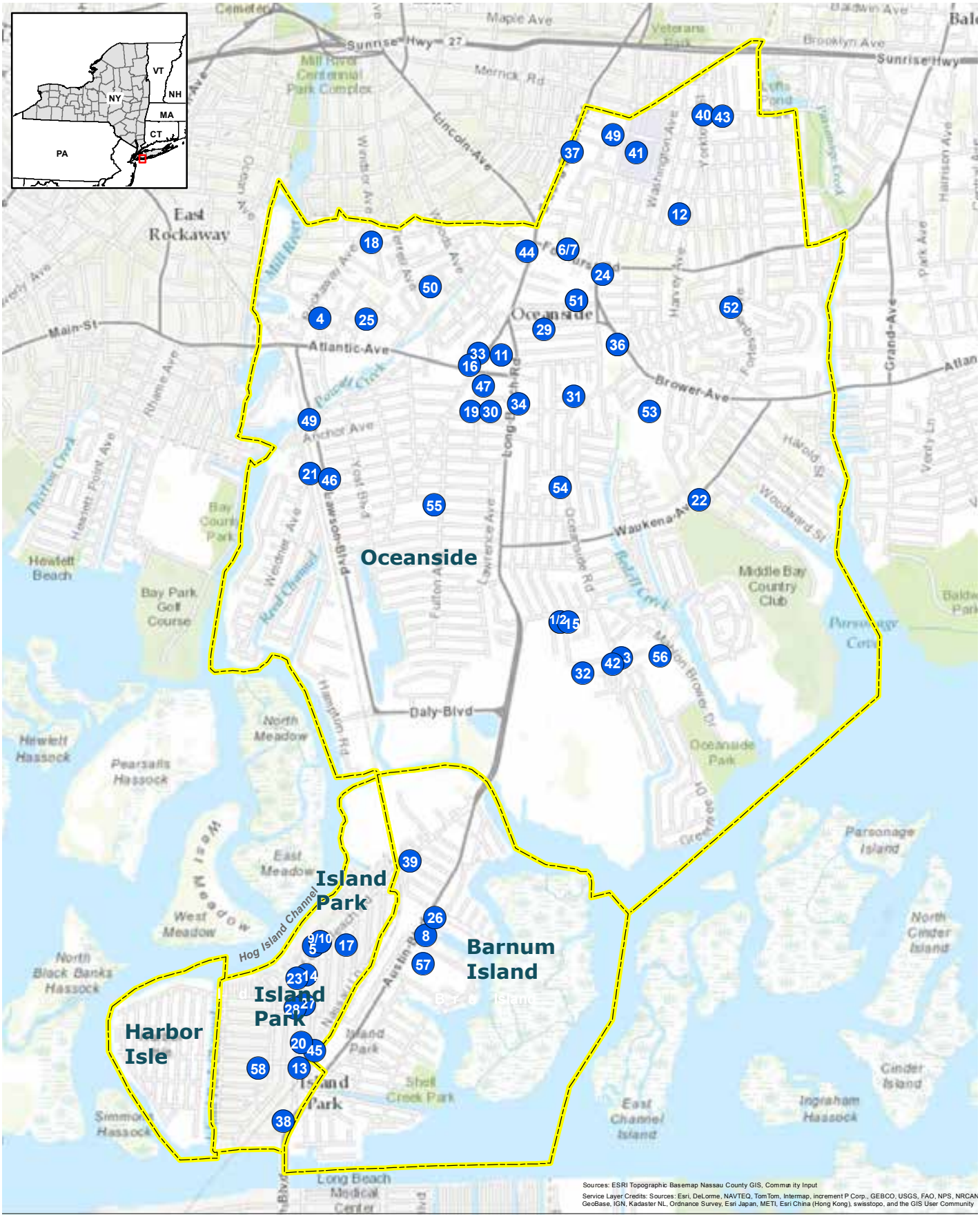
Miles
1 inch = 0.5 miles

- Specific Health and Social Services Assets located in Figure 5 include:

Table 5: Health and Social Services Assets

Name		Type
1	Oceanside Fd Exempts Hall	Emergency Services
2	Oceanside Fd Maintenance Bldg	Emergency Services
3	Oceanside Fd Hose 2	Emergency Services
4	Oceanside Fd Hose 1	Emergency Services
5	Island Park Fd Exempts Hall	Emergency Services
6	Oceanside Fd Headquarters	Emergency Services
7	Oceanside Fd Headquarters	Emergency Services
8	Barnum Island Fire District	Emergency Services
9	Island Park Fd Headquarters	Emergency Services
10	Island Park Fd Headquarters	Emergency Services
11	Oceanside Fd Engine 1	Emergency Services
12	Oceanside Fd Hose 3	Emergency Services
13	Island Park Village Hall	Government
14	U S Post Office Island Park	Government
15	TOH Sanitation District 7	Government
16	U S Post Office Oceanside	Government
17	Island Park Greek Orthodox Church	House of Worship
18	Windsor Avenue Bible Church	House of Worship
19	St Anthonys Church	House of Worship
20	Island Park Jewish Center	House of Worship
21	Arca de Salvacion	House of Worship
22	Congregation Shaarhashamyim	House of Worship
23	Island Park United Methodist Church	House of Worship
24	First Presbyterian Church	House of Worship
25	First Methodist Church	House of Worship
26	Full Gospel Church	House of Worship
27	Sacred Heart Parish Center	House of Worship
28	Sacred Heart Church	House of Worship
29	Oceanside Lutheran Church	House of Worship
30	St Andrews Episcopal Church	House of Worship
31	Temple Avodah	House of Worship

Name		Type
32	JCC	Human Services
33	Oceanside Care Center Inc.	Human Services
34	Sons Of Italy	Human Services
35	Oceanside Community Center	Human Services
36	Oceanside Jewish Center	Human Services
37	Bishop Kellenberg Senior Cit	Human Services
38	Bayview Nursing Home	Human Services
39	Abbey Island Pk Manor Nrsg Home	Human Services
40	South Nassau Hospital Annex	Medical Facilities
41	South Nassau Communities Hospital	Medical Facilities
42	South Nassau Dialysis Center	Medical Facilities
43	South Nassau Hospital Annex	Medical Facilities
44	South Nassau Walk-in Care	Medical Facilities
45	American Legion Post 1029	Public Assembly
46	VFW Post 5199	Public Assembly
47	Knights Of Columbus	Public Assembly
48	American Legion Post 1246	Public Assembly
49	North Oceanside Road School	Educational
50	Florence Smith School #2	Educational
51	Oceanside High School Castleton #6	Educational
52	Oaks School #3	Educational
53	Oceanside High School #7	Educational
54	South Oceanside School #4	Educational
55	Fulton Avenue School #8	Educational
56	Boardman Elementary / Oceanside Middle School #9	Educational
57	Lincoln Orens Middle School	Educational
58	Francis Hegarty Elementary School	Educational



Legend

- Community Reconstruction Area
- Human Services

Figure 5: Health and Social Services Assets

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Miles
1 inch = 0.5 miles

- **Housing:** Single-family and multi-family dwellings, supportive housing/group homes, senior housing and affordable housing. These assets are shown in Figure 6.

- Specific Housing Assets located in Figure 6 include:

Table 6: Housing Assets

	Name	Type
1	Mill River Gardens Apartments	Apartment Building
2	Oceanside Cove Condominiums	Apartment Building
3	Woodcrest Apartments	Apartment Building
4	Valley Town House Apartments	Apartment Building
5	Island Park Housing	Apartment Building
6	The Glen Apartments	Apartment Building
7	Theresa Gardens Apartments	Apartment Building
8	Ocean Harbor Apartments	Apartment Building
9	Alhambra Condos Clubhouse	Apartment Building
10	Regency Apartments	Apartment Building

	Name	Type
11	Sherwood Townhouse Apartments	Apartment Building
12	Bishop Kellenberg Garden Apts	Apartment Building
13	Summit Apartments	Apartment Building
14	The Yacht Club	Apartment Building
15	Oceanside Senior Citizens Apts	Senior Apartments
16	Bishop Kellenberg Senior Cit	Senior Apartments
17	Oceanside Care Center Inc.	Nursing Home
18	South Point Plaza Nursing and Rehabilitation Center	Nursing Home
19	PSCH Island House	Nursing Home

California Place canal from Shell Creek Park

Figure 6: Housing

- **Infrastructure Systems:** Stormwater, wastewater, water supply, roads, transit, bridges, rail, pedestrian and bicycle paths, airports, ports, ferries, gas stations, water supply, electric and gas service lines, solid waste and recycling. These assets are shown in Figure 7.

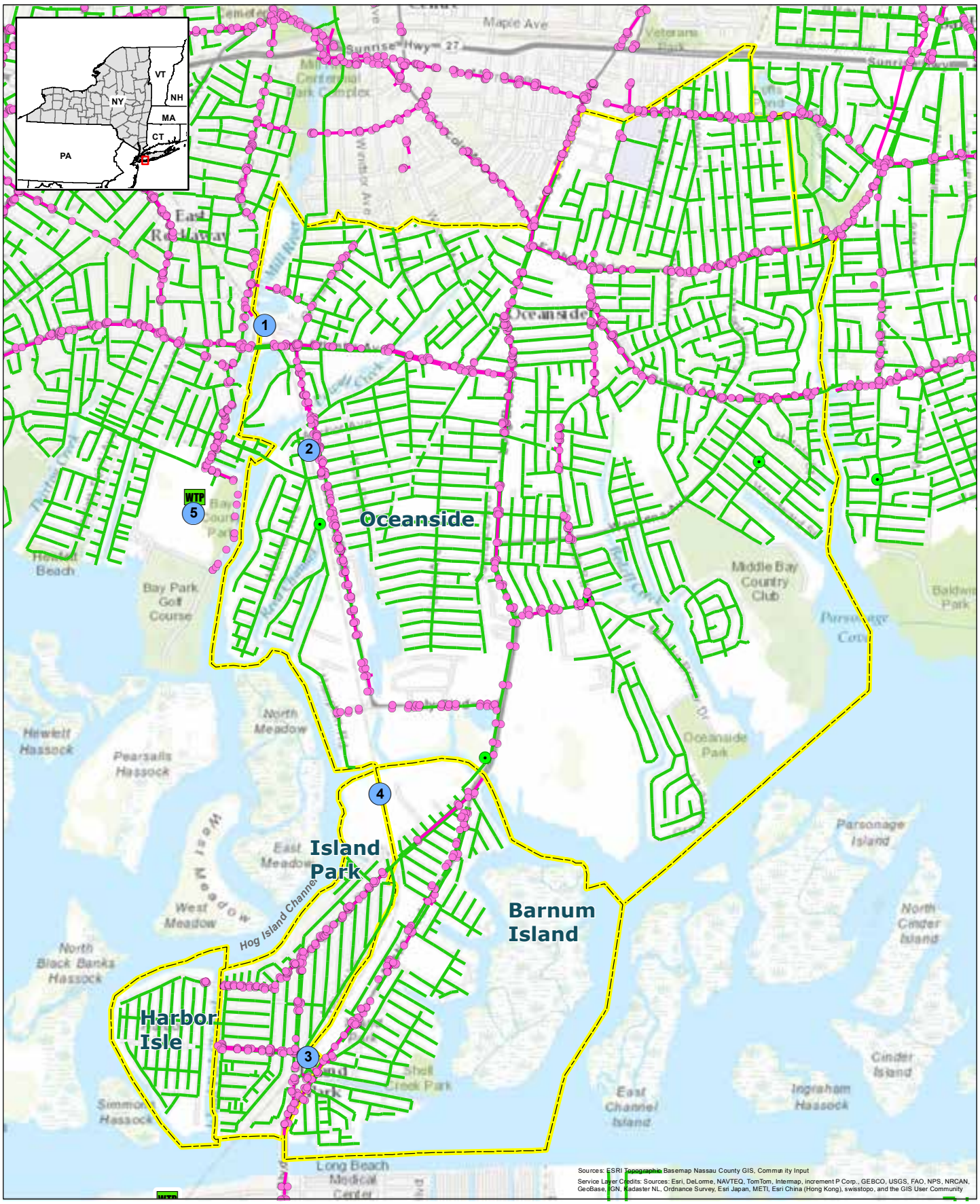
- Specific Infrastructure Assets located in Figure 7 include:

Table 7: Infrastructure Assets

	Name	Type
1	LIRR East Rockaway Station	Transportation
2	LIRR Oceanside Station	Transportation
3	LIRR Island Park Station/ LIRR Electrical Substation	Transportation
4	LIPA E.F. Barrett Power Station*	Public Services
5	Bay Park WWTP	Public Services

* PSEG is scheduled to take over the E.F. Barrett Power Station from LIPA on January 1, 2014.

LIRR Island Park Station and Electrical Substation



Legend

- Community Reconstruction Area
- Stormwater Pump Stations
- Stormwater Structures
- Drainage Pipes
- Sewer Pump Stations
- WTP Wastewater Treatment Plant
- Sewer Pipe

Figure 7: Infrastructure Assets

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Miles
1 inch = 0.5 miles

- **Natural and Cultural Resources:** Natural habitats, wetlands and marshes, recreational facilities, parks, public access, open spaces, religious establishments, libraries, museums, historic landmarks, performing arts venues. These assets are shown in Figure 8. In addition, the waters of the NYRCR Planning Area have been designated by the NYS Department of State as Significant Fish and Wildlife Habitats.

- Specific Natural and Cultural Assets located in Figure 8 include:

Table 8: Natural and Cultural Assets

	Name	Type
1	Oceanside Library	Educational
2	Island Park Library	Educational
3	Empire Point Marina	Recreational Facilities
4	Oceanside Park	Recreational Facilities
5	Oceanside Park Pool	Recreational Facilities
6	South Bay Country Club	Recreational Facilities
7	Bridgeview Yacht Club	Recreational Facilities
8	Clay Time Tennis	Recreational Facilities
9	Harbor Isle Beach	Recreational Facilities
10	Little Beach	Recreational Facilities
11	Shell Creek Park	Recreational Facilities
12	Masone Beach	Recreational Facilities
13	Oceanside Marine Nature Study Area	Recreational Facilities
14	Bay County Park	Recreational Facilities
15	Wrights Field	Recreational Facilities

Community-Identified Assets

Based on feedback from the NYRCR Planning Committee, the following assets will receive particular attention:

- Key stormwater systems and other drainage facilities, including:
    - Central Oceanside (bounded by Lawson Avenue, Long Beach Road, Atlantic Avenue, and Daly Boulevard)
    - Island Park (Hegarty Elementary School / Deal Road / Warwick Road and the area surrounding the central business district along Nassau Road)
    - Oceanside west of Lawson Boulevard (Ocean Harbor Drive)
- Bay Park Wastewater Treatment Plant
- The continued viability of the Hog Island Channel for deep water access to support water-dependent and water-enhanced industrial development
- Reynolds Channel waterfront as an economic development opportunity for water-dependent and water-enhanced commercial and recreational uses
- Long Island Rail Road stations as anchors for economic development in Oceanside and Island Park Island Park Village Hall
- Key transportation corridors and roads that experience significant flooding including:
    - Austin Boulevard
    - Lawson Boulevard
    - Yost Avenue
    - Lorraine Road
    - Nassau Lane
    - Suffolk Road
    - Kingston Boulevard
    - Long Beach Road
- Power supply – the Long Island Power Authority (LIPA) E.F. Barrett Power Station on Lawson Boulevard
- Senior services
- Schools
- Parks and beaches
- Marshlands
- Post offices
- Libraries
- Emergency services and firehouses

Legend

- Community Reconstruction Area
- Natural & Cultural Assets
- Marshland
- Beach

Figure 8: Natural and Cultural Assets

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Miles
1 inch = 0.5 miles

Identification and Understanding of Risk

After the NYRCR Planning Committee confirms the identification of the assets, the next step will be to assess how future events could affect the assets and how the community could be affected as a result. The State Risk Assessment Map (Figure 9) shows that approximately two-thirds of the NYRCR Planning Area is at extreme or high risk for flooding. After the Conceptual Plan is finalized, the Planning Team will conduct a more detailed risk assessment to show the potential impact of hazards on assets under current conditions and after implementation of potential strategies under consideration for the NYRCR Plan.

The findings from the risk assessment will guide selection of specific proposed strategies, such as utility improvements or changes in the building environment. Proposed strategies will be reviewed in a cost-benefit analysis. This risk assessment and cost-benefit analyses will be used together to help the NYRCR Planning Committee to decide on appropriate methods to mitigate future risk.

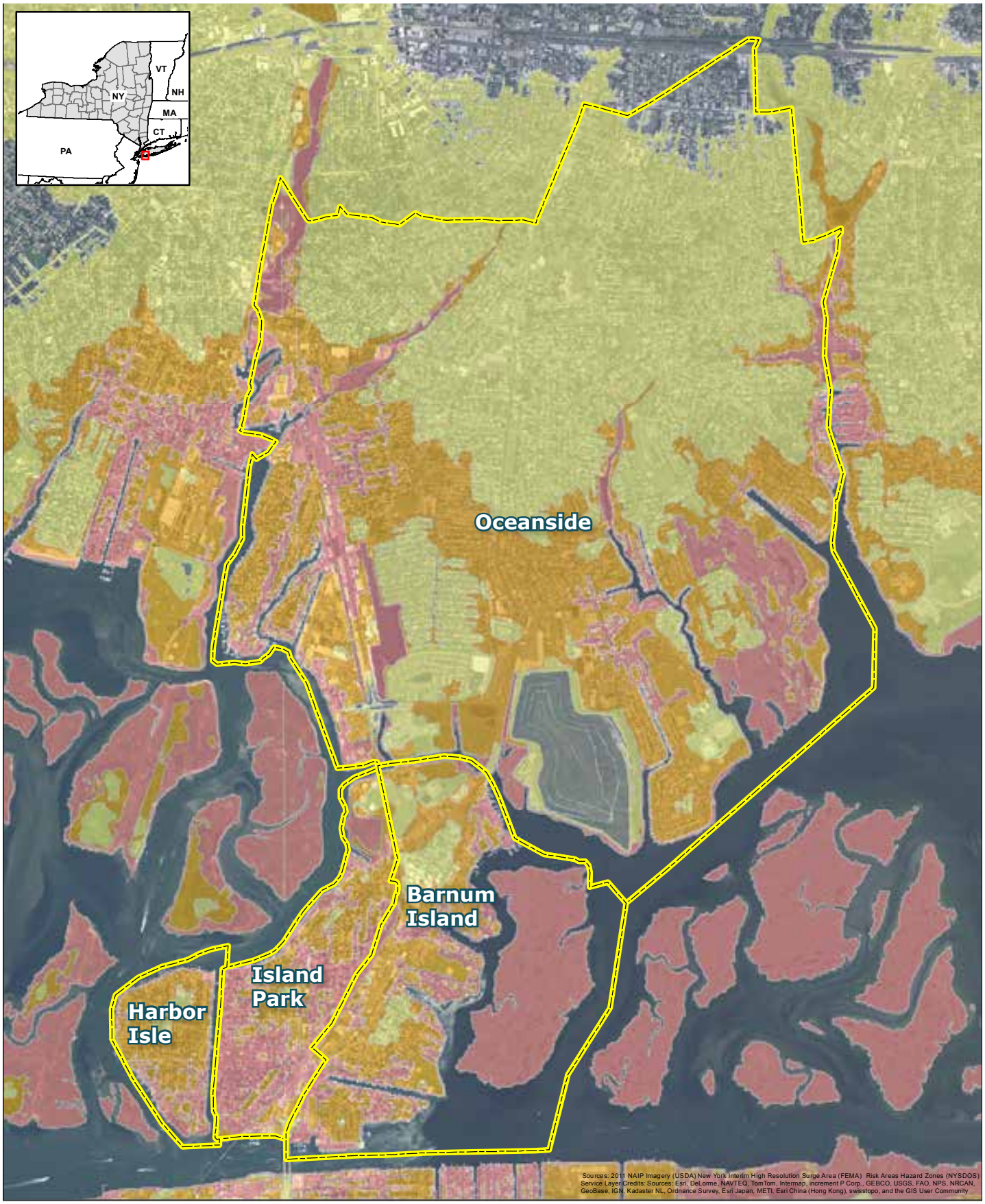
The Risk Areas identified by the NYS Department of State (illustrated in Figure 9) were developed based on the following:

Table 9: Identification of Risk Areas

Extreme Risk Area	High Risk Area	Moderate Risk Area
FEMA Coastal Zone V	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 high water shoreline from the National Oceanic and Atmospheric Administration	—	Area bounded by Sea, Lake, and Overland Surges from Hurricanes (SLOSH) Category 3 hurricane inundation zone
Areas prone to erosion	—	—
Source: New York State Department of State		

For more detail, please refer to the Risk Assessment Mapping Methodology on the New York Rising Community Reconstruction Program Website at:

http://stormrecovery.ny.gov/sites/default/files/documents/Risk_Assessment_Area_Mapping.pdf



Legend

Community Reconstruction Area

NYS DOS Risk Areas

- Extreme
- High
- Moderate

Figure 9: Generalized Risk Areas

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Miles
1 inch = 0.5 miles

Identification of Needs and Opportunities

Mitigating the risk of damage from future storms to increase resiliency will require both local and regional actions, so the NYRCR Plan will consider both local and regional needs and opportunities. This section describes the needs and resilience/redevelopment opportunities identified so far, which are based on:

- Review of relevant plans and studies
- Field visits
- Information gathered at the September 6, 2013, boat tour and meeting of the NYRCR Planning Committee Co-Chairs, State Planners, and Planning Team
- NYRCR Planning Committee meetings on September 12, September 26, and October 22, 2013
- A Public Engagement Meeting held on October 9, 2013

Identified needs and opportunities are described below, organized by the six NYRCR reconstruction and recovery functions.

Infrastructure and Natural/Cultural Resources

The NYCRCR Planning Committee identified protection from flooding – including tidal flooding caused by tidal surges, and storm flooding caused by storm events – as the most significant need in the NYRCR Planning Area.

Because flooding is such a high NYRCR community priority, infrastructure and natural area needs and opportunities are presented together as they are inherently linked. The *Guidance for New York Rising Community Reconstruction Plans: A Planning Toolkit for CR Communities* states *"rebuilding infrastructure with increased resilience is critical for improving a community's capacity to respond to future disasters…"* While simultaneously, *"a growing body of evidence indicates the value of coastal ecosystems in wave attenuation, deflection, and erosion reduction. These systems can also retain stormwater during rain events, preventing surface flooding."*[8]

Flooding from both tidal surge and stormwater runoff places increased pressure on the stormwater drainage and roadway systems. The NYRCR Planning Committee recognizes that a combination of infrastructure and improvements to natural systems, such as wetlands, marshes, sea grasses and other habitats, will be needed for protection and resiliency.

Stormwater

The community's stormwater systems have been identified as damaged, in need of repair, undersized and under-maintained. Other issues include clogged storm drains and pipes and a lack of storm backflow preventers and tide flex valves to prevent tidal flooding.

Need

The inability of stormwater to drain is a major issue for the NYRCR Planning Area. The water table is high, and infrastructure is outdated and undersized for the current population.

Much of the area experiences flooding in normal heavy rainfalls, and some areas flooded during high tide events. Drainage pipes are too low, so stormwater is not able to drain.

Opportunities

Opportunities to address stormwater needs include:

- Preparation of an overall stormwater master plan that identifies solutions for each community and for the NYRCR Planning Area as a whole to better manage runoff, integrating such actions into a broader regional context – considering the planned actions by Nassau County and adjacent communities.
- The Town of Hempstead has begun an initiative to map all the stormwater facilities in order to identify long-term solutions.

8. Guidance for New York Rising Community Reconstruction Plans

Need

Austin Boulevard is an important thoroughfare connecting the mainland to the City of Long Beach and entire barrier island. It is an evacuation route during major storms; however, it often floods during storm events, blocking evacuation for portions of the NYRCR and the barrier island.

Opportunity

Nassau County is planning streetscape, parking and traffic management improvements to Austin Boulevard. At this point, the planned project does not include drainage improvements, but it presents an opportunity to combine local and County resources to make upgrades to the stormwater system and other roadway/utility improvements during reconstruction. The NYRCR Plan should evaluate this reconstruction project in consultation with Nassau County to ensure that it maximizes these opportunities.

Need

The Bay Park Sewage Treatment Plant, which serves the NYRCR, is located adjacent to it, as is the Long Beach Sewage Treatment Plant just across Reynolds Channel. Both failed and were heavily damaged during Superstorm Sandy.

Opportunities

Restoration of the Bay Park Plant is Nassau County's single largest FEMA recovery priority. The County is working to secure funding to repair damaged portions and reduce the risk of future damage.

The NYRCR Plan will evaluate opportunities to integrate local projects that benefit both Nassau County and the NYRCR Planning Area.

Additional Needs:

- Shoreline infrastructure is lacking or failing in many sections of the community – particularly around Shell Creek and Shell Creek Park in Barnum Island, the north side of Harbor Isle, and Island Park. Many Barnum Island homes near Shell Creek have been structurally stabilized, but some adjacent streets that end at the water remain open.
- Water backs up in channels and creeks, resulting in inundation of surrounding areas.
- Warwick Road, an important east/west connection across Harbor Isle and Island Park, regularly floods due to insufficient drainage.
- Lower-lying areas regularly experience flooding from normal storm events due to the "bowl effect" of much of the peninsula.
- Many roads flood at high tide.
- Wrights Field, located on Mott Street, adjacent to Bedell Creek, floods at high tide, sometimes leaving players stranded in the field.

Green Infrastructure, Non-Structural Infrastructure and Natural Area Enhancements

Natural systems play a significant role in the community. However, the NYRCR Planning Area is nearly fully developed and contains large amounts of hardscape and impermeable surfaces, which makes it a challenge to insert permeable areas and additional green space. Approaches to expand and protect habitats in urban areas also need to be explored.

Need

Long Island is a sole-source aquifer, and it is being depleted by withdrawals and lack of recharge. The abundance of paved surfaces directs water to run off into the bays and water surrounding the island, rather than filter back into the water table.

Opportunities

Consider green infrastructure systems to manage stormwater, which could also recharge local aquifers, where feasible given environmental conditions.

Restore and expand wetlands and marshes and other coastal habitats.

Consider innovative solutions such as artificial sea grass and seaweed systems

Community Planning and Capacity Building

The Community Planning and Capacity Building recovery function addresses the community's ability to implement storm recovery activities and to plan to mitigate the effects of future storms. The NYRCR Planning Committee reviewed systems in place and determined that they presented needs as well as opportunities.[9]

Need

Zoning and building codes that require construction of storm-resistant structures.

Opportunities

Strengthen zoning and building codes for the Town of Hempstead and the Village of Island Park to support more resilient reconstruction methods for residential, commercial and public structures.

Need

The elevation of Little Beach in Island Park is very low and has been experiencing erosion due to lack of (or poor condition of) bulkheads. Beachfront properties and adjacent residential areas have been flooding as a result.

9. Guidance for New York Rising Community Reconstruction Plans

Opportunity

The Village has been working with United States Senator Chuck Schumer's office and the U.S. Army Corps of Engineers (USACE) to address this issue. USACE completed the planning phase for a project to install bulkheads and fill to raise Little Beach. In addition, other flood mitigation alternatives should be identified for their potential to reduce or eliminate bulkheads at this location.

Additional Opportunities

The former landfill in the Town of Hempstead affords high ground in an otherwise low-lying area. There may be opportunities to work with the Town to integrate the former landfill into stormwater and emergency management plans and facilities. If pursued, such projects should consider the potential to contribute to other environmental, social and economic benefits; however, the planning process needs to recognize the complexities of landfill reuse.

Economic Development

When considering economic development after a storm the main focus is to help businesses return to normal activity.[10] Identified opportunities will support and rebuild damaged businesses while building future resiliency through additional economic development.

Need

Businesses affected by flooding are struggling to recover from Superstorm Sandy, and many businesses throughout the NYRCR Planning Area have been destroyed and may not be rebuilt.

10. Guidance for New York Rising Community Reconstruction Plans

Opportunities

Revitalize existing business corridors and create new economic generators on vacant or inactive land sites by matching economic and supporting infrastructure investments to support:

- Water-dependent and water-related industrial uses along the Hog Island channel in the Oceanside industrial area
- Water-dependent and water-related commercial development along Reynolds Channel
- Reinvestment and redevelopment adjacent to the Oceanside Long Island Rail Road (LIRR) station to create a mixed-use node of activity
- Reinvestment and redevelopment adjacent to the Island Park LIRR station, connecting south through Village-owned land to make pedestrian, bicycle and vehicular connections to the Reynolds Channel Waterfront
- Implementation of a Main Street Revitalization Program along the Long Beach Road commercial corridor in Island Park
- Resilient construction methods, emergency practices, continuity of operation plans, back-up systems and recovery programs to reduce damage to local businesses, increase safety, and reopen businesses sooner after future flooding

Need

When LIPA's E.F. Barrett Power Station failed during Superstorm Sandy, NY State recognized that the management and operation of the power utilities on Long Island required reform. In response, the State reformed LIPA, reduced its role and is gradually shifting control to New Jersey's Public Service Enterprise Group (PSEG).

Opportunity

On January 1, 2014 the contract between LIPA and National Grid will expire and the transition from National Grid to PSEG will ensue. PSEG will operate a dedicated business unit on Long Island and will handle infrastructure improvements and storm preparedness.[11,12]

Work with PSEG to address power failures in the electric grid.

Explore alternative energy generation and distribution models to decrease reliance on centralized power generation facilities.

Housing

According to FEMA, more than 7,400 housing units in the NYRCR Planning Area were heavily damaged in Superstorm Sandy. Making homes safer and preventing future damage are the primary housing goals of the NYRCR Conceptual Plan.

Need

Homeowners and renters throughout the NYRCR Planning Area need guidance on how best to protect their homes and maintain eligibility for financial assistance to rebuild.

Opportunities

Identify resilient construction methods, including elevation of homes and dry flood-proofing, to increase safety and return residents to their homes sooner after future flooding events.

Both the Town of Hempstead and the Village of Island Park participate in the National Flood Insurance Program. The NFIP is a Federal program created by Congress based on an agreement between local communities and the Federal Government that states that if a

11. http://www.pseg.com/info/media/newsreleases/2012/2012-06-27.jsp
12. http://www.cnn.com/2013/07/29/us/new-york-lipa/index.html

community will adopt and enforce a floodplain management ordinance to reduce future flood risks to new construction in Special Flood Hazard Areas (SFHAs), the Federal Government will make flood insurance available within the community as a financial protection against flood losses. Further application to the Community Rating System can reduce flood insurance premiums for policyholders when a community accrues enough credit points for approved flood reduction activities.

Health and Social Services

As part of post-disaster considerations, an assessment of impacts to public health, health care facilities, and essential social service needs should be developed.[13] Through study of inventoried assets, the Committee can develop appropriate strategies and management techniques.

Need

Public facilities including schools, municipal buildings and fire houses were hard hit by Superstorm Sandy and remain vulnerable to future storm events.

Opportunity

Protect critical facilities so they can be maintained during storm events. Move mechanical systems above base flood elevations. Install generators that can provide sufficient power to maintain communications and enable these facilities to serve as command centers. Install underground electrical conduit to reduce potential impacts to overhead wires during storm events.

13. Guidance for New York Rising Community Reconstruction Plans

Socially Vulnerable Populations

Special consideration should be given to segments of the population that require additional care and assistance during storm events.[14] Assessment of the location and extent of those groups within the community structure is a priority of the NYRCR Committee.

Need

A plan is needed for communicating with the elderly, disabled and other vulnerable populations prior to, during and after an emergency.

Opportunity

Radio stations and websites should have clear, updated information, and automated phone messages should be enunciated. Such efforts could be supplemented by loud and clear street announcements and flyers should be distributed by hand.

Need

As housing is rehabilitated, it should be made more accommodating to seniors and those people with special circumstances.

Opportunity

Publicly-funded reconstruction is required to comply with the provisions of the Americans with Disabilities Act, which means that the resulting projects will increase the number of accessible housing units, commercial buildings and community facilities in the NYRCR community.

14. Guidance for New York Rising Community Reconstruction Plans

Key Strategies, Actions, Potential Projects, and Innovations to Implement Strategies

The key strategies and innovations identified below comprise a collection of ideas and information heard consistently from the NYRCR Planning Committee and supported by the public during the public engagement process. The "innovation" recommendations describe potential projects and project approaches that represent new ways of thinking about an issue and/or will rely on new technologies for implementation. The recommendations in this section are initial concepts at this point and will continue to be vetted by the NYRCR Planning Committee and by public and technical resources to create a realistic system of strategies and actions to create more resilient communities in Barnum Island, Oceanside, Village of Island Park and Harbor Isle.

Infrastructure and Natural Resources

Strategies

The following strategies are specific to infrastructure and natural systems. They are intended to increase physical protection for the community from future storms.

Strategy 1:

Identify areas to implement progressive stormwater management systems and infrastructure upgrades to decrease flooding in areas that consistently flood during rain events and high tides.

Actions and potential projects to address this strategy include the following:

Short Term

- Survey and map areas that consistently experience nuisance flooding from both tidal and rain events. This will require street surveys, informational meetings, and GIS mapping.
- Select storm and tide water management tools to meet identified needs.
- Identify vulnerable populations experiencing consistent flooding and determine the project or action that would best address their needs.

Medium Term

- Identify faulty storm drainage systems and areas for storm drainage system and facilities upgrades. Do this in coordination with existing mapping resources in the Village of Island Park, Town of Hempstead and Nassau County.
- Work with the Town of Hempstead, the Village of Island Park, and Nassau County to identify maintenance obligations, methods, and schedules for storm drainage systems.

Long Term

- Develop a NYRCR Planning Area-based stormwater master plan that links the needs of the Town of Hempstead and the Village. The master plan should include phasing for storm management upgrades and identify areas for green infrastructure such as bioswales and rain gardens within the NYRCR Planning Area.

Strategy 2:

Protect hazard areas from tidal surge through a combination of structural, non-structural, and hybrid shoreline stabilization techniques.

Structural stabilization includes erosion control practices using physical structures such as bulkheads, concrete sea walls, rip-rap, jetties, groins, and breakwaters that armor and stabilize the shoreline. Non-structural stabilization includes erosion control and restoration practices using plantings or organic materials such as vegetation plantings (marsh, submerged aquatic vegetation, dune grasses), oyster reefs, coir fiber logs or other natural materials to restore, protect or enhance the natural shoreline environment. Hybrid stabilization includes erosion control and restoration practices that are a combination of structural and non-structural techniques, such as combining low-profile rock, rubble, oyster reefs, or wood structures with vegetative planting or other soft stabilization techniques.

Actions and potential projects to address this strategy include the following:

Short-Term

- Develop a shoreline protection plan.
- Implement shoreline infrastructure in highest-priority areas already identified by the Village of Island Park, Town of Hempstead and Nassau County initiatives. This may include unprotected street ends in Barnum Island.
- Implement structural and non-structural stabilization around community assets and critical facilities identified near waterways.
- Survey vulnerable populations. Determine locations of seniors, disabled, and low income residents and identify where shoreline stabilization can be implemented as a protective measure. Use the survey to also address evacuation procedures for these vulnerable populations when shoreline improvements will not sufficiently protect them.
- Develop an educational and awareness campaign for private property owners to learn how to privately bulkhead and/or protect their homes through soft infrastructure measures from tidal surge.

Medium-Term

- Identify the potential interest in home acquisition programs through public surveys and engagement sessions.
- Develop an awareness and educational campaign for a home acquisition program that reflects feedback received, demonstrates issues, establishes program initiatives, and identifies locations that regularly flood and/or are in extreme risk areas.
- Identify tools to limit the negative tax-base implication of an acquisition program for the municipality.
- Survey and map areas that are most critical for acquisition programs to function.
- For consolidated acquisition areas, identify areas for non-structural infrastructure and natural area restoration.

Long-Term

- Coordinate with the Village of Island Park and Town of Hempstead to identify potential marsh areas that would be candidates for natural habitat protection, preservation and restoration.
- Support the Town of Hempstead in its efforts to work with the New York State Department of Environmental Conservation to restore habitat areas where appropriate. Coordinate with the Village of Island Park as needed.
- Survey and identify areas for the implementation of green infrastructure such as bioswales and rain gardens.

Infrastructure Innovation

Regional infrastructure and natural systems such as transportation facilities, wastewater treatment, water treatment, and electrical/energy systems, wetlands and marshes are critical to community resiliency. The NYRCR community can contribute to a regional approach by being involved in ongoing studies, participating on committees, and sitting on community and regional boards.

Innovations that would protect the NYRCR community and the region include:

- Restoration of the Bay Park Waste Water Treatment Plant
    - Continue to coordinate with Nassau County on repairs and improvements to the Bay Park Waste Water Treatment facility. Emphasize inclusion of this facility in emergency preparedness plan development.
    - Identify local projects that could tie into the Bay Park Sewage Treatment Plant restoration.
    - Nassau County is considering options to relocate the Bay Park Sewage Treatment Plant outfall from Reynolds Channel into the Atlantic Ocean to alleviate environmental degradation of the Channel. NYRCR area representatives should continue to work with the County to encourage and support this project.
- LIPA E.F. Barrett Power Station and distribution system
    - Work with LIPA to identify areas to place infrastructure underground to protect the community from electrical power outages, downed power lines, and downed power poles in the future and during future storms.
    - Work with LIPA and Nassau County, Town of Hempstead and Village of Island Park to investigate opportunities to return portions of the LIPA property to a wetland function to store and filter water during storm events.
    - Work with the Town of Hempstead Conservation and Waterways Department to support its Comprehensive Energy Master Plan to identify strategies to develop alternative modes of energy.
    - Explore the opportunity to create and implement alternative energy pilot programs.
    - Explore the opportunity to pilot projects that support energy self-sufficiency.
- Natural systems restoration and protection
    - Coordinate with the Town of Hempstead on its ongoing map documentation of conditions and trends in area marshes and small islands. Such work is vital to determining which potential natural protection solutions could be effective in the NYRCR Planning Area.

Major shoreline infrastructure tools, including sea gates and large sea walls to hold back tidal surges have been discussed by the NYRCR Planning Committee as potential strategies that may be worth investigation. These types of innovations require major financial investments and may create an entire system of environmental and impacts. Any consideration of these tools would require detailed fiscal impact and environmental studies to understand environmental impacts and impacts to neighboring communities and regions. These studies could include the potential to use the shoreline infrastructure in concert with alternative energy systems, such as tidal turbines, where appropriate.

Community Planning and Capacity Building

Implementation of the strategies resulting from the NYRCR Plan will reduce the frequency and severity of flood events, but will not eliminate all flooding. Effective planning and emergency preparedness before, during and after a storm is critical to the safety and security of the NYRCR community. Along with physical protections, The NYRCR Plan will recommend strategies to enhance the capacity of local governments and public to engage them in proactive emergency-preparedness and response.

Strategies

Strategy 1:

Implement an Emergency Management and Control Center that engages in emergency planning, response, and communications planning at the local/NYRCR level.

Actions and potential projects to address this strategy include the following:

Short-Term

- Identify a location for an Emergency Control and Command Center and/or determine several locations to diversify command centers.
- Survey and hold public meetings to gather thoughts and information on such a facility or multiple facilities. Include vulnerable populations such as seniors, disabled, youth, and low-income persons to identify their emergency and evacuation needs.
- Identify emergency control center(s) and response teams, comprised of firefighters, first responders, other volunteers and municipal staff, to operate each command center or the one main command center.
- Begin planning for command center locations and proceed through the zoning and building permit and approval process with the Town of Hempstead and the Village to verify the best building type, zone and location.
- Identify ways the emergency control center can further encourage evacuation of residents, visitors and business owners during storms.
- Increase residents' household readiness (e.g., evacuation plan, meeting point, emergency bag) in coordination with the Nassau County Office of Emergency Management planned evacuation zones.
- Coordinate with local government and state agencies to incorporate Command Center functions and responsibilities into local emergency preparedness workflows.

Medium-Term

- Implement "street sweep emergency volunteer teams" (first responders) to enter the area during and after the storm to check on structures housing identified vulnerable groups and/or persons.
- Purchase emergency response equipment, such as vehicles, radios and generators, to adequately support the Emergency Management and Control Center.
- Develop a local evacuation and communications plan that connects and coordinates with the Nassau County Office of Emergency Management planned evacuation zones.

Long-Term

- Proactively plan for large storms and develop a local and regional communications command center via the web and radio communications.
- Continue to support emergency response teams with current and real time information for them to successfully and efficiently respond to emergencies through crisis-action software.
- Write, adopt and implement an emergency management plan for the NYRCR Planning Area that coordinates with Nassau County and broader regional plans.

Strategy 2

Work with the Village of Island Park and the Town of Hempstead to develop a toolkit of land use planning tools to help protect current and future investments in the community.

Actions and potential projects to address this strategy include the following:

Short-Term

- Prepare and adopt a Local Waterfront Revitalization Plan for the NYRCR. An approved New York State Department of State Local Waterfront Revitalization Plan will allow the NYRCR Planning Area to take advantage of tangible benefits, including: (1) NYS Department of State technical and financial assistance for the preparation and implementation of local programs, (2) consistency between State agencies' actions and approved local programs to the maximum extent practicable, and (3) if a State's Coastal Management Program is amended to include the approved local program, Federal agencies will be required to adhere to this program to the same degree which is required of State agencies.

Medium-Term

- Develop a Village and community comprehensive/master plan with land use designations to effectively demonstrate existing land uses and future vision for development, identifying areas for potential transit-oriented developments (TODs) or Mixed Use Developments to revitalize old and damaged economic corridors, induce residential uses as mixed uses and increase density around LIRR station areas.

Community Planning and Capacity Building Innovation

Communication in the NYRCR Planning Area during and after the storm was down for several days. Even after cell phone, telephone and Internet services were repaired, communication remained relatively ineffective and uncoordinated. A coordinated communications system is required to effectively respond to emergencies and needs of the public and specifically for those who could not or did not evacuate and/or those who have specific emergencies or needs.

Open-source Crisis Mapping

Open-source crisis mapping has been used in Haiti and Kenya during, and after major emergencies.[15]

This type of system and software allows residents to provide information about their immediate needs and to report emergencies, evacuation issues, medical emergencies, people trapped or incapacitated and other requirements for food, water and shelter through technological communications.

An Internet connection is required, so this solution must be paired with alternative energy resources to power cell phones and allow Internet connections to be effective during power and communication failures.

Redevelop the Oceanside Landfill

The Town of Hempstead is using the former Oceanside Landfill as a transfer station and is capturing methane gas. The landfill has been capped with a plastic liner. Any future use plans for the site must be closely coordinated with the Town of Hempstead and be compatible with Township uses and site conditions. Once the methane capture slows or stops, there could be potential to reuse the landfill for another community purpose. The NYRCR Planning Area should begin working with the Town to develop a community plan that provides design and development ideas for the former Oceanside Landfill.

15. http://www.usip.org/publications/crowdsourcing-crisis-information-in-disaster-affected-haiti

Actions and potential projects to address this strategy include the following:

Short-Term

- Discuss potential concepts with the Town of Hempstead.
- Determine needs, issues, and key potential uses for the landfill.
- Study the current uses of capturing methane gas and determine the longevity of such energy capture.
- Develop a reuse plan for the existing structure on the site.
- Reduce stormwater runoff from the landfill that is currently affecting neighboring properties.

Medium- to Long -Term:

- Develop a community concept plan for potential reuse of the landfill.

Health and Social Services

Building on the community and capacity building section above, this section focuses on the needs of hospitals and medical facilities, fire and emergency services facilities, as well as schools and their functions during and after storms.

Strategies

Strategy 1:

Make emergency service facilities such as police and fire departments, emergency management centers and hospitals more resistant to storm damage. This may include elevating structures, moving mechanical systems above flood levels and other investments to make these structures more resilient.

Actions and potential projects to address this strategy include the following:

Short-Term

- Install generators with adequate fuel storage capacity at fire stations and Island Park Village Hall. Consider dual-fuel units that can also utilize natural gas.
- Relocate emergency generators to upper floors in key facilities such as schools, healthcare facilities, and public buildings to maintain power and functionality during future hazard events.

Medium-Term

- Make physical building improvements to make emergency services structures more resistant to flooding.
- Connect each fire station to a fiber optic cable network to increase communication capability.

Long-Term

- Expand the Town of Hempstead Department of Conservation and Waterways' ability to generate power using wind turbine and solar panels to power emergency service facilities during storm events.
- Expand fire stations to allow for increased storage for emergency response equipment and increased space for fire fighters and their families during an emergency.

Strategy 2:

Identify disaster recovery services and areas.

Actions and potential projects to address this strategy include the following:

Short- to Medium-Term

- Develop a safe-zones plan in coordination with local and emergency facilities and religious institutions that are located outside of the flood

areas. These can be used as safe houses and central locations for food, water, shelter and emergency services.

- Set up special needs registration so that vulnerable people (elderly, disabled, low income) can identify themselves and receive needed services during emergencies (e.g., assistance with evacuation, 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 MOUs with food assistance groups (e.g., Island Harvest, Long Island Cares, and Meals on Wheels) in advance to arrange for assistance for the elderly in walk-up buildings when the power is out.

Strategy 3:

Work with the Long Beach Medical Center to align Long Beach NYRCR goals with those of the Barnum Island, Oceanside, Village of Island Park, and Harbor Isle for the Long Beach Medical Center.

Actions and potential projects to address this strategy include the following:

Short- to Medium- Term

- As recommended in the Long Beach NYRCR Conceptual Plan, restore, reopen, protect, and enhance the Long Beach Medical Center.
- Increase emergency services and access to emergency services to vulnerable populations such as seniors, the disabled, youth and low-income residents.

Long-Term

- Identify locations for additional emergency medical or urgent care facilities in the future.

Strategy 4:

Reduce the risk of flooding and flood damage to schools and facilities that serve vulnerable populations, such as senior centers and low-income or rental properties.

Actions and potential projects to address this strategy include the following:

Short-Term

- Work with school officials and school boards to discuss the issues associated with schools located in vulnerable areas.
- Survey local residents and hold a meeting to discuss the vulnerability of schools located in high to extreme risk areas.
- Work with residents identified as vulnerable to determine the best ways to safeguard their facilities, homes and neighborhoods.
- Upgrade school radio communications systems.
- Install new generators in schools above base flood elevation to facilitate in staging resident support centers.

Medium-Term

- Install water tight doors and raised entryways or other dry flood-proofing techniques to block water intrusion in schools, senior facilities and other structures serving vulnerable populations.
- For facilities in high and extreme risk areas, identify alternative locations and plan for relocation and/or rebuilding with protective measures.
- Improve structures to make them more resistant to flood damage if relocation or rebuilding is not possible.

Long-Term

- Where flood-proofing is not possible, consider relocating schools, senior facilities and other structures serving vulnerable populations to safer locations.

Health and Social Services Innovation

Coordination of health and social services is essential in maintaining a connection to the community in prior to, during and after times of crisis. One way to better assess conditions at all times is to share services between communities. Although each of the four communities in the NYRCR Planning Area is unique, there are commonalities between them and neighboring jurisdictions that may make it attractive to share responsibility (and resources) to track and maintain human services to residents.

Mobile health vehicles may be a resource to bring health services to vulnerable populations. Mobile health clinics currently operate in the Bronx and run through the *Community Healthcare Network.*[16] These services deliver access to the client, rather than finding ways for the client to better access services and buildings.

This concept requires additional study to assess its adaptability to this NYRCR Planning Community and to coordinate with Nassau County hospitals and their mobile access programs.

Economic Development

When implemented, the strategies described above will contribute to an NYRCR community that is prepared for the short-, medium- and long-term challenges and establish a newfound resiliency. These same actions and measures work together to create a strong foundation for a healthy local and regional economy. The economic development strategies described below build on NYRCR goals and objectives and align with the priority strategies listed in the Long Island Regional Economic Development Council's (LIREDC) Strategic and *Economic Development Plan for Nassau and Suffolk Counties.*

16. The Community Healthcare Network operates a mobile health van that travels to areas that do not have ready access to health services. The van makes weekly visits to schools, community organizations and other areas.

Strategies

Strategy 1:

Leverage the community's location and rail access to Manhattan while capitalizing on its unique attributes.

Actions and potential projects to address this strategy include the following:

Short-Term

- Identify additional areas for increased economic development along existing commercial corridors near the LIRR stations.
- Create a conceptual mixed-use development plan for the Island Park LIRR station area linking it to the Reynolds Channel waterfront to increase public access to the waterfront and enhance water-dependent and water-enhanced economic opportunities.

Medium-Term

- Design streetscape and transportation improvements to support rail, pedestrian, bike and vehicular access to support mixed-use commercial activity around the Oceanside and Island Park LIRR stations.
- Design a new east/west multi-modal transportation connection across Austin Boulevard and the LIRR tracks by realigning the road network on parking lots and other land owned by the Village adjacent to the LIRR station.

Long-Term

- Construct transportation improvements described under medium-term actions above.

Strategy 2:

Establish special services districts and/or partnership opportunities, such as business improvement districts, to support local businesses.

Actions and potential projects to address this strategy include the following:

Short- Term

- Assist local businesses with infrastructure, financial assistance, and rebuilding customer bases.

Medium Term

- Support or create a mechanism to establish private-private partnerships in which businesses and community residents support one another in business innovations and community aesthetics and programs.

Strategy 3:

Identify areas for waterfront revitalization to support new industrial, commercial and mixed-use development. Leverage their waterfront location to establish new water-dependent and water-enhanced uses including industrial and distribution uses, restaurants and shops, and recreational amenities.

Actions and potential projects to address this strategy include the following:

Short-Term

- Support social and commercial entrepreneurship and entrepreneurs to enhance and support the younger community by engaging in alternative energy designs and capitalizing on community support and communications functions.
- Leverage community activities to attract visitors to the area.

Medium-Term

- Work with NYS Department of State to prepare a Local Waterfront Revitalization Plan to identify strategies and tools needed to create a strong waterfront economy as described in Strategy 2 under Community Planning and Capacity Building

Strategy 4:

Foster connections to the Oceanside Marine Nature Study Area and establish interlinked preserves or community green and blueways that connect with this 52-acre preserve. Connections can be made throughout the NYRCR Planning Area to smaller wetland, marshland, and natural area educational spaces throughout the community.

Actions and potential projects to address this strategy include the following:

Short-Term

- Review the South Shore Blueway Trail Plan for planned facilities in and adjacent to the NYRCR Planning Area.
- Design greenway and blueway connections to implement a community wide preserve pathway.

Medium- to Long-Term

- Construct the greenway/blueway as an educational marsh, wetland educational trail that provides educational kiosks and markers designating different types of natural areas and how they are interlinked.

Housing

Protection of housing stock is critical for the ongoing health and vitality of the NYRCR community. On a regional level, the LIREDC has established priorities to strengthen, protect, and expand the housing stock.

Strategies

Many of these issues connect directly to housing shortages, a limited rental stock and increased vulnerability to flooding. Therefore the following strategies have been identified to counteract these issues at the local NYRCR level.

Strategy 1:

Identify financial resources for homeowners and renters while increasing protection measures.

Actions and potential projects to address this strategy include the following:

Short- to Medium-Term

- Increase homeowner awareness of existing programs and funding.
- Map vulnerable neighborhoods in high and extreme risk areas and identify potential risk protection measures.
- Identify and map neighborhoods with vulnerable populations and increase protective measures.

Medium-Term

- Develop and implement program guides for homeowners to implement storm-ready projects, retrofits, and projects that reduce risk and increase safety.

Strategy 2:

Identify locations for future affordable housing and develop plans for multiple housing types.

Actions and potential projects to address this strategy include the following:

Short- to Medium-Term

- Restore and protect affordable housing that already exists, including housing for vulnerable populations such as seniors and low-income residents.
- Identify, quantify, and qualify the community need for additional rental units and diverse housing types.

Medium-Term

- Work in coordination with the Town of Hempstead and the Village of Island Park to amend zoning to include more affordable types of housing as permitted land uses. These can include multi-family housing of a variety of types, including mixed-use development, clustered housing, and attached units and with other cost efficiencies. In addition, they can enact regulations that permit more flexibility with the use of accessory apartments.

Long-Term

- Connect local plans with regional plans for affordable housing opportunities.
- Address health, social, and resource allocations and access for vulnerable populations.

Projects Identified Outside of the NYRCR Planning Process

It is very important to the Barnum Island, Oceanside, Village of Island Park and Harbor Isle NYRCR Planning Committee to understand the relationship between strategies, actions and projects it may include in its NYRCR Plan and those already identified by Nassau County, Hempstead Township and the Village of Island Park. The NYRCR Planning Committee wants to ensure that it coordinates ideas and actions, maximizes its ability to leverage partner agency investments, and fosters cooperation among agencies, while minimizing conflicts.

The projects shown below (Table 10) have been assembled from current plans and grant applications in one or more of the four NYRCR Communities. Many of these projects, as noted, are potential areas of improvement and are not yet funded nor budgeted. The status of programmed and funded projects is noted in the descriptions.

Temporary Village of Island Park Village Hall

Table 10: Proposals Planned, Funded and/or Underway

Project Name	Reconstruction Category	Description and Status
Daly Boulevard, Oceanside Culvert Rehabilitation Between Long Beach Road and Lawson Boulevard Nassau County	Infrastructure	Restore the concrete box bridge culvert, channel clearances, and eroded earth embankments. The culvert has been declared structurally deficient by New York State DOT. Project was funded through the Nassau County Capital Improvement Plan (CIP) 2013-2016. **Status: Completed.**
Swirl Separator Installation in Island Park Nassau County	Infrastructure	Install swirl separators on 18 outfalls. Install catch basin. **Status: Underway.**
Oceanside Department of Public Works Sewage Pump Station Repairs Nassau County	Infrastructure	Repair Nassau County Department of Public Works (DPW)– DPW Sewage Pump Station at Site 13 - Long Beach Rd.; Pump Station, Site 17 - Millar St. Pump Station; Site 18 - Mott St. Pump Station; and Site 25 - Royal Ave. Pump Station. **Status: Funded and in process for completion.**
Roadway Grade Raise: Hazard Mitigation Grant Program (HMGP) - Roads included are Moreland Avenue, Fir Place, Stanton Place, Louis Place and Grove Place Oceanside	Infrastructure	Project includes reconstruction of approximately 1,850 feet of local residential streets. Sections of these existing roadways are currently at or below elevation 4.50 feet NGVD and flood during monthly episodes of high tides. The intent is to reconstruct roads to have a minimum gutter elevation of 5.50 feet NGVD, making them significantly less susceptible to regular tidal flooding. Project design includes replacing concrete curbs and sidewalks, improving the storm drain system, installing check valves, and reconstructing street end bulkheads as necessary. Raising the roadway grade will have a direct impact on frontages of private properties. The design will include regrading and installing storm drain inlets on private property as needed. **Status: Application submitted. Not yet funded. Estimated cost is $1,500,000.**
Roadway Grade Raise: HMGP - roads included are California Place North, California Place South and Vanderbilt Avenue. Barnum Island	Infrastructure	Project includes reconstruction of approximately 6,000 feet of local residential streets currently experiencing tidal flooding. Sections of these existing roadways are currently at or below elevation 5.25 feet NGVD. The intent of the project is to reconstruct roads to have minimum gutter elevations of 6.50 feet NGVD. Project includes replacing concrete curbs and sidewalks, improving the storm drain system, installing check valves, and reconstructing street end bulkheads as necessary. Raising the roadway grade will have a direct impact on the frontages of the private properties. The design will include regrading and installing storm drain inlets on private property as needed. **Status: Project is not yet funded. Estimated cost is $3,250,000.**

Project Name	Reconstruction Category	Description and Status
Bulkhead Reconstruction: HMGP - locations included are West Waukena Avenue at end, opposite 335 Golf Drive and Oceanlea Drive Oceanside	Infrastructure	Project includes reconstruction of approximately 750 feet of timber bulkhead on various local residential streets. Sections of these existing bulkheads have deteriorated significantly and have reached the end of their useful life. Most locations have storm drain outfall pipes, which will be replaced. Four additional flood protection check valves will be installed to prevent upland tidal flooding. The proposed bulkheads will be constructed with vinyl sheeting that has an expected life span of 50 years. Bulkheads will be designed so the top of the bulkhead is at or above an elevation of 7.0 feet. Project design will include replacing any concrete curbs and sidewalks, and reconstructing street ends as necessary to allow for the installation of the new bulkhead. **Status: Not yet funded. Estimated cost is $1,500,000.**
Bulkhead Reconstruction Little Beach: HMGP Island Park	Infrastructure	The Village of Island Park proposes to construct a new bulkhead across the length of the Little Beach to minimize erosion and flooding in this area. A new bulkhead is proposed between the existing wooden jetties at Suffolk Road and Washington Place, about 100 feet out into the channel, with a top elevation at least 4 feet higher than the Village street level. The Village would import sand (estimated quantity approximately 2,400 cubic yards) to re-grade the area. In addition, the Village would replace the existing jetty at the end of Suffolk Road with a bulkhead to provide greater protection against flooding and erosion. **Status: Not yet funded. Estimated cost is $650,000.**
Bulkhead Reconstruction: HMGP – Redford Road, Norfolk Road, and Rizkin Place Village of Island Park	Infrastructure	The Village of Island Park proposes to remove and replace existing bulkheads with wooden piles, whalers, and sheeting at the end of Redfield Road, Norfolk Road, and Rizkin Place. New bulkheads will measure at least 10 feet from the bulkhead caps to the bottom of the bulkheads to provide greater protection against flooding. **Status: Not yet funded. Estimated Cost is $370,000.**
Department of Public Works (DPW) Generator Installation HMGP Island Park	Infrastructure	The Village of Island Park proposes to install an emergency generator at its DPW building. The generator would be installed above the base flood elevation to avoid potential flood impacts. The Village would benefit by having a fully operational DPW that is able to provide essential services to its residents during emergencies. **Status: Not yet funded. Estimated to cost $100,000.**
Demolition and Construction of Village Hall and generator installation HMGP Island Park	Community Planning Health/Social Services Infrastructure	The Village of Island Park proposes to demolish the existing condemned Village Hall building, construct a new Village Hall building, and install an emergency generator to provide backup power as needed. The proposed Village Hall is assumed to be 2,500 square feet. The building will be designed in accordance with the American Society of Civil Engineers/Structural Engineering Institute (ASCE/SEI) 24-05, Flood Resistant Design and Construction. The new building will be constructed to the base flood elevation, or a higher elevation if required by FEMA or a local ordinance, to minimize the risk of damage to the new Village Hall during severe flooding events in the future. The generator would also be installed above the base flood elevation to avoid potential flood impacts. **Status: Not yet funded. Estimated to cost $580,000.**

Project Name	Reconstruction Category	Description and Status
Battery at Harbor Isle & Avalon Yacht View Town of Hempstead	Economic Development Community Planning Housing	Potential development project known as the Battery at Harbor Isle and Avalon Yacht View. It is a $90 million potential project that would include 140 rental apartments and 32 condominiums, with most containing boat slips. **Status: Application submitted to Town of Hempstead. Board voted not to lift covenant that restricts the number of rental units to 10 percent of the total**.
Marsh Trend Mapping and Water Quality Testing Marshes and Waterways surrounding Town of Hempstead Unincorporated areas, villages and municipalities Town of Hempstead	Natural/Cultural Resources	The purpose of the marsh trend mapping is to identify changes in the marshes, observe and analyze the data, and determine any revitalization methods. The purpose of the water quality testing is to verify the state of water quality in the marsh and its ability to maintain marshlands as well as critical vegetation and aquatic life in the area. **Status: Ongoing. Information about this ongoing project was gained by conversations with the Town of Hempstead Conservation and Waterways Department.**
Bay Park Sewage Treatment Plant Revitalization Nassau County	Infrastructure	Plans to revitalize the Bay Park Sewage Treatment Plant remain in negotiations. An estimated $740 million in construction costs is needed in order to repair items such as odor control systems, the electrical power supply and distribution system, effluent screening and raw sewage pumping, and sludge thickening and dewatering facilities. $500 million dollars is required for construction of a new outfall pipe that delivers treated sewage into the Atlantic Ocean rather than local bays and waterways. **Status: This project is ongoing and in discussions at the county and state level.**

Additionally FEMA Public Assistance (PA) funding was applied for in order to conduct work on the Oceanside Union Free School located at 145 Merle Ave, Oceanside, NY 11572.

Other FEMA PA funded projects are being reviewed and analyzed at this time.

Project Evaluation Process

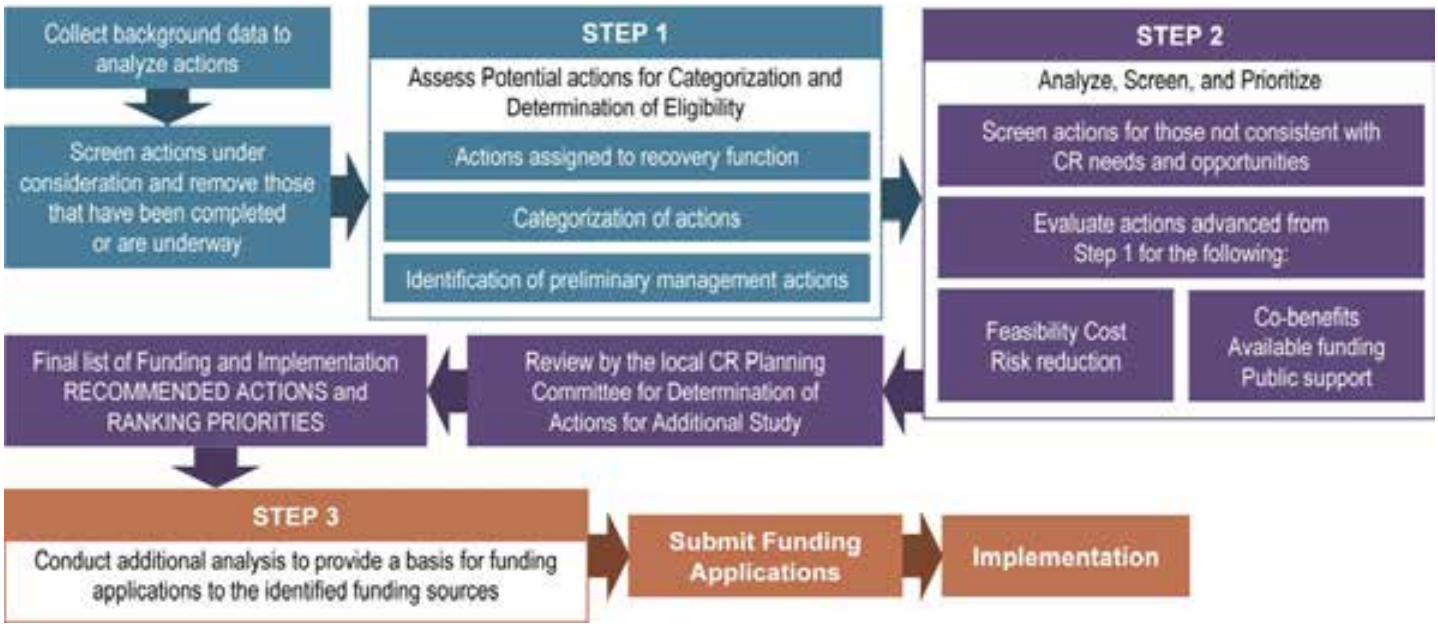
The Barnum Island, Oceanside, Village of Island Park and Harbor Isle NYRCR Planning Committee is working to develop potential projects and will begin the project evaluation process after completion of the Conceptual Plan. The information below summarizes the activities to be taken.

The NYRCR Planning Committee, with guidance and the greater community, will identify additional strategies and prioritize identified strategies according to agreed-upon metrics such as cost, time frame, and others as identified through the outreach process. These may include capital improvement 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 impact, and alternatives.

The project evaluation process undertakes a cost-benefit analysis for recommended capital improvement projects and a suitable equivalent analysis for policy and regulatory programs. The final result will be a prioritized list of projects, investments, and initiatives that include detailed project descriptions, listing of potential funding sources, and ranking to show implementation priorities.

The actions to implement strategies follow a three-step, evaluation screening and prioritization process described in Figure 10.

Figure 10: Strategy Implementation Process



Regional Coordination

Some of the issues addressed in the NYRCR Plans cross political jurisdictions and will need to be coordinated on a regional basis. For the NYRCR Planning Area, the region includes the South Shore, Greater Long Island, and potentially even larger areas.

The importance of coordinating issues as a region is already reflected in many non-Sandy-related efforts on Long Island, including the strategic economic development plan developed by the Long Island Regional Economic Development Council, the Long Island 2035 Regional Visioning Initiative prepared by a group of Long Island organizations, the transit-oriented development plan being developed by the NYS Equitable Transit-Oriented Development Collaborative, and the sustainability plan being developed by the Long Island Cleaner, Greener Consortium.

The communities of Barnum Island, Oceanside, Village of Island Park and Harbor Isle are independent communities, each with unique qualities, but they are also part of the larger Western Long Island South Shore, and they recognize the need for regional coordination.

The NYRCR Planning Committee has discussed the following entities that merit a consideration of regional coordination due to connections beyond the political boundaries of the NYRCR Plan:

- New York State
- FEMA
- National Grid
- Long Island Power Authority (LIPA) and its successors
- Long Island Rail Road
- City of Long Beach
- Long Island Regional Economic Development Council
- Long island 2035 Regional Visioning Initiative
- Nassau County
- Town of Hempstead
- U.S. Army Corps of Engineers

Potential regional coordination includes:

- Partnering with the Long Island Regional Development Council to implement economic revitalization that supports local business programs
- Emphasizing the importance of the Long Island Rail Road in the vitality of Island Park and Oceanside, with special focus on the Island Park station area and pedestrian connections to Reynolds Channel
- Coordinating with Nassau County, the Town of Hempstead, and Island Park to develop green stormwater infrastructure, e.g. permeable pavement, bioswales, rain gardens, and gray water reclamation
- Working with LIPA to install smart meters on homes and businesses to better monitor energy usage and build toward a “smart” electrical grid that uses communications technology to gather and act on information about the behaviors of suppliers and consumers to improve the efficiency, reliability, economics, and sustainability of the production and distribution of electricity
- Coordinating with the Town of Hempstead on restoring habitat areas adversely affected by storm events
- Working with the Town of Hempstead, Nassau County, and FEMA to prepare a coordinated evacuation plan, including an evaluation of the Oceanside landfill as a high point to be used for an emergency management staging area or the development of a regional command center
- Evaluating the need for intergovernmental agreements with neighboring jurisdictions during disaster response

Public Engagement Process

The NYRCR Committee used the following public engagement strategies to notify and educate the community and solicit feedback for the development of the Conceptual Plan and planning process for the NYRCR Plan. This section summarizes outreach strategies to advertise meetings and summarizes the results of NYRCR Planning Committee and Public Engagement Meetings.

Outreach for the October 9, 2013 Public Engagement Meeting included:

- Used the Barnum Island, Oceanside, Village of Island Park and Harbor Isle "New York Rising Community Reconstruction Program" Facebook page to convey information, post documents, and announce meeting dates. Shared Facebook page with local groups also on Facebook.
- Distributed information and flyers electronically to the following groups through the NYRCR Planning Committee and requested posting of flyer and/or announcement on website as appropriate:
  1. Schools
     a. Island Park Public Schools: Nina Hargrove, Vice President (NYRCR Planning Committee)
     b. Oceanside School District: Michael D'Ambrosio, Board of Education (NYRCR Planning Committee)
  2. Sports teams
     a. Ellen Cutler Igoe (NYRCR Planning Committee)
  3. Chambers of Commerce
     a. Oceanside Chamber: Michael Scully (NYRCR Planning Committee)
- Outreach to local civic associations and community organizations, including but not limited to:
  1. Island Park Civic Association (includes Harbor Isle, the Incorporated Village of Island Park, and Barnum Island): Felicia Nicholas, Vice President (NYRCR Planning Committee)
  2. Oceanside Civic Association: Ray Pagano (Co-Chair NYRCR Planning Committee)
  3. Committee to Help Oceanside Restore After Sandy (CHORAS): Ed Scharfberg (NYRCR Planning Committee)
- Used Street Teams to distribute paper flyers and door hangers to the following leading up to the Public Engagement Meeting, including October 5, 2013, through October 7, 2013
  1. Oceanside and Island Park LIRR Stations
  2. Libraries
     a. Oceanside Library, 30 Davison Ave., Oceanside, NY 11572
     b. Island Park Public Library, 176 Long Beach Rd Island Park, NY 11558
  3. Nassau Inter-County Express Bus Shelters throughout the community
  4. Shopping centers, commercial districts, store locations:
     a. The Sands Shopping Center, 3563 Long Beach Road, Oceanside, NY 11572 (e.g., Victoria's Secret, Toys R Us, Loft, Express)
     b. Oceanside Plaza, 3563 Long Beach Road, Oceanside, NY 11572 (e.g., GameStop, Capital One Bank, TJ Maxx)
     c. Mott Street Shopping Center on Long Beach Road (e.g. Trader Joe's and CVS)
  5. Senior residences and senior centers
     a. Oceanside Senior Center, 2900 Rockaway Ave Oceanside, NY 11572

b. Bayview Nursing and Rehabilitation Center, 1 Long Beach Rd., Island Park, NY

c. Island Park Senior Housing, 347 Long Beach Road, Island Park, NY

d. Oceanside Care Center, 2914 Lincoln Ave, Oceanside, NY 11572

- Worked with New York State to notify local media for first public engagement workshop
- At the first public workshop, engaged community members through interactive activities to:

1. Facilitate dialogue with members of the community, NYRCR Planning Committee, State Planners, and Planning Team
2. Encourage participants to view proposals and provide input on or contribute ideas they feel can be beneficial for resiliency planning and as economic development initiatives for the community
3. Prioritize or rank selections entries based on number of votes received, entries contributed
4. Solicit comments via Comment Forms made available during all NYRCR Planning Committee meetings and public workshops

Meeting Summaries

The following outreach events have taken place in the community to solicit feedback from the NYRCR Committee, stakeholders, and the public.

NYRCR Planning Committee Meetings

NYRCR Planning Committee Meeting, September 12, 2013

Lincoln Orens Middle School, 150 Trafalgar Boulevard, Island Park, NY

The first NYRCR Planning Committee meeting focused on the importance of the NY Rising Community Reconstruction Program, providing an overview of the planning process, anticipated outcomes, and timeline. It was emphasized that the program uses a bottom-up approach to planning, and strategies for conducting outreach and engaging the public were reviewed. There was discussion about issues and opportunities within the communities, and the meeting closed with a moderated public comment session.

NYRCR Planning Committee Meeting, September 26, 2013

Father Joseph O'Connell Knights of Columbus, 2985 Kenneth Place, Oceanside, NY

The second NYRCR Planning Committee meeting began with a review of what was accomplished at the previous meeting, as well as a discussion of feedback submitted by the Town of Hempstead and Village of Island Park regarding stormwater/tidal management and the Oceanside Landfill. Committee Co-Chairs provided information about flooding, damage, and areas of critical importance – drainage, emergency management services, and economic development. With guidance from the Planning Team, the NYRCR Planning Committee continued to identify assets, challenges, and potential projects through interactive visioning and mapping activities and began developing a vision statement for the NYRCR Planning Area.

NYRCR Planning Committee Meeting, October 22, 2013

Island Park Village Hall, 127 Long Beach Road, Island Park, NY

The third NYRCR Planning Committee meeting began with a review of feedback received at the Public Engagement Meeting (described below). The NYRCR Planning Committee also reviewed the outreach strategy for the second Public Engagement Meeting and decided to use an interactive workshop format. The Committee reviewed the draft vision statement and decided to continue to refine it rather than adopt it at the meeting. The Planning Team reviewed the draft Conceptual Plan content with the Committee, with a focus on demonstrating inter-connections between plan areas. The Committee provided comments, which were integrated into the final Conceptual Plan.

Public Engagement Meeting Summary

NYRCR Community Open House, October 9, 2013

St. Anthony's Church, 110 Anchor Avenue, Oceanside, NY

The public information meeting was structured as an open house and designed to gather NYRCR community knowledge, experience, and recommendations, which are essential in developing the community's reconstruction plan. Fifty individuals signed in; 75 community members were counted by sign-in table staff. Participants were invited to review information on the NYRCR program and the planning process that supports the program, and the NYRCR Planning Committee's work to date, including draft vision statements, community assets, needs and opportunities, and preliminary strategies.

Interactive stations were arranged around the room, including:

- Background/ Process
- Station 1: Community Vision
- Station 2: Community Assets
- Station 3: Needs and Opportunities
- Station 4: Transforming the Status Quo

Each station was staffed by members of the Planning Team and the NYRCR Planning Committee who offered guidance to participants through the information and activities and included display boards with instructions for the activities and background information, maps, and other materials needed to complete the activities.

Based on the results of **Station 1: Community Vision**, the **vision statement** that received the most support was "Vibrant, diverse and tight-knit communities that follow their own unique path to foster a safe environment and resilient infrastructure so that each community can thrive, and bounce back better in the face of adversity." The NYRCR Planning Committee will use this statement as a starting point and develop an agreed-upon vision statement for the NYRCR Plan.

At **Station 2: Community Assets**, participants were asked to identify critical community assets that should be considered in development of the NYRCR Plan. Commonly cited assets were critical infrastructure components, natural resources such as marshes, canals, and waterways, schools, and neighborhoods in general. Suggestions were made for assets to be clarified or removed, including businesses that are no longer open, names that have changed, and more specific information to be included about listed assets.

Station 3: Needs and Opportunities provided participants with an opportunity to help identify the most pressing needs and opportunities they see to become stronger, more resilient, and protected in the future from weather-related events. Among the most pressing needs and opportunities identified were concerns about condition, maintenance, and capacity of storm drains and drainage; dredging of waterways; condition of bulkheads; concerns about rising price of flood insurance; and comments about the interconnected nature of issues and areas – that the water will always find another place to go and caution about not wanting to solve flooding issues in one area by causing flooding in another.

At the final station, **Station 4: Transforming the Status Quo**, participants were encouraged to consider how all of the components of the NYRCR Plan – vision, assets, needs and opportunities – work together. The strategies most commonly identified as the best to achieve better resiliency were under the categories of infrastructure, with a preference for structural stabilization such as bulkheads, flood gates, and stormwater drainage management. Non-structural stabilization, such as reconstruction of marshes and wetlands, also received a number of votes and comments. Other potential ideas such as dredging waterways, elevating businesses, and consideration of home acquisition programs were also discussed. Communication from local government agencies and concern for clean-up, repair, and location of future schools were also discussed.

Implementation Structure

The NYRCR Plan will include an implementation schedule that will summarize strategies, actions, target dates for implementation, responsible implementing parties (individuals or organizations), and potential funding sources. Table 11 is a sample implementation schedule.

Table 11: Sample Implementation Schedule

Reconstruction Category	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					

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New York Rising
Community Reconstruction Program

Community Reconstruction Conceptual Plan

For the Communities of:

Barnum Island, Oceanside, Village of Island Park, Harbor Isle

October 2013