



NEW YORK RISING COMMUNITY RECONSTRUCTION PROGRAM

SOUTH VALLEY STREAM CONCEPTUAL PLAN

OCTOBER 2013



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 NYRCR 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 NYRCR 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.

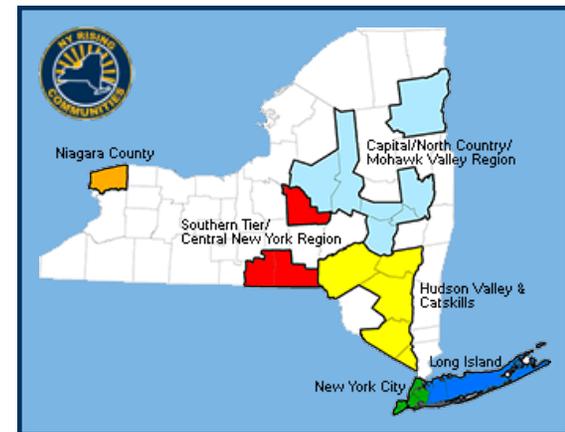
In the months ahead, communities will develop ways to implement additional strategies for economic revitalization, human services, housing, infrastructure, natural and cultural resources, and the community's capacity to implement changes.

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](http://StormRecovery.ny.gov/Community-Reconstruction-Program)

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TABLE OF CONTENTS

INTRODUCTION	3
1.0 COMMUNITY PROFILE	5
1.1 COMMUNITY VISION	
1.1 PLANNING AREA	
1.2 COMMUNITY OVERVIEW	
1.3 SUMMARY OF STORM IMPACTS	
1.4 EXISTING PLANS AND STUDIES	
2.0 ASSESSMENT OF RISK AND NEEDS	15
2.1 UNDERSTANDING ASSETS AND RISKS	
2.2 IDENTIFICATION OF ASSETS AND RISKS	
2.3 NEEDS AND OPPORTUNITIES	
3.0 PRELIMINARY RECONSTRUCTION STRATEGIES	35
3.1 KEY THEMES	
3.2 POTENTIAL KEY PROJECTS	
3.3 PRELIMINARY IMPLEMENTATION STRATEGIES	
3.4 REGIONAL PERSPECTIVE	
4.0 PUBLIC ENGAGEMENT	47
5.0 PRELIMINARY IMPLEMENTATION STRUCTURE	51
APPENDIX	55

INTRODUCTION

New York State launched the New York Rising Community Reconstruction Program in July 2013, empowering communities hit hard by Superstorm Sandy, Hurricane Irene, and Tropical Storm Lee to create and implement locally-created, federally funded strategies for rebuilding and strengthening their communities against future extreme weather events. The program recognizes that New York must build back better through a two-pronged approach: providing state leadership for critical infrastructure and broad investment strategies, while enabling local communities with the resources necessary to invest in their own future.

As a part of the NY Rising Community Reconstruction Program, New York State has convened a Planning Committee for South Valley Stream consisting of residents and civic leaders in the community. The goal of the NYRCR Planning Committee is to create a NY Rising Community Reconstruction Plan (NYRCR Plan), to be completed in March 2014, which will result in a list of projects and actions needed for South Valley Stream to recover from the damage caused by Superstorm Sandy and to reduce the risk of future hazards

caused by extreme weather events. The Planning Committee is supported by a team of professional planners, engineers, architects and community engagement specialists who will provide technical assistance and guide the Planning Committee through the planning process.

This NYRCR Conceptual Plan is the first step in outlining the process undertaken by the NYRCR Planning Committee to date and provides a roadmap for the next steps that the Planning Committee will take in drafting the NYRCR Plan. Ultimately, the NYRCR Plan will include strategies for rebuilding and replacing critical facilities, improving resilience against future threats, capitalizing on social assets and maintaining economic viability. At this stage, the NYRCR Planning Committee has created a framework of strategies to guide the next stages of the process of creating the final NYRCR Plan.

To date, the NYRCR Planning Committee has created a Vision Statement to guide ideas about long-term changes to the community, identified key assets that were damaged by Superstorm Sandy or are at risk in the

event of future storms, and outlined needs and opportunities for improving the area's resilience to extreme weather and climate change. Building upon this process, the broad strategies that the NYRCR Planning Committee has developed will help to inform a more specific set of actions and ultimately, priority projects which will be subject to cost-benefit analyses and community consensus building. The NY Rising Community Reconstruction Program has determined that South Valley Stream is eligible to receive \$3,000,000 in funding through the U.S. Department of Housing and Urban Development (HUD) Community Development Block Grant – Disaster Recovery (CDBG-DR) program. The NYRCR Plan is an imperative step in securing this funding from New York State by identifying projects that qualify for CDBG-DR funding under New York State and HUD guidelines. In addition to focusing on this initial funding eligibility, the NYRCR Planning Team is also tasked with identifying additional funding sources that could contribute to the implementation of short, medium, and long term reconstruction strategies to increase the resilience of South Valley Stream.

SOUTH VALLEY STREAM

1.0 COMMUNITY PROFILE



1.1 COMMUNITY VISION

Developing A Vision

The NYRCR Planning Committee created a Vision Statement to address regional and community recovery and resilience for South Valley Stream. The objective of the vision statement is to address damage caused by Superstorm Sandy, Hurricane Irene, and Tropical Storm Lee capitalize on social and economic assets to improve the local economy; and rebuild a more resilient community to expand the economy and reduce future risk. The Vision Statement is phrased in the voice of the Planning Committee, as representatives of the larger South Valley Stream community.

Vision Statement

As a civically minded and culturally diverse community, we will work towards creating a resilient South Valley Stream; founded upon a diverse economy, protected and restored natural and man-made shoreline, and environmental stewardship.

South Valley Stream's Community Reconstruction Plan will guide the community to:

- Create and restore continuous shoreline protection through a range of man-made and nature-based measures that provide South Valley Stream enhanced ecological connections to the bay, protect residents and businesses from flooding due to severe weather and do so where possible in combination with measures to meet other needs of the community.*
- Anticipate potential changes within the business district and use such changes to contribute to a more resilient community.*
- Help community members understand how they can contribute to the physical and social resilience of South Valley Stream.*



Figure 1: Site Aerial. Source: Google Earth Pro

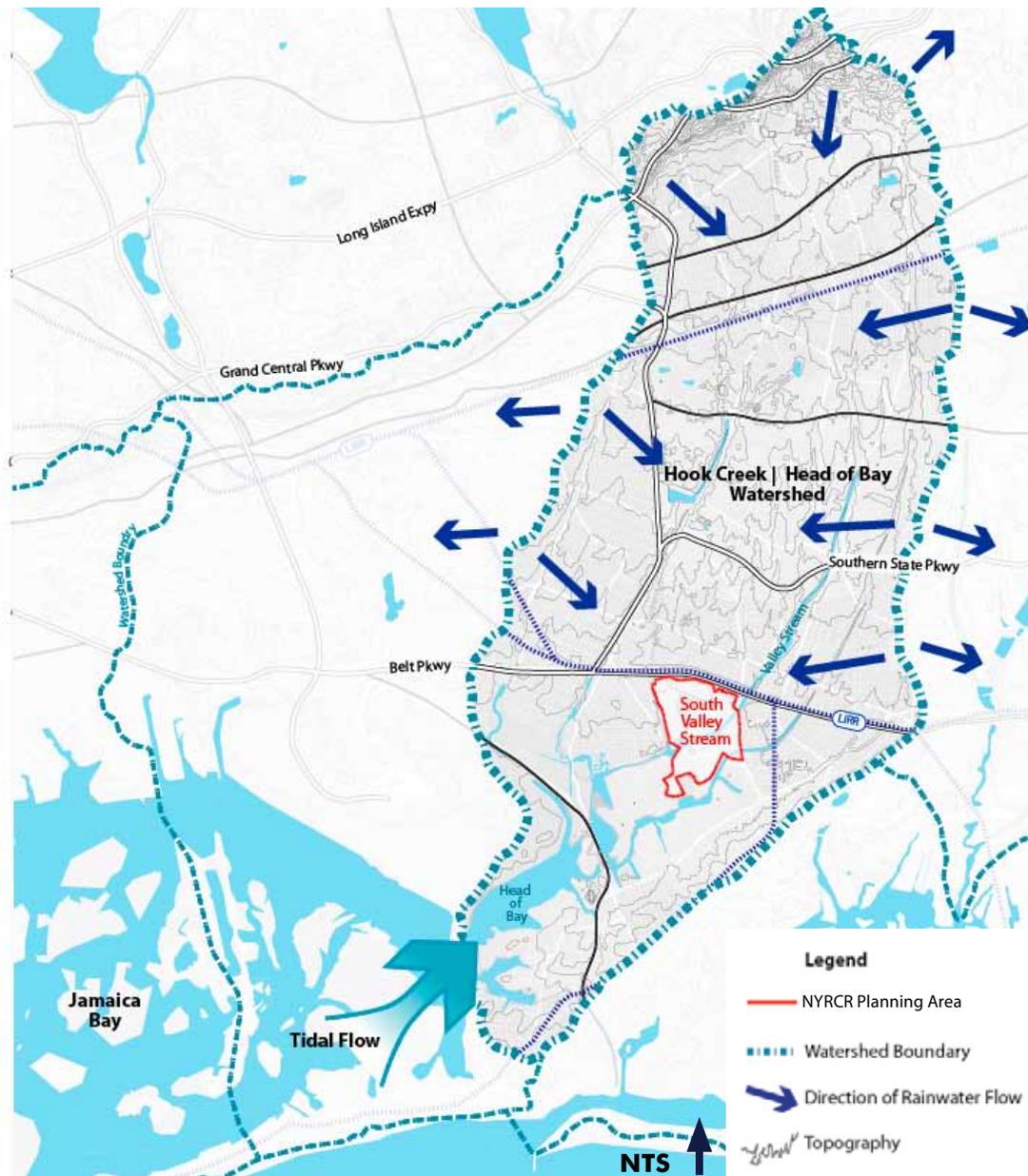


Figure 2: Head of Bay Watershed. Source: ESRI

1.2 PLANNING AREA

The South Valley Stream New York Rising Community Reconstruction Planning Area (NYRCR Planning Area) is located in the southern part of the Town of Hempstead in Nassau County and lies just south of Sunrise Highway. The South Valley Stream NYRCR Planning Area is bordered to both the north and east by the Village of Valley Stream. To the west is the Borough of Queens in New York City, and to the south are the Five Towns (Figure 1). The NYRCR Planning Area includes the South Valley Stream community which is named for, and surrounded by, water. It is bordered by Hook Creek to the west, and divided by Valley Stream, a tidally influenced water body which cuts through the community in roughly northeast-southwest direction, with the Mill Brook neighborhood to the north and North Woodmere neighborhood to the south, as discussed in greater detail below.

Part of the Head of Bay subwatershed within the Atlantic Ocean / Long Island Sound watershed, South Valley Stream receives water from the northerly tributaries that feed into Mill Pond which flows south into Valley Stream (Figure 2). Hook Creek and Valley Stream combine south of Rosedale Road, flowing parallel to Motts Creek into the Head of Bay (Jamaica Bay), and from there into the Atlantic Ocean. During storm events, tidal flows from Jamaica Bay surge north through Hook Creek into South Valley Stream, where they combine with stormwater drainage and river flows from the larger Head of Bay subwatershed. Hook Creek and a spur of Valley Stream both terminate within the residential neighborhood of Mill Brook.

1.3 COMMUNITY OVERVIEW

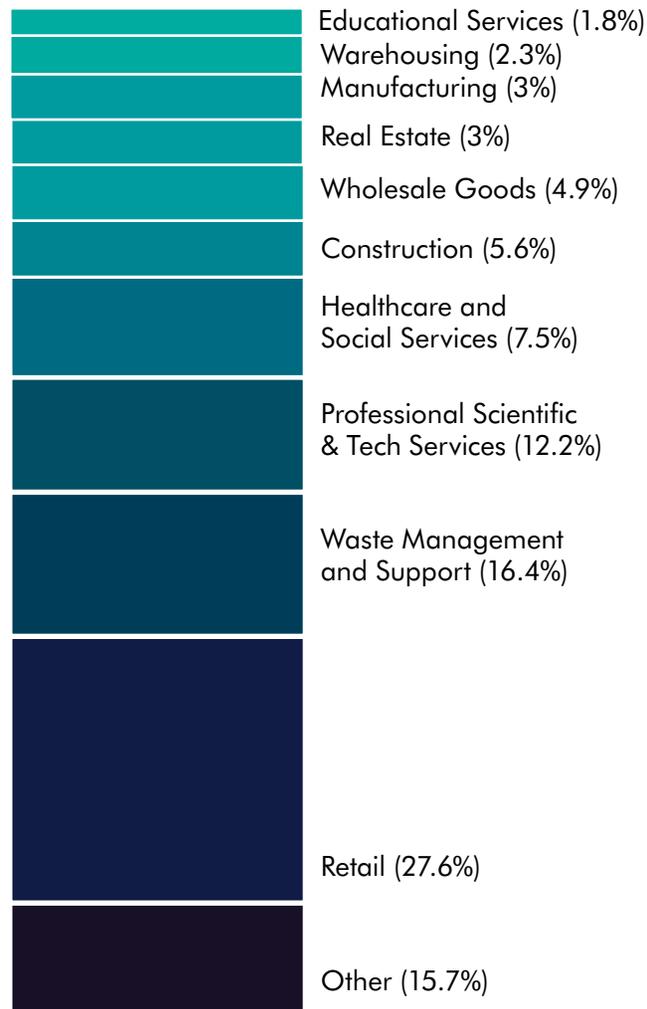
South of Valley Stream is the Mill Brook Community, a planned development of approximately 1,800 single-family residences built in the 1940s. Originally called the Community of Green Acres, the Mill Brook neighborhood is bordered to the north by Green Acres Mall, which serves as an economic driver and employment hub for South Valley Stream (Figure 3). Access to the Mill Brook community is limited to two entry points: one via Flower Road and one via Rosedale Road. South of Valley Stream is the community of North Woodmere, an unincorporated area of single-family residences that lies within South Valley Stream but is also associated with the Five Towns. Mott's Creek divides North Woodmere from Woodmere. Woodmere is part of the Five Towns NYRCR Planning Area.

In 2010, there were approximately 2,000 housing units in South Valley Stream, more than 96% of which were occupied. Roughly 1,540 housing units in South Valley Stream were owner-occupied, which accounts for more than 75% of the total. Nearly 70% of the owned houses have a mortgage or loan, and the average household size is approximately 3 people.



Figure 3: Community Overview

In total, there are 427 businesses in South Valley Stream. Sectors of particular note include retail trade (118 businesses, over half of which are clothing and accessories stores), professional, scientific and technical services (52 businesses), health care and social assistance (32 businesses), manufacturing (13 businesses), transportation and warehousing (10 businesses), and educational services (8 businesses). In 2011, 4,747 people were employed in South Valley Stream, however, 4,667 (98.3%) lived outside of South Valley Stream. The majority of South Valley Stream residents (96.3%) are employed outside of South Valley Stream, with only 80 residents employed in the community. Several commercial and industrial vacancies lie within or on the border of South Valley Stream. Vacancies are located on West Sunrise Highway (four vacancies), in the Airport Industrial Office Park (one vacancy), and in a pad site at Green Acres Mall.



427 Businesses in South Valley Stream

1.4 SUMMARY OF STORM IMPACTS

In October of 2012, Superstorm Sandy ran along the east coast of the US, bringing with it damaging winds and high tidal surges. Sandy was not regarded as a strong hurricane, but it was wide, extending 175 miles from its center with its tropical-force winds extending out to 520 miles. Sandy was characterized by a combination of factors that are considered rare. The storm picked up strength from the warm ocean down south, and then as it traveled north it hit a cold, arctic blast. The storm occurred during a full moon, which translated into higher tides and floods. On October 29, the storm hit the South Valley Stream area causing mass flooding and power outages.

Flooding in South Valley Stream during Superstorm Sandy largely resulted from a tidal storm surge that came through Jamaica Bay and flowed through Valley Stream in a northerly direction, overflowing the banks and any area lower than the maximum storm surge of 11 feet. Bulkheads were overtopped due to the extreme flood levels associated with Superstorm Sandy.

The residential communities of Mill Brook and North Woodmere were inundated, with the highest impacts to single-family residences in the proximity of Hook Creek and Valley Stream. Severe flooding

occurred along Heatherfield, Southgate, Brook and Cloverfield roads, with diminishing inundation levels extending as far north as Flower Road. Athletic fields such as those at Forest Road School were flooded, and most homes with basements or recessed driveways were severely impacted.

Feedback from the community indicates that since the storm occurred, the community has been experiencing tidal flooding on a more frequent basis. The general Mean High Water tidal datum closest to the Jamaica Bay is over 7 feet, which is near the average elevation of the South Valley Stream community. Superstorm Sandy, and previously Hurricane Irene, has left the community's bulkheads in a poor condition. As a result, these bulkheads no longer provide adequate protection during the average high tide flow.

During Sandy, stormwater flows while not extreme, exacerbated surge flooding. The community is located at the confluence where tidal flow coming from the south (Jamaica Bay) meets with river flow from the Hook Creek / Head of Bay regional watershed to the north (Mill Pond). The storm surge raised water levels in the streams substantially above the elevation of the stormwater outlets that discharge

the area's stormwater into the stream. As a result all of the stormwater flowing into South Valley Stream from areas north of and within South Valley Stream itself, storm sewers backed up into the South Valley Stream community. Despite limited rainfall during Sandy, this condition exacerbated the flooding conditions within the South Valley Stream NYRCR Planning area.

Stormwater problems in South Valley Stream are exacerbated by the fact that the confluence of Hook Creek and Valley Stream is located in South Valley Stream, forming the terminus of the Valley Stream system (Figure 4). As water flows towards Jamaica Bay, the Valley Stream system in South Valley Stream collects stormwater from the entire watershed. Moon tides and tidal surges cause tidal flows to enter the storm sewer system, creating further water backup in the system. Under such conditions the already increased amount of water entering the storm sewer system cannot exit the system at the same rate, thus resulting in flooding within South Valley Stream. Given its location close to the Bay, the groundwater table of South Valley Stream is very high, which reduces the area's capacity for stormwater infiltration and causes basement flooding.

Both Tropical Storm Irene and Superstorm Sandy caused heavy damage to trees within the community, resulting in extended power outages, lasting up to seven weeks. This reduction in the number of trees after the storms decreased the amount of infiltration possible during a storm event, which can increase the surface runoff and thereby contribute to stormwater flooding.

The storm disrupted the electrical network, leaving residents without power for up to seven weeks. Vulnerable populations were especially impacted as a result of their dependence on electricity for oxygen devices and refrigerated medications. Impacts on the electricity infrastructure varied across South Valley Stream. The neighborhood near South Gate Drive experienced electricity outages for seven weeks due to the Long Island Power Authority (LIPA) substation that was flooded in Cedarhurst. The neighborhood near Forest Road School was without power for 13 days.

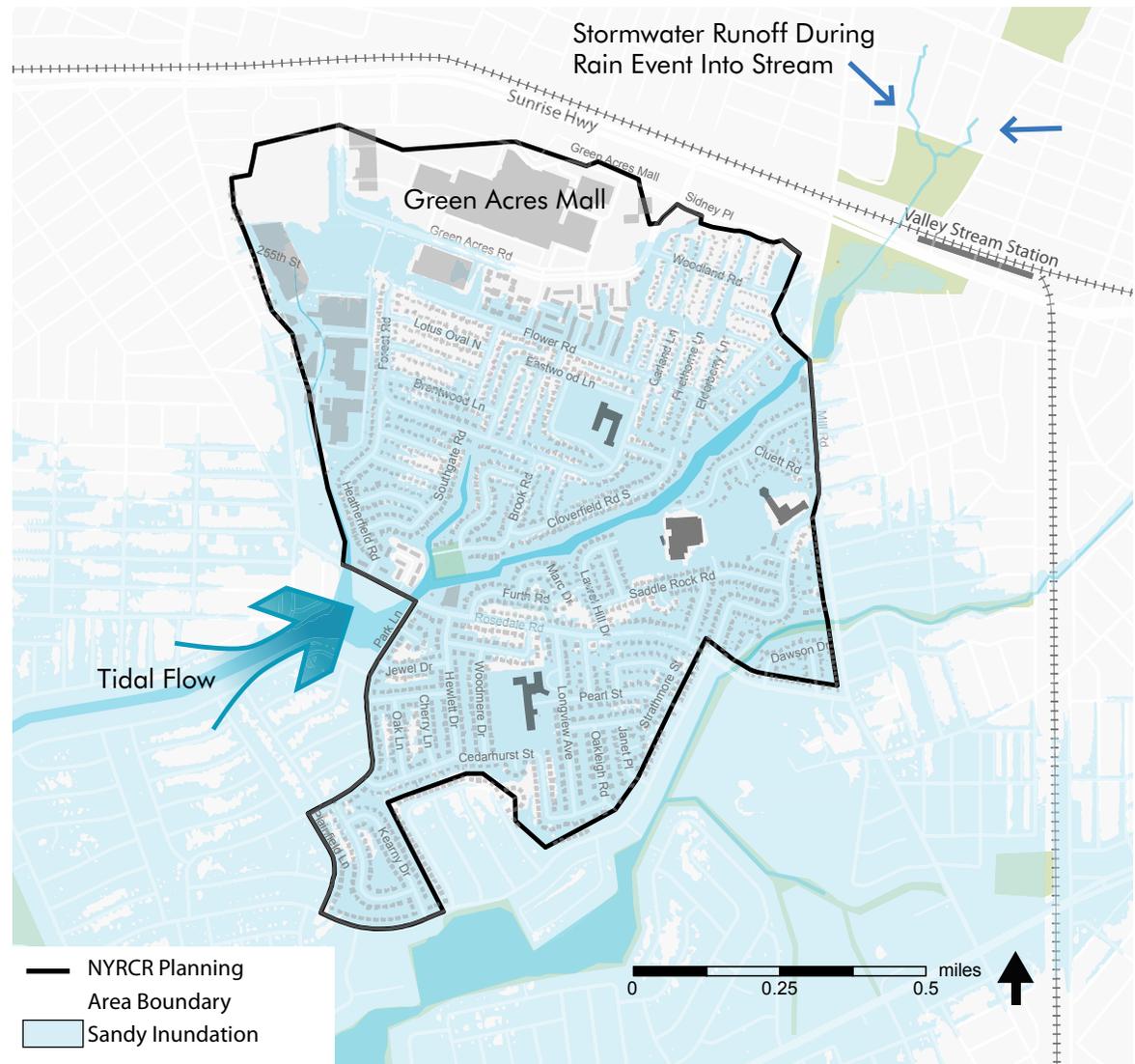


Figure 4: Sandy Inundation

1.5 EXISTING PLANS AND STUDIES

Several plans, policies, procedures and resources exist that address the present conditions, regulatory framework, community goals and issues, as well as resilience opportunities in South Valley Stream. These resources have been produced by a variety of stakeholders including public agencies at all levels (federal, state, county, and town), regional planning groups, non-profit organizations, academic institutions, community stakeholders and private groups. Reconstruction strategies and management measures included in the Final NYRCR Plan cannot be formulated in a vacuum and must recognize the planning work completed to date and be complementary to these other efforts. A list of relevant regulatory and advisory documents is included below. A summary of each of these documents can be found in Appendix A.

REGULATORY

- Federally approved Significant Coastal Fish and Wildlife Habitats
- New York State Coastal Management Program and Final Environmental Impact
- Nassau County Department of Public Works Drainage Requirements
- Nassau County Stormwater Management Program Plan
- Town of Hempstead Adopted 2013 Budget
- Environmental Conservation Law, § 17-0301, Part 885: Nassau County Waters

ADVISORY

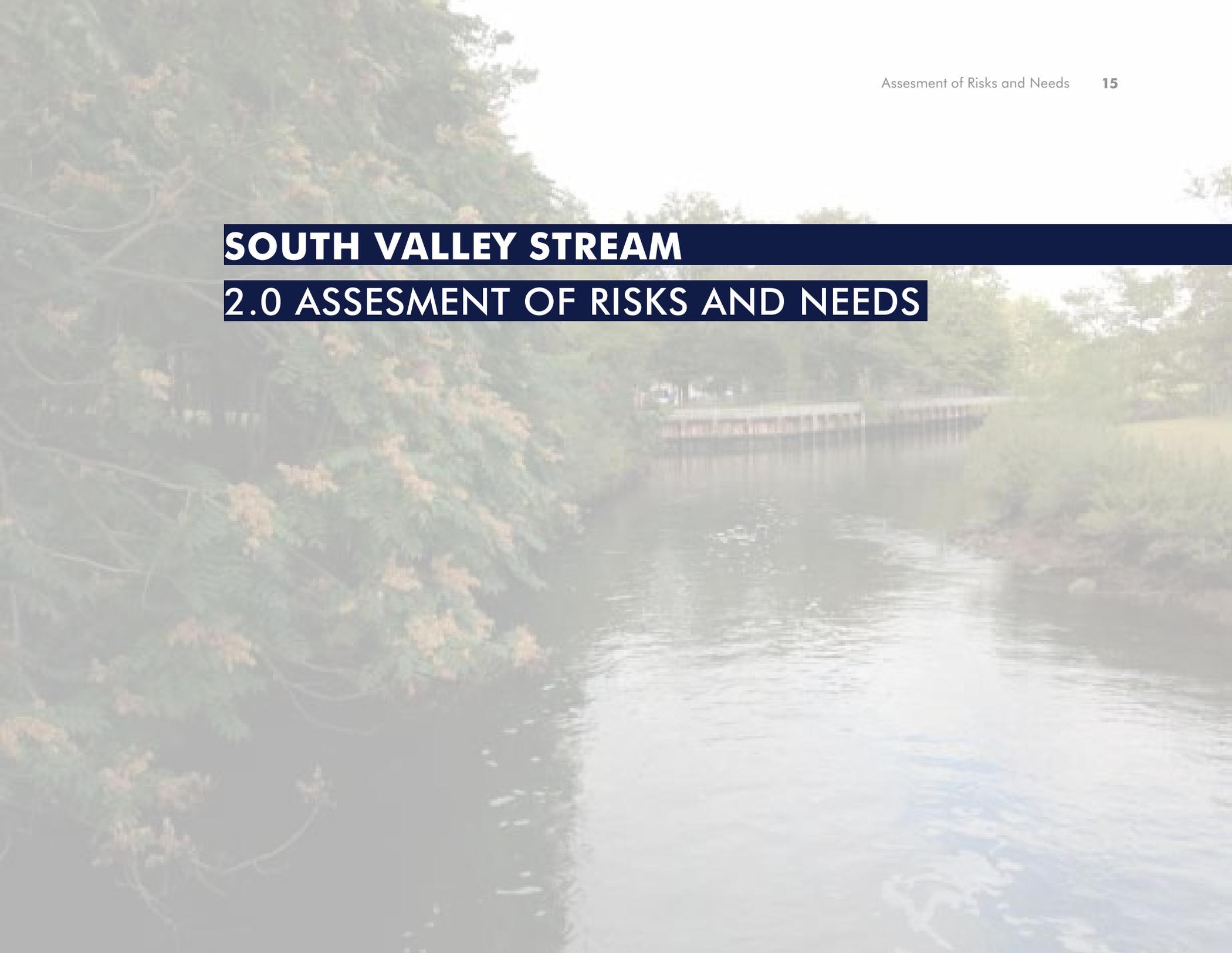
- Hurricane Sandy Rebuilding Strategy
- Nassau County Draft Master Plan
- Nassau County Multi-Jurisdictional
- Long Island Regional Economic Development Council Strategic Plan
- Cleaner Greener Long Island
- The Long Island Index: "Places to Grow"
- Long Island Infrastructure Priorities to Recover from Hurricane Sandy, Long Island Association
- Nassau County 2013 Annual MS4

Report

- Nassau Urban County Consortium 5 Year Consolidated Plan
- Nassau County Infill Redevelopment Feasibility Study: Cultivating Opportunities for Sustainable Development
- The Atlantic Ocean/Long Island Sound Basin Waterbody Inventory and Priority Waterbodies List
- Water Body Inventory for the South Shore Long Island Watershed, Water Body Inventory for the Western Long Island Sound Watershed
- Long Island 2035 Sustainability Plan and Visioning Initiative
- Long Island 2035 Comprehensive Sustainability Plan
- Long Island South Shore Estuary Reserve - Comprehensive Plan

SOUTH VALLEY STREAM

2.0 ASSESMENT OF RISKS AND NEEDS



2.0 ASSESMENT OF RISKS AND NEEDS

The process of completing a NY Rising Community Reconstruction Plan is largely framed in terms of community assets and the risks that they face. Assets are a critical component of the NYRCR Plan because these are facilities, institutions, or networks that are essential to day-to-day life, rapid disaster recovery and long-term resilience in South Valley Stream.

In order to create a plan that protects critical assets, the NYRCR Planning Committee must also consider the relative risk that these community assets face. To do so, the NYRCR Plan will utilize risk assessment maps which identify whether certain assets are located within extreme, high, or moderate risk areas. The following presents a preliminary analysis of the assets and risk in the South Valley Stream Planning Area.

2.1 UNDERSTANDING ASSETS AND RISKS

The NYRCR planning process seeks to ensure that both reconstructed areas and new construction following Superstorm Sandy are more resilient to future storms. Resilience is the ability of a community to prepare for and adapt to changing conditions and withstand and recover rapidly from disruptions.

ASSETS

Assets are features which the community values, ranging from commercial areas, neighborhoods, schools, and healthcare facilities to infrastructure and natural habitats and cultural resources. To become a more resilient community, South Valley Stream must identify ways to strengthen and protect its social, economic and natural resource assets that have been, or will be, affected by coastal hazards. Several assets were identified that were either impacted by Superstorm Sandy and Hurricane Irene, are at risk of being impacted by future storms, or provide critical recovery functions for residents and businesses in risk areas. The South Valley Stream NYRCR Planning Committee prioritized these assets that are critical or locally significant, and which might provide services for socially vulnerable populations.

RISKS

Risk is the chance that an asset will be damaged or destroyed by future storm events. New York State has developed risk assessment area mapping to define areas at risk from coastal hazards in relation to their topography, Federal Emergency Management Agency (FEMA) flood zones, previous storm surge inundation, sea level rise, National Weather Service (NWS) shallow coastal flooding advisory thresholds, and natural shoreline features. The resulting coastal risk assessment areas illustrate a wide range of coastal risks in South Valley Stream, for regular precipitation and extreme storm events, as well as future storms under projected sea level rise. The risk maps are categorized into three levels of risk: extreme, high and moderate (Figure 5).

Assessing the South Valley Stream community's risks enables prioritization of projects and reconstruction strategies that can protect specific assets by reducing their risks. The risk maps illustrate that the entirety of the South Valley Stream NYRCR Planning Area is at risk for future coastal storm events. The majority of the community is located in the high risk area, with a small but significant extreme risk area located near where South Valley Stream crosses under Rosedale Road and the Chase Bank. The area at lowest risk is Green Acres Mall, which sits in the moderate risk area. Risk

is assessed by measuring **hazard**, the likelihood and magnitude of a future storm, evaluating **exposure**, or what mitigating impact the coastal protective features will have, and determining **vulnerability**, or the ability of an asset to resist damage from a future storm event.

Hazard

South Valley Stream faces varying types of hazards:

- Frequent, low intensity storm events such as average rainfall, causing stormwater drainage issues and stormwater induced flooding in the 100-year floodplain.
- Infrequent, high intensity storm events, such as above average rainfall, northeasters or hurricanes, causing storm surge and tidally induced flooding in the 500-year floodplain.
- Combinations of stormwater and tidal flooding.
- High winds, possibly in combination with either type of hazard above.
- Long-term hazards posed by bank erosion and seal level rise.
- Power outages during weather events, including extreme heat or winter snow storms.

Exposure

The high point of South Valley Stream is Green Acres Mall, at an elevation of 18 feet, which slopes downward to an elevation of two feet at Hook Creek, and as low as zero at South Valley Stream. Exposure to tidal flooding is heightened by sandy soils with a high erosion rate along Hook Creek, and limited shoreline defenses along both water bodies, putting the waterline in frequent, even daily, contact with neighboring homes and parkland. These local topographic and shoreline conditions increase the impacts of tidal flooding and coastal hazards on the assets identified by the community, most significantly on the residential community of Mill Brook, Brook Road Park, and Forest Road School.

Vulnerability

At the community level, South Valley Stream is significantly vulnerable to the impacts of storm events given its low elevation in relation to base flood elevation, and exposure to storm surge. Vulnerability varies for individual assets.

 **Extreme Risk Areas:** Areas currently at risk of frequent inundation, vulnerable to erosion in the next 40 years, or likely to be inundated in the future due to sea level rise.

Extreme risk areas include:

- FEMA V zone.
- Shallow Coastal Flooding per NOAA NWS's advisory threshold.
- Natural protective feature areas susceptible to erosion.
- Sea level rise - Added 3 feet to the MHHW* shoreline and extended this elevation inland to point of intersection with ground surface.

*Mean Higher High Water (MHHW):

A tidal datum. The average of the higher high water height of each tidal day observed over the National Tidal Datum Epoch. For stations with shorter series, simultaneous observational comparisons are made with a control tide station in order to derive the equivalent datum of the National Tidal Datum Epoch. (National Oceanic and Atmospheric Administration)

 **High Risk Areas:** Areas outside the Extreme Risk Area that are currently at infrequent risk of inundation or at future risk from sea level rise.

High risk areas include:

- Area bounded by the 1% annual flood risk zone (FEMA V and A zones).
- Sea level rise - Added 3 feet to NOAA NWS coastal flooding advisory threshold and extended this elevation inland to point of intersection with ground surface.

 **Moderate Risk Areas:** Areas outside the Extreme and High Risk Areas but currently at moderate risk of inundation from infrequent events or at risk in the future from sea level rise.

Moderate risk areas include:

- Area bounded by the 0.2% annual risk (500 year) flood zone, where available.
- Sea level rise - Added 3 feet to the Base Flood Elevation for the current 1% annual risk flood event and extended this elevation inland to point of intersection with ground surface.
- Area bounded by the Sea, Lake, and Overland Surge from Hurricanes model (SLOSH) category 3 hurricane inundation zone.

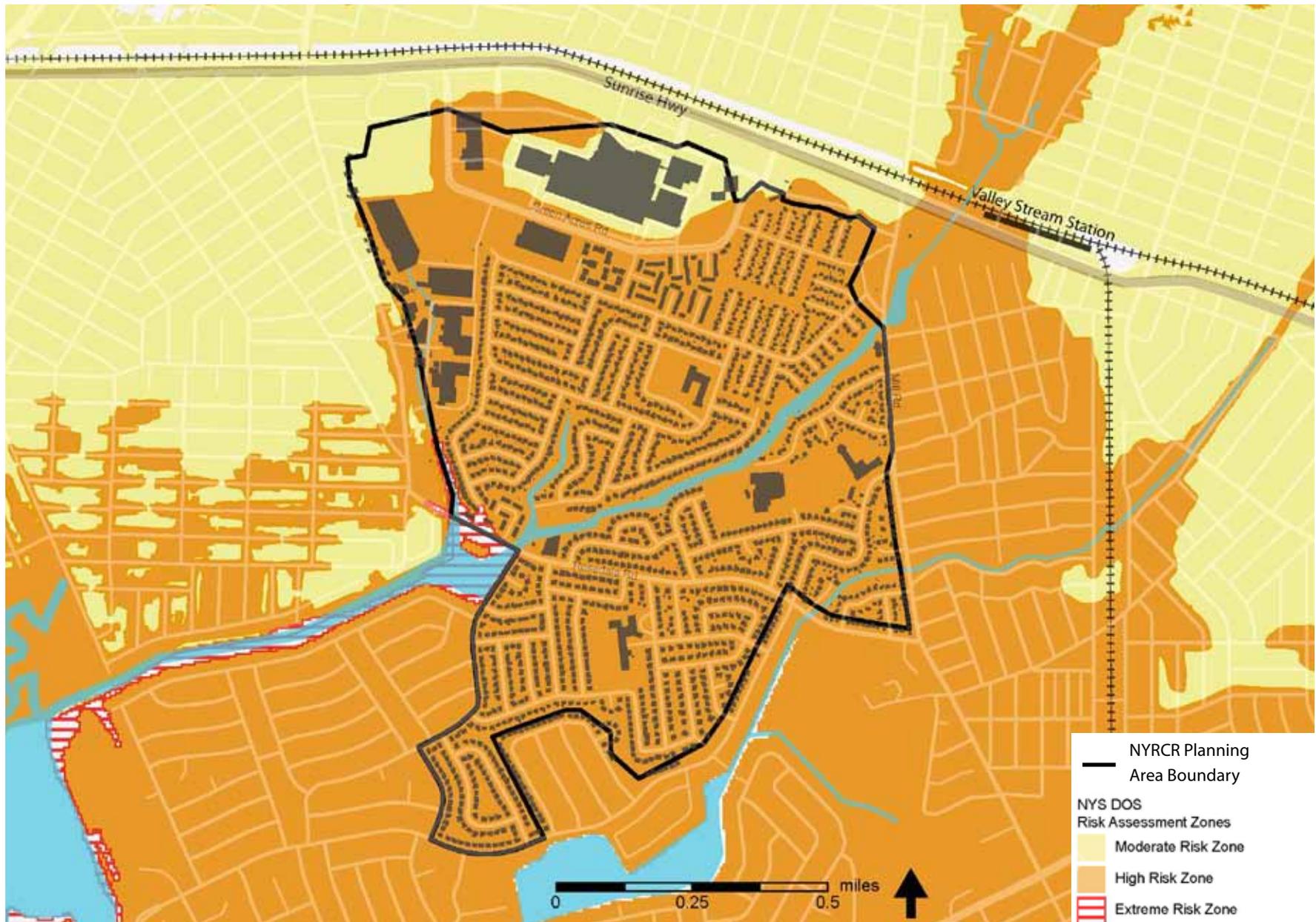


Figure 5: Risk Assessment Zones. Source: NYS Department of State Coastal Management Program, NOAA, FEMA, and ESRI

2.2 IDENTIFICATION OF ASSETS AND RISKS

Critical assets in South Valley Stream are grouped into six categories: Economics, Health & Social Services, Socially Vulnerable Populations, Housing, Infrastructure Systems, and Natural & Cultural Resources. Assets were identified through a series of exercises that involved community input, research, and analysis, including:

- Discussions at NYRCR Planning Committee Meetings
- Feedback at Public Engagement Meetings
- Meetings in the local communities with NYRCR Planning Committee members, local officials, and community members
- Site tours
- Data Analysis

The following presents a summary of the assets at risk within the Planning Area identified through the aforementioned assessment process.

2.2.1 ECONOMICS

The primary economic assets in South Valley Stream are Green Acres Mall and Green Acres Plaza, with several large retailers such as Home Depot and BJ's Wholesale Club. The Mall has various small and large businesses, restaurants, and serves as an employment

hub. Among the economic assets in South Valley Stream, the Mall and Plaza are at the lowest risk (moderate) due to their higher elevation and greater distance from tidal surge conditions than other economic assets in South Valley Stream.

Additional economic assets are located along Rosedale Road and Mill Road, including the Chase Bank on Rosedale Road, which is located in an extreme risk area and suffers routine flooding (Figure 6). Various small businesses in a strip shopping mall along Mill Road are at high risk. Economic Assets outside of the NYRCR Planning Area on which residents rely include Key Food and the Parkdale Pharmacy on Rosedale Road, and businesses along Sunrise Highway. Key Food is located within the extreme risk zone, and when inundated, causes loss of service to the only grocery store within walking distance of the Mill Brook Community.

Economic Examples:

Employment hubs and downtown centers, office buildings, industrial warehousing, retail stores, small businesses, banks and tourism destinations.



Green Acres Mall



BJ's Wholesale Club



Retail along Mill Road

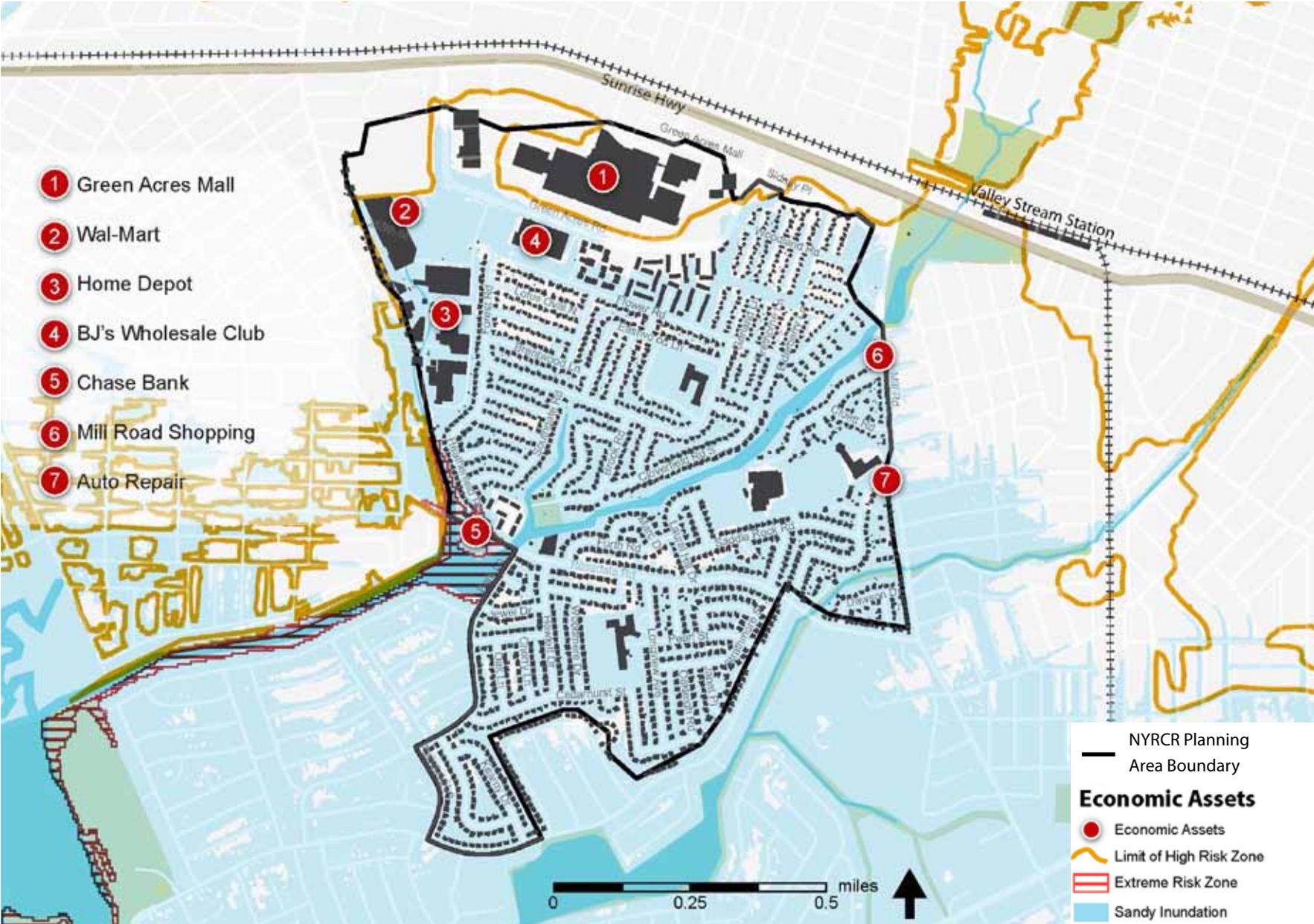


Figure 6: Asset Inventory: Economics

2.2.2 HEALTH AND SOCIAL SERVICES

Several schools in South Valley Stream are located in the high risk area, including the Forest Road School, Valley Stream South High School, Robert Carbonaro School and Ogden Elementary School, as well as day care centers such as Yale Academy After School, Harbor Kidz and Forbin Francoise (Figure 7). Various residential medical offices and healthcare services at high risk are dispersed throughout the Mill Brook Community. Other health and social services on the periphery of the community, just outside the planning area boundary, include Sunrise Family Foot Care, Valley Stream Medical Office and pharmacies at Wal-Mart, Target, all at high risk, as well as Parkdale Pharmacy on Rosedale Road, which sits in an extreme risk area. The Health and Social Services assets category also includes government services and emergency operations, which in South Valley Stream is limited to the Nassau County Police outpost at Green Acres Mall.

2.2.3 SOCIALLY VULNERABLE POPULATIONS

Socially vulnerable populations in South Valley Stream are concentrated among children, senior citizens, and persons with disabilities or limited mobility. The elderly population is both dispersed throughout high-risk neighborhoods, as well as concentrated in Green Acres Senior Center on Flower Road, which is situated in a high risk zone. As discussed in Section 3.2.2, Health and Social Services, several schools and day care centers are also located in the high risk area. The Long Island Power Authority (LIPA) maintains a confidential list of vulnerable residents who rely on electricity because of medical conditions.

Health & Social Services Examples:

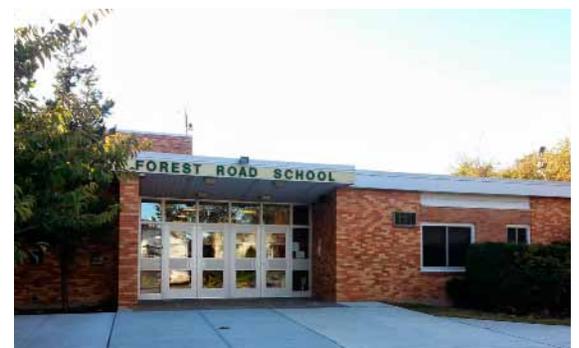
Schools, health care facilities, day care and elder care, government buildings, media and communications, and first responders such as police, fire and rescue.

Socially Vulnerable Populations Examples:

People with disabilities, low-income populations, the elderly, young children, homeless and people at risk of becoming homeless.



Valley Stream Medical Office



Forest Road School



Nassau County Police

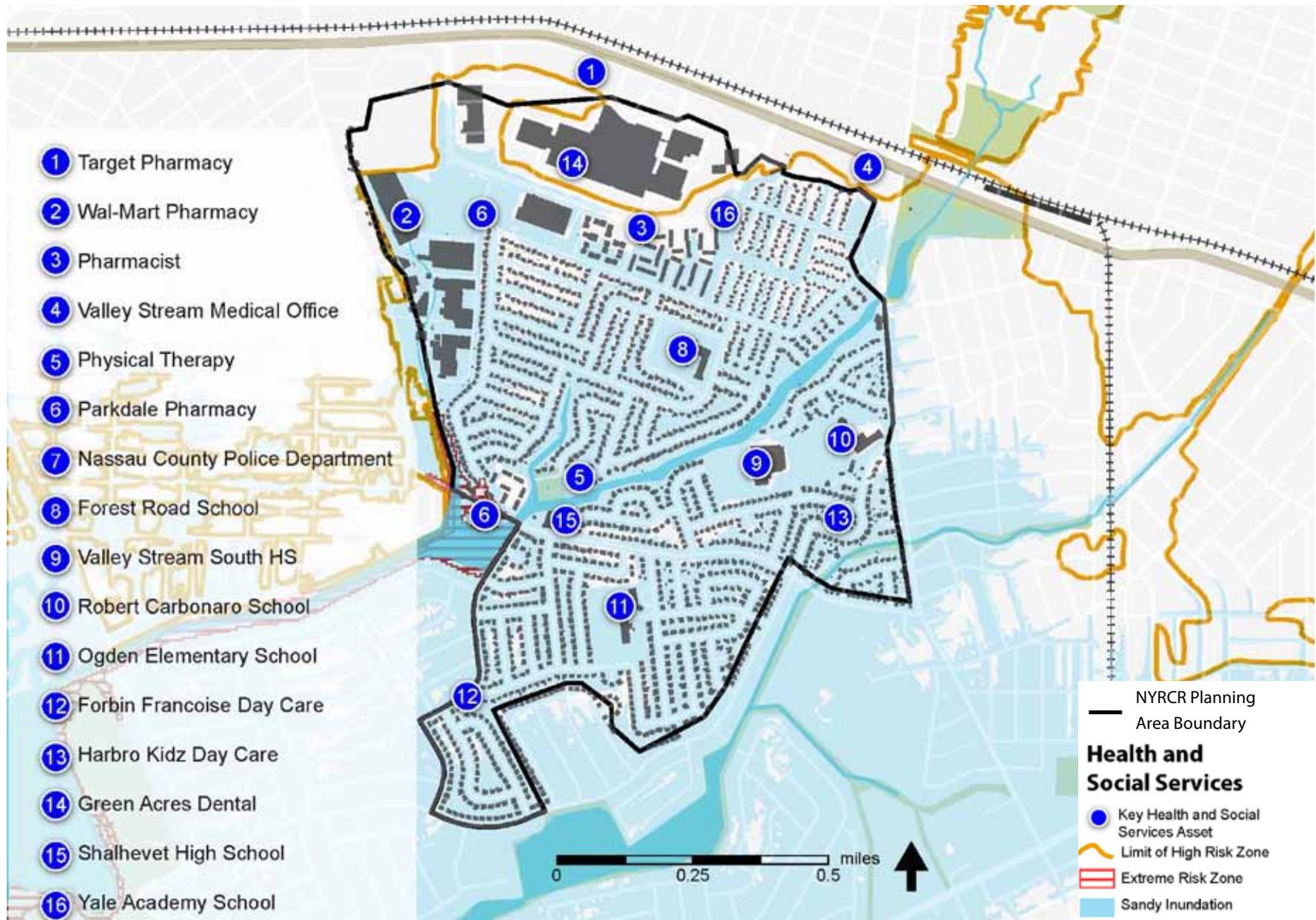


Figure 7: Asset Inventory: Health and Social Services

2.2.4 HOUSING

Housing in South Valley Stream is largely divided into two neighborhoods of single-family residences, the Mill Brook community north of Valley Stream and North Woodmere south of Valley Stream (Figure 8). With two access roads both susceptible to flooding, the Mill Brook Community is at high risk for future hazards, with Heatherfield Road at extreme risk bordering Hook Creek. North Woodmere is also located entirely within a high risk area. In general single-story homes throughout South Valley Stream and those with basements or driveways below ground elevation are also particularly vulnerable. Multi-family housing assets include the Vanderbilt Way Condominiums, which straddle the high and extreme risk areas, and Mayfield Apartments, located in the high risk area.



Neighborhood



Green Acres Senior Center



Neighborhood along Rosedale Road



Neighborhood along Hook Creek Extension



Vanderbilt Condominiums



Mayfield Estates

Housing Examples:

Single-family residential neighborhoods, condominiums, multi-family properties, and senior housing.

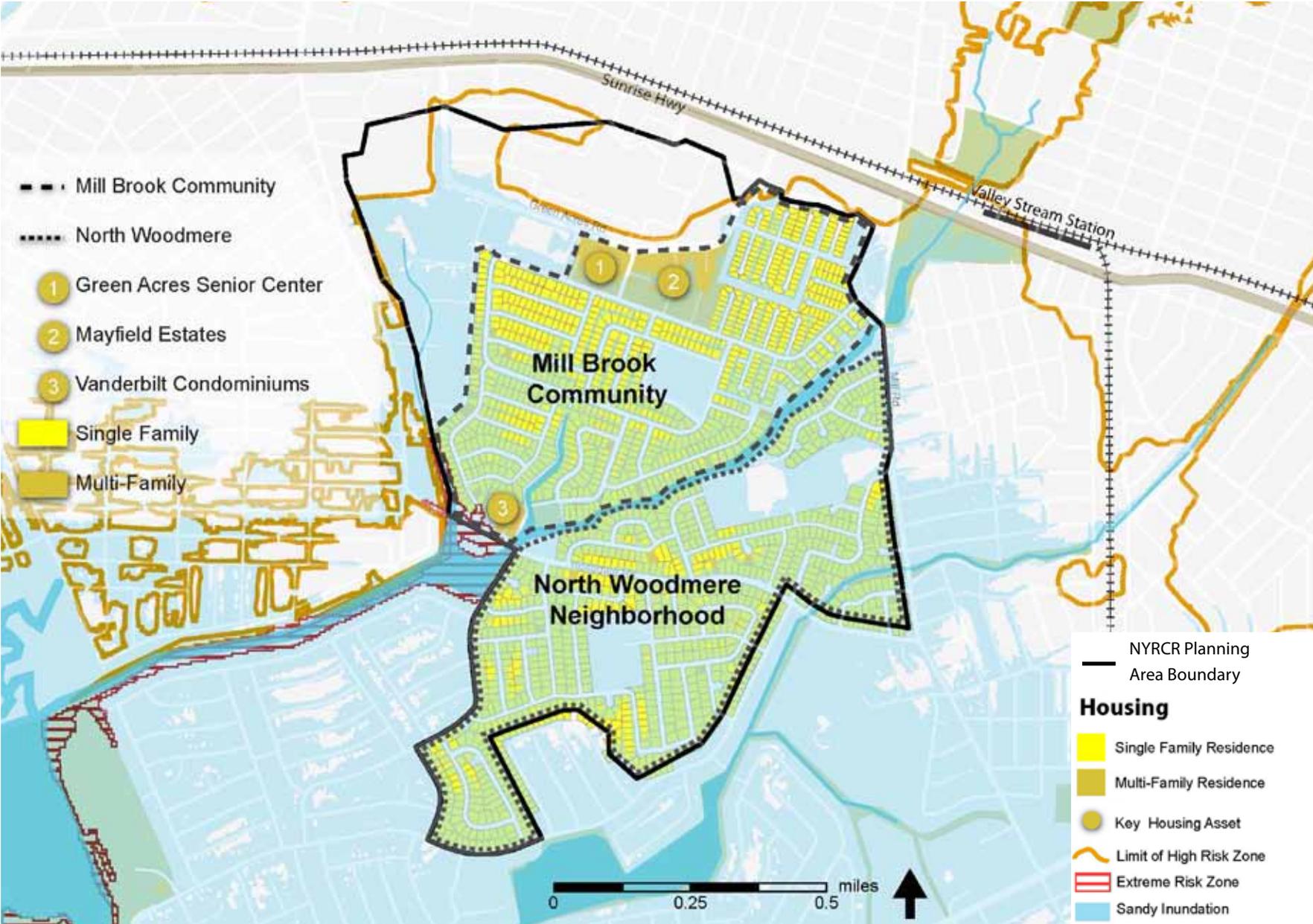


Figure 8: Asset Inventory: Housing

2.2.5 INFRASTRUCTURE

Key infrastructure systems in South Valley Stream include roadways, stormwater and water distribution infrastructure, and power utilities including electric and natural gas. Key roadways include Sunrise Highway to the North, Mill Road to the east, and Rosedale Road which cuts across the community from east to west, as well as the only two entrances to the Mill Brook community at Flower Road and Heatherfield Road (Figure 9). Rosedale Road is at extreme coastal risk, as tidal surge from Hook Creek and Valley Stream can inundate the bridge. Street gates exist between the Mill Brook Community and Green Acres Mall at Mayfield Lane and Woodland Road, which can be opened for emergency access.

The stormwater and storm sewer system are comprised of pipes maintained by the Town of Hempstead under local roads, which feed into larger mains and pump stations maintained by Nassau County. These systems suffer varying degrees of extreme to moderate risk, and while their specific localized condition is unknown, the storm sewer system in its current condition generally appears to be inadequate to handle high volumes. Infrastructure assets also include fuel distribution, of which the only gas station within the planning area is Gulf/Hoffner's fuel station. This gas station is located in an extreme risk area and is regularly flooded during minor precipitation events. Various gas stations immediately outside the study area are also critical, including the Shell Station located in an extreme risk area on Rosedale Road. Electric utility systems maintained by the Long Island Power Authority are critical assets at especially

high risk, including the substation on Flower Road, as power outages following Superstorm Sandy reportedly lasted for longer than one month. Limited natural gas infrastructure is maintained by National Grid.

Infrastructure Examples:

Transportation such as roadways and transit, stormwater, wastewater and water supply infrastructure, gas stations, and solid waste or recycling.



Electric Power Supply- Substation



Former Pedestrian Bridge Connection



Electric Power Supply- Overhead Lines



Drain Inlets



Gulf/Hoffners Fuel Station

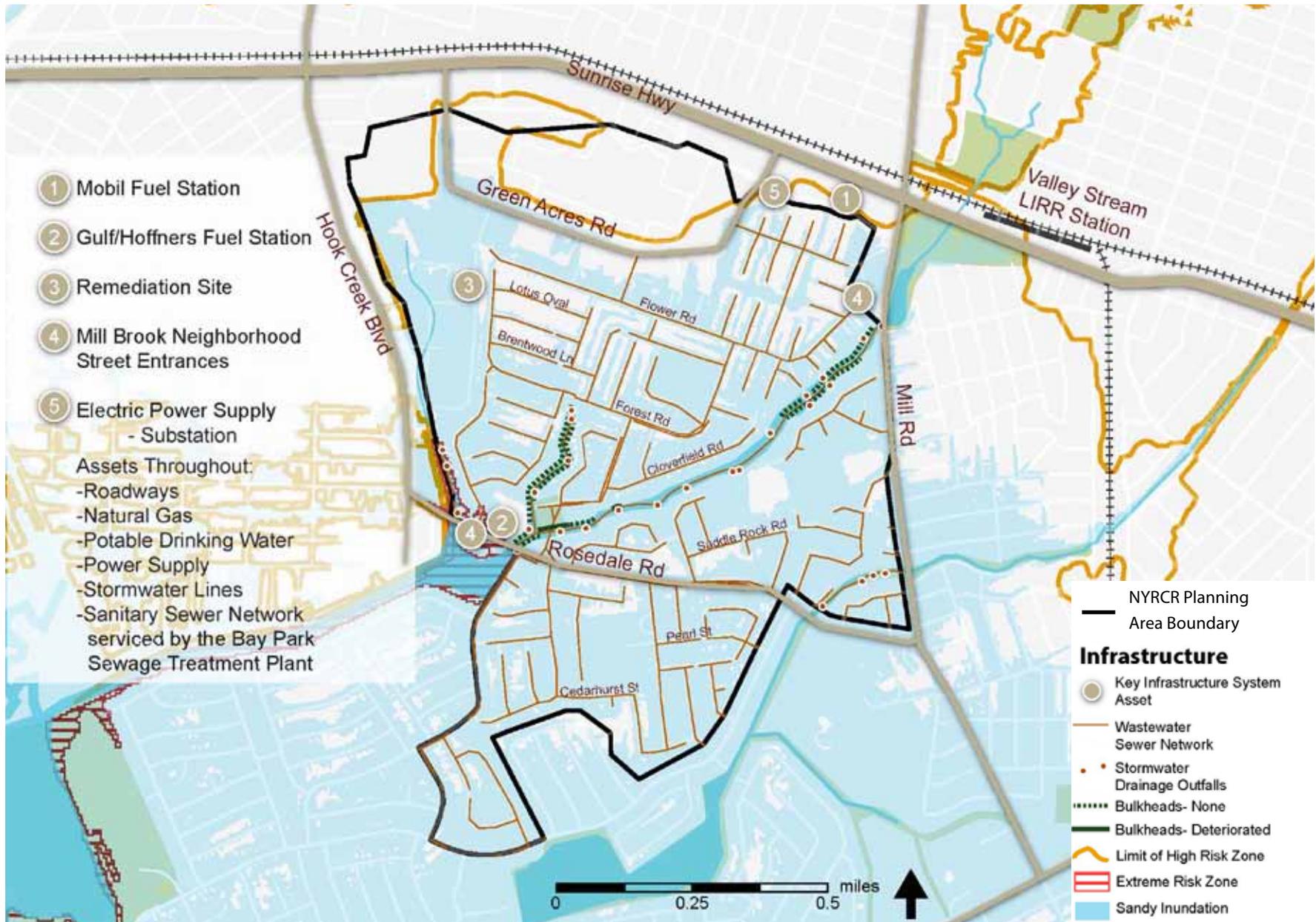


Figure 9: Asset Inventory: Infrastructure

2.2.6 NATURAL AND CULTURAL RESOURCES

Water is a valuable natural resource as well as key risk factor in South Valley Stream, with water bodies including Valley Stream, Motts Creek and Hook Creek. Several parcels of undeveloped land and walking paths in the northeastern end of the Mill Brook Community are owned by the Town of Hempstead, as well as 'the Path,' a greenway walking path along Valley Stream at the end of Cloverfield Road North (Figure 9). South Valley Stream has several recreational assets, including the Forest Road School Ball Fields and Brook Road Park, both of which were flooded during Hurricane Sandy. The fields at Valley Stream South High School, Ogden Elementary School and Robert Carbonaro School are also recreational assets in the high risk area. All of the aforementioned natural and cultural resources assets lie in the high risk area, as do several religious establishments including Temple Hillel and Congregation Ohr Torah. The Pagen-Fletcher House is outside of the study area, but is an important historical resource for the community.



Brook Park



Athletic Fields



The Path



Hook Creek



Temple Hillel



Valley Stream

Natural & Cultural Resources Examples:

Natural and Cultural Resources vary from natural & ecological habitats, wetlands and marshes, parks, recreation and open space, to museums, libraries, historic landmarks & religious establishments.

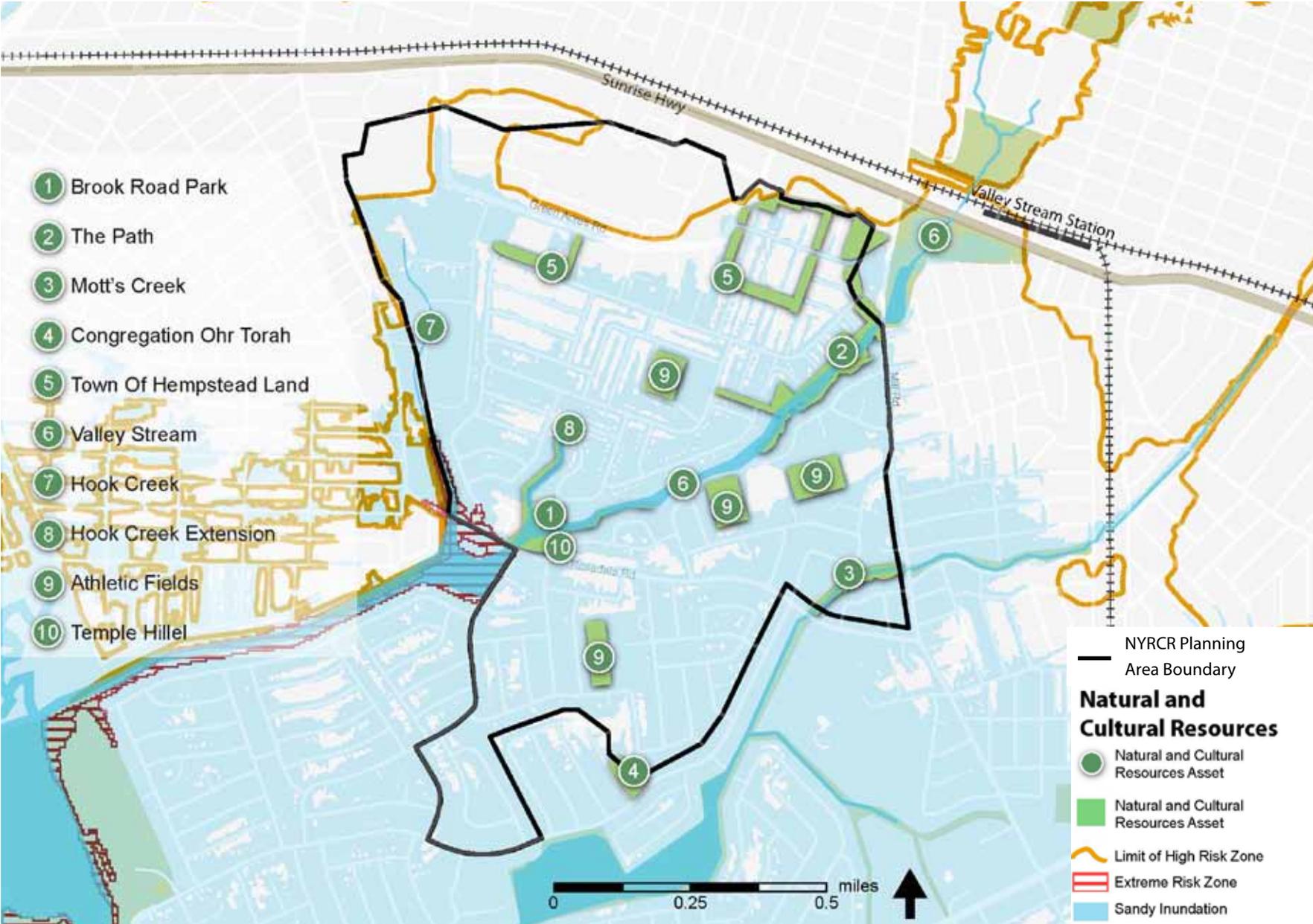


Figure 10: Asset Inventory: Natural and Cultural Resources

2.3 NEEDS AND OPPORTUNITIES

The objective of the needs and opportunities assessment is to evaluate the potential for increased resilience in the short, medium, and long-term in South Valley Stream. The following section presents an initial evaluation of the needs and opportunities within the Planning Area. These needs and opportunities will be refined through additional detailed analysis of the assets and risks within the Planning Area, as well as through input from the NYRCR Planning Committee and public. Further, while some opportunities currently exist, they may result in long-term projects, and may require environmental study or review, as well as additional funding. (See Section 4.0 for a discussion of potential key projects; see Section 6.0 for preliminary implementation structure)

2.3.1 COMMUNITY PLANNING AND CAPACITY BUILDING

Needs:

- Greater coordination between Nassau County and community-based organizations that provide critical resources for educating residents in disaster preparedness and recovery.
- Improved communication, information sharing, and awareness to facilitate emergency response.

Opportunities:

- Build upon the strong network of community-based organizations, civic pride, and neighborhood identification to improve education and outreach. (Figure 11)
- Continue the Mill Brook Civic Association's advocacy for residents in the South Valley Stream, and Project Hope's efforts to reach people impacted by Superstorm Sandy across Nassau County.

2.3.2 ECONOMIC DEVELOPMENT

Needs:

- A diverse and resilient economy. South Valley Stream has an oversupply of retail. While Green Acres Mall is an important asset, changes in retail trends in combination with retail oversupply could

make the current retail configuration vulnerable. This could adversely affect the tax base. An over-reliance on Green Acres Mall as a tax base could become problematic if retail declines.

- Additional locations for grocery stores, as the primary grocery store for South Valley Stream was inundated during Superstorm Sandy.

Opportunities:

- Evaluate the configuration of the existing retail area and vacant properties, within the context of South Valley Stream's community character, in order to be prepared to adapt to changing market conditions.
- Maintain the long-term viability of economic assets and tax-base. (Figure 12)

2.3.3 HEALTH AND SOCIAL SERVICES

Needs:

- Ability of schools in South Valley Stream to withstand extreme weather, bounce back quickly from disasters, and continue to provide resources to local children and their families while the neighborhood recovers.
- Heating and cooling centers within South Valley Stream, in the case of extreme heat

Water Conservation and Stormwater Management Information Outreach to Homeowners and Schools- potential projects



2.3.4 HOUSING

Needs:

- Preserve neighborhood character and sense of community in South Valley Stream, while maintaining housing choices. South Valley Stream is densely populated, and the housing is generally expensive. The vacancy rate in South Valley Stream (3.6% in 2010) is lower than the vacancy rates in Nassau County and the New York-Long Island-Northern New Jersey Municipal Statistical Area (MSA). In South Valley Stream, approximately 65.5% of renters pay 35% or more of their household incomes on gross rent (which is considered to be unaffordable). This rate is much higher than in Nassau County and the MSA.
- Resilient housing design and construction. The housing stock in South Valley Stream is aging, with the majority (78.8%) built in 1959 or earlier, and 47.5% built between 1950 and 1959. The housing stock in South Valley Stream is becoming physically obsolete, especially when considering the physical effects of storms.

Opportunities:

- Consider the safety of South Valley Stream residents by employing design and construction practices capable of withstanding the impacts of extreme weather events for new housing, home improvements, or redevelopment.

Figure 11: Water Conservation and Stormwater Management Information Outreach to Homeowners and Schools events, nor'easters or other storms that disable the power supply.

Opportunities:

- Work with the active civic associations and parent-teachers associations at the Hewlett-Woodmere Union Free School District and the Valley Stream Union Free School District to create an emergency

- response and recovery plan.
- Establish an informal heating and cooling center at Green Acres Mall, which has backup power supply sources. Residents also used the Mall's parking lot for storage of personal vehicles during and in the aftermath of Sandy, making it a potential location for future emergency parking (Figure 13)

2.3.5 INFRASTRUCTURE SYSTEMS

Needs:

- Coastal protections to buffer tidal surge. South Valley Stream is vulnerable to tidal flooding, which is exacerbated during surge conditions by stormwater drainage outlet pipes without valves to prevent the tidal flows from entering. Since Sandy, moon tides have been regularly flooding the areas around the mouth of Hook Creek in North Woodmere. A tide gate prevents high tidal flows from entering into the main stem of Hook Creek, providing a level of protection for the associated area. However this tide gate does not protect tidal flow from entering into Brook Road Park and Hook Creek extension, resulting in erosion, debris accumulation and increased flooding. The condition of an existing flood gate located at the mouth of Hook Creek is unknown, while the pump station for the tide gate is in need of repair since Sandy.
- Additional stormwater retention to increase stormwater management capacity. Sandy has effectively exposed the greater system-wide inadequacy of storm water drainage capacity in South Valley Stream. Flooding also occurs further north in South Valley Stream due to the inadequate effective capacity of the storm sewer system, which cannot store stormwater volumes when tidal flow causes backups at storm sewer outfalls. In low lying areas bordering coastal waters, these pipes without valves allow for the tide water to backflow in the stormwater system, creating temporary flooding

during high tide in the streets.

- Maintenance and/or upgrades of storm sewer infrastructure to increase stormwater management capacity. The conditions of the stormwater sewer system were unknown before Sandy, but noticeable buildup of sediment and debris within the stormwater sewer system has since been found, impeding the discharge of stormwater. It has also been

indicated during community meetings that current piping in the system and inlet basins are inadequately sized to convey the stormwater within it during a regular storm event.

- A more reliable power supply grid that provides power to critical facilities during disaster recovery.

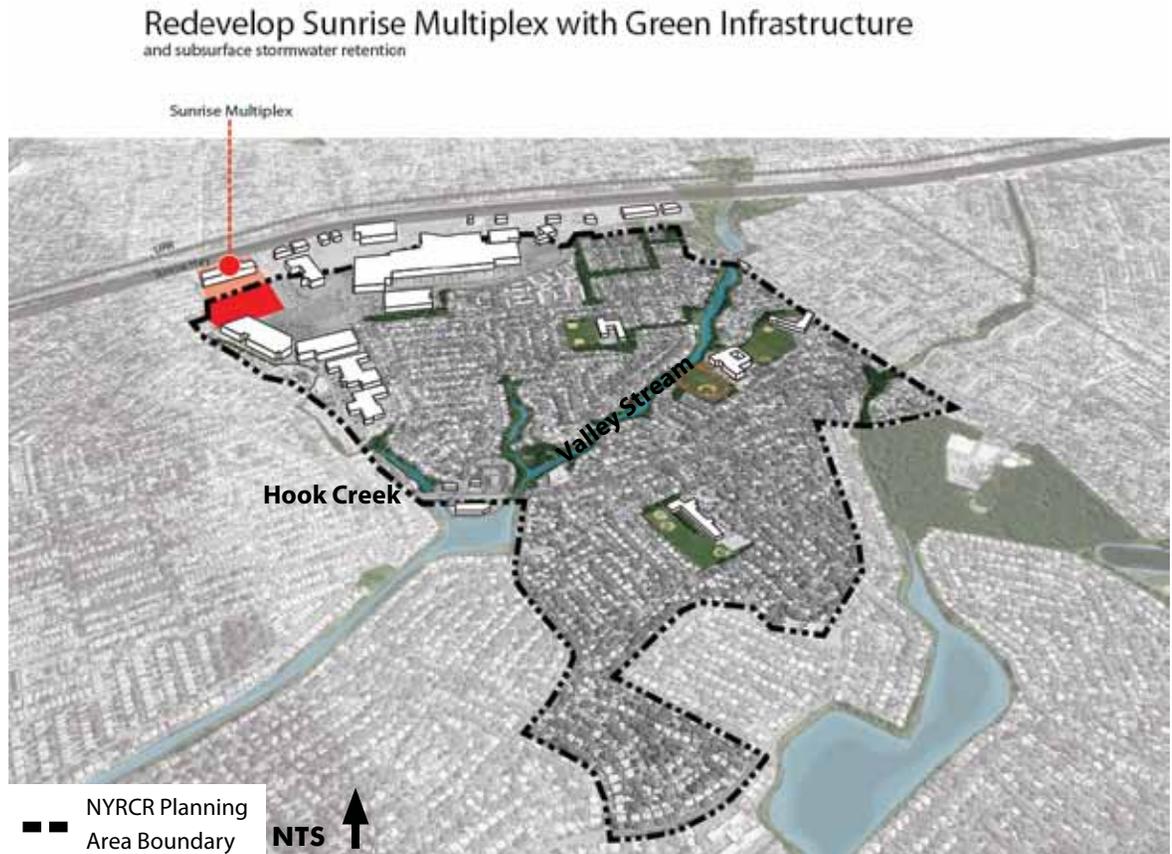


Figure 12: Redevelop Sunrise Multiplex with Green Infrastructure

Opportunities:

- Install outlet pipe valves to intercept tidal flow.
- Repair bulkheads along Hook Creek and Valley Stream, in coordination with the Town of Hempstead bulkhead repair program for municipal property.
- Repair the flood gate at the mouth of Hook Creek and the Doxey Brook stormwater pump.
- Implement green infrastructure for stormwater retention in parking lots, athletic fields, roadways, greenways and private residences.
- Build a more resilient power supply network that utilizes renewable energy and micro-grids (Figure 13).
- Expand the natural gas network in South Valley Stream. Natural gas could serve as an alternate heating source and a more environmentally sustainable power supply for generators and micro-grids (compared to diesel or gasoline). Providing a natural gas supply is a priority for key community facilities such as schools.
- Bury power lines along main trunk connections, especially where trees are being removed and replanted.

2.3.6 NATURAL AND CULTURAL RESOURCES**Needs:**

- Removal of sediment buildup in water bodies and ecosystem restoration in water bodies and natural areas. Due to the strength of the tidal surge, increased sedimentation buildup has occurred, causing sediment and debris to routinely wash onto the properties of South Valley Stream residents.
- Additional vegetation and tree cover, with proper maintenance or pruning. Sandy, and other recent storms like Hurricane Irene, have damaged and severely diminished the vegetation in South Valley Stream.
- Nature-based stormwater management. Although South Valley Stream has adequate open space and recreation areas, an increase in green infrastructure would be beneficial as additional open space or adaptation of existing open space could serve as stormwater detention/retention, reducing the amount of stormwater conveyed to the storm sewer system by South Valley Stream itself.

Opportunities:

- Stabilize riverbank and restore the stream corridors along Valley Stream and Hook Creek.
- Improve tree maintenance and reforestation of 'the path,' with consideration of opportunities for wetlands restoration and increased buffering of Valley Stream. Many areas, most notably the municipally owned open space near Cloverfield Road South known as "The Path" (Figure 14), are in need of replanting to increase stormwater absorption capacity. While trees are in need of being replanted, proper maintenance is necessary to prevent damage to power lines, such as experienced during Sandy.
- Reduce large impervious surfaces, and capture runoff from impervious surfaces with green infrastructure. Reduce large impervious areas to further lessen the volume of stormwater entering the storm sewer system, especially at locations at relatively higher elevation within South Valley Stream such as Green Acres Mall. Similar measures upstream in the watershed, north of Sunrise Highway, should be employed to reduce cumulative stormwater flows to South Valley Stream.

2.3.7 SOCIALLY VULNERABLE POPULATIONS

Needs:

- Assistance during evacuation and emergency response for senior citizens, children and persons with disabilities or limited mobility. The Nassau County Office of Emergency Management (OEM) is a key resource for evacuation and emergency response. However, OEM has experienced difficulty in identifying dispersed vulnerable populations that reside in their homes, and are not concentrated in senior communities or other healthcare facilities.
- Increased individual awareness of nearby vulnerable community members, to complement Nassau County’s formal emergency assistance protocols. With this understanding, the community could better coordinate with the County for emergency operations and disaster response, and would also be better prepared to respond to conditions that may not qualify as a severe emergency but could still be disruptive, especially to vulnerable residents.

Opportunities:

- Assist the County in identifying vulnerable populations through the Mill Brook Civic Association and connected social networks within the neighborhoods. Monitor the most vulnerable persons during a storm event through neighborly face-to-face contact.

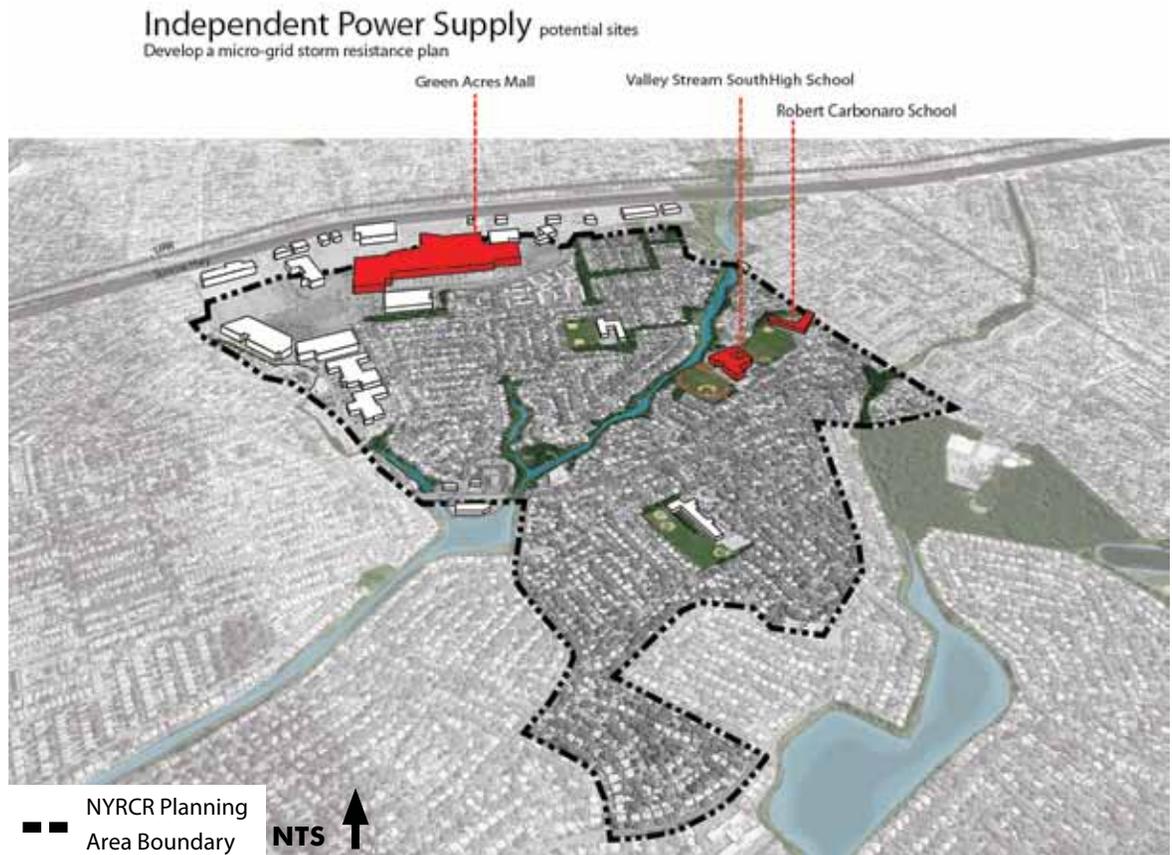


Figure 13: Independent Power Supply

- Work with LIPA to identify vulnerable populations within South Valley Stream using the authority’s list of socially vulnerable populations, pending the resident’s authorization for LIPA to share this information with Nassau County.
- Coordinate with Nassau County to expand the Millbrook Civic Association block captains program and operations during emergency response.

SOUTH VALLEY STREAM

3.0 PRELIMINARY RECONSTRUCTION STRATEGIES



3.1 KEY THEMES

Feedback garnered from the initial public outreach meetings and NYRCR Planning Committee feedback has suggested five key themes for long term recovery in South Valley Stream. These ideas are preliminary, and additional strategies are expected to emerge as the planning process and community engagement continue.

- 1. Manage Tidal Flow.**
- 2. Retain Stormwater.**
- 3. Reinforce Power Grid.**
- 4. Strengthen Communication and Coordination.**
- 5. Maintain and Enhance Economic Viability.**

A variety of management measures will be necessary to achieve long term resilience in South Valley Stream (Figure 14). The projects below represent some of the many management measures that may ultimately serve to achieve the designated reconstruction strategies. However, further investigation will be required through the Risk Assessment Scenario tool to evaluate the impact of these strategies on the protection of the key assets identified above and their costs and benefits.

3.2 RECONSTRUCTION STRATEGIES AND POTENTIAL KEY PROJECTS

COMMUNITY PLANNING & CAPACITY BUILDING

Reconstruction Strategy:

Coordinate with Nassau County Office of Emergency Management (OEM) to improve education and awareness about disaster preparedness and emergency response.

Potential Key Projects:

- Support Nassau County OEM by establishing a Community Emergency Response Team (CERT) to assist with recovery operations and communication.

Reconstruction Strategy:

Advocate for policy changes with the Town of Hempstead for greater stormwater management controls over future development.

Potential Key Projects:

- Zoning changes for Stormwater Management focusing on residential properties and Green Acres Mall

Reconstruction Strategy:

Educate the community about ways to reduce their individual impact on the stormwater system.

Potential Key Projects:

- Provide education for homeowners about stormwater capture, green infrastructure, individual check valves / back-flow preventers at catch basins, water conservation, rain barrels, french drains, and tree pruning near power lines.

Reconstruction Strategy:

Improve project implementation through community monitoring and oversight.

Potential Key Projects:

- Continue NYRCR Planning Committee engagement after finalizing the Final NYRCR Plan, to provide Planning Committee members with project status updates and fast track project completion.

ECONOMIC DEVELOPMENT

Reconstruction Strategy:

Encourage redevelopment that supports long-term economic stability while detaining stormwater through green infrastructure.

Potential Key Projects:

- Evaluate opportunities to rehabilitate properties along Green Acres Road South in conjunction with reduction of impervious area and measures to retain stormwater on-site to reduce stormwater flow to residential areas.
- Encourage the implementation of Green Infrastructure at Green Acres Mall site where possible.

HEALTH AND SOCIAL SERVICES

Reconstruction Strategy:

To provide place of refuge during critical weather.

Potential Key Projects:

- Establish warming / cooling center at available facilities within South Valley Stream.

HOUSING

Reconstruction strategy:

Maintain neighborhood character while strengthening housing stock against future extreme weather events.

Potential Key Projects:

- Encourage resilient design and construction practices for home improvement projects and new home construction.

INFRASTRUCTURE

Superstorm Sandy highlighted the fact that the infrastructure around the South Valley Stream area is failing and inadequate for the population of 2013 and the future. Multiple projects, reconstruction strategies and studies have been developed to implement the needs and opportunities on a regional and local scale for the South Valley area.

Infrastructure: regional

Reconstruction Strategy:

Gain a regional, watershed-level understanding of the hydrology affecting South Valley Stream, which will better inform stormwater management projects.

Potential Key Projects:

- Perform a Hydrologic and Hydraulic study to determine where the runoff is coming from, how much, where is it going and whether the current systems are adequate to handle 2013 conditions and future

conditions and what measures would be needed to ensure adequate stormwater management.

Reconstruction Strategy:

Minimize storm surge flooding impacts through natural and manmade measures to manage tidal flow.

Potential Key Projects:

- In support of a regional solution, align with potential initiatives by the City of New York and the US Army Corps of Engineers on possible solutions being developed for Jamaica Bay, the Rockaway Inlet, and the barrier island.
- Study flood protection options along Rockaway Turnpike at Hook Creek and Motts Creek, including moveable tidal surge barriers to attenuate tidal flow and elevating Rockaway Turnpike.
- Install green infrastructure to capture stormwater runoff before it travels downstream.
- Repair the flood gate at the mouth of Hook Creek and the Doxey Brook stormwater pump

Infrastructure: local

Reconstruction Strategy:

Increase stormwater retention capacity within and north of the South Valley Stream NYRCR Planning Area.

Potential Key Projects:

- Further research is necessary into locations for green infrastructure and retention structures, as well as the types of systems with the highest benefit at lowest cost.
- Future redevelopment at Green Acres Mall may presents an opportunity to implement green infrastructure systems, including semi-pervious pavement, landscaped stormwater detention areas such as swales as well as other parks and open parking lots and green and blue roofs.
- Development of a stormwater system maintenance and monitoring plan will allow for proper maintenance of the current system to prevent back flows and overflows. Documentation of flooding conditions would help understand specific storm conditions and the effectiveness of stormwater management measures.

Reconstruction Strategy:

Restore shoreline through structural and natural protective features.

Potential Key Projects:

- Incentivize shoreline restoration along private property, including bulkhead repairs, by encouraging private property owners to organize for more cost efficient comprehensive and continuous shoreline restoration and protection.
- Repair bulkheads at Brook Road Park.

- Restore natural shoreline on Town of Hempstead property along Valley Stream known as the Path, including removal of former pedestrian bridge.

Reconstruction Strategy:

Provide redundancy in electricity infrastructure and establish alternative sources of energy.

Potential Key Projects:

- Identify areas that would benefit from micro-grids and communication facilities (e.g. Forest Road School or Green Acres Mall).
- Extend the natural gas network in the community, especially to critical facilities that may use such natural gas supply for generators and micro-grids.
- Relocate utility lines underground in forested areas, with higher priority for those connecting to critical infrastructure, schools, and primary roadways.
- Identify renewable energy sources that could be used to maintain power during emergency situations. Research and conduct cost analysis for alternative energy sources (solar, wind, water turbine) that can provide other means to maintain the power supply.

NATURAL & CULTURAL RESOURCES

Reconstruction Strategy:

Increase stormwater retention capacity through man-made and nature-based systems.

Potential Key Projects:

- Construct underground storage tanks and convert impervious surfaces to pervious areas, increasing stormwater storage capacity and infiltration.
- Implement green infrastructure and native plantings for stormwater retention along Valley Stream, at Town of Hempstead property known as ‘the Path.’

Reconstruction Strategy:

Corridor restoration and riverbank stabilization, including bulkhead repair, to prevent erosion along Hook Creek and Valley Stream.

Potential Key Projects:

- Dredging and riverbank stabilization is underway in the north of the South Valley NYRCR Planning Area from Mill Pond north to Hendrickson pond. This riverbank stabilization will help eliminate the current moon tide flooding occurring by re-establishing the protection systems that have deteriorated in the past years throughout the South Valley Stream area. Further stabilization is necessary throughout the river corridors.

SOCIALLY VULNERABLE POPULATIONS

Reconstruction Strategy:

Provide a more resilient social infrastructure and communications network among South Valley Stream residents.

Potential Key Projects:

- Identify vulnerable populations who need assistance with emergency operations and response.
- Expand neighborhood communications network to share information and raise awareness through technology and face-to-face interaction with block captains.

Reconstruction Strategy:

Provide safe and pedestrian accessible refuge from storm impacts within the South Valley Stream community

Potential Key Projects:

- Formalize personal vehicle storage at Green Acres Mall during extreme weather events.

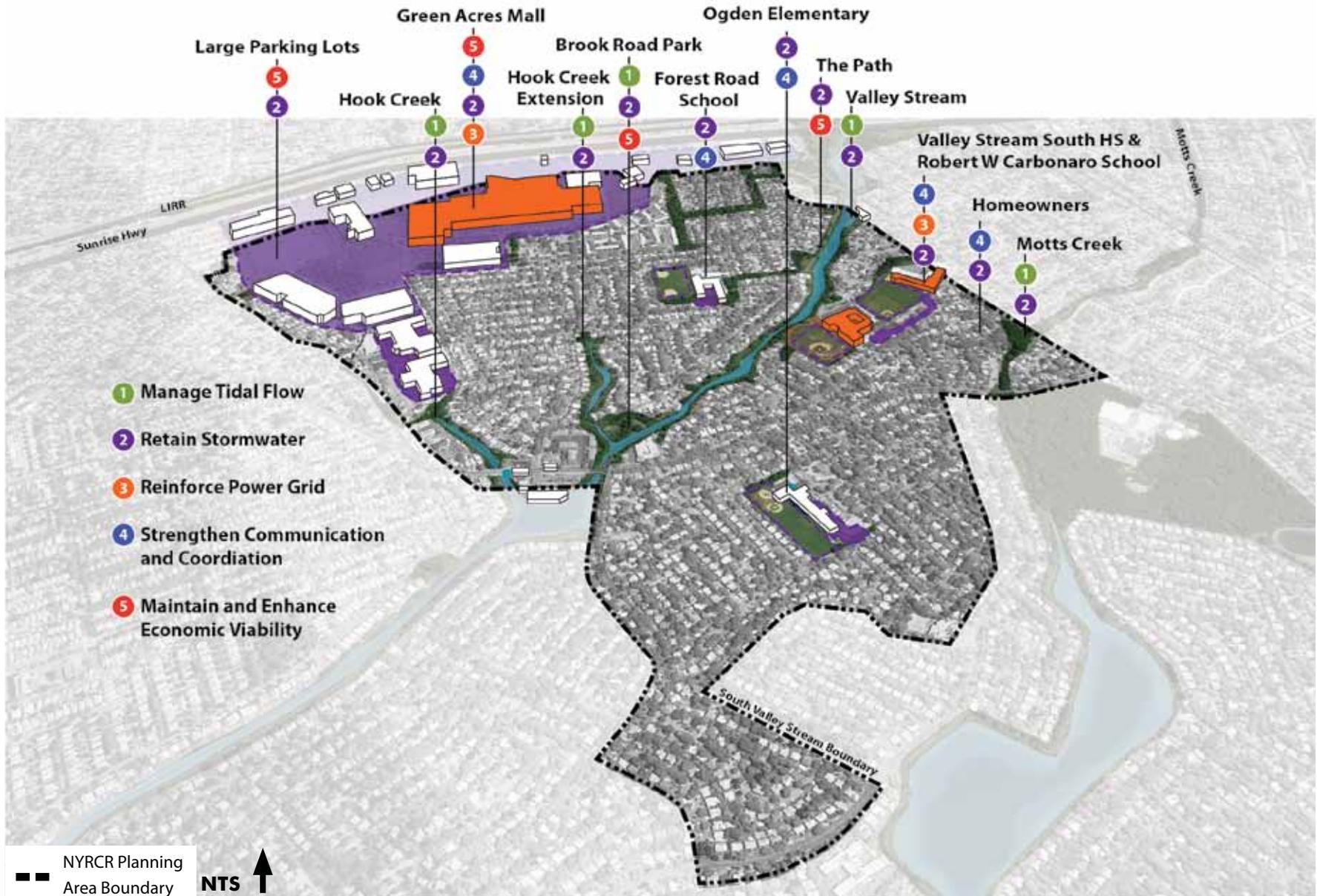


Figure 14: Key Themes and Reconstruction Opportunity Sites

3.3 PRELIMINARY IMPLEMENTATION STRATEGIES

The NYRCR Plan requires careful consideration of what assets are at risk, what resources are available, and the capacity for mitigating risk through specific management measures. Selected management measures may include a variety of projects and actions, which would reduce the risk to a given asset, several assets or the community as a whole.

New York State has identified six classes of management measures that can reduce the exposure and vulnerability of assets to storm impacts. While some management measures have more immediate benefit to risk and resilience, others are more effective in combination with other strategies. These classes include:

- Class 1: Conserve, Restore, and Enhance Natural Protective Features
- Class 2: Resilient Construction
- Class 3: Structural Defenses
- Class 4: Land Use Planning and Regulation
- Class 5: Market-Based Methods
- Class 6: Increased Awareness and Information

As potential management measures are developed, the NYRCR Planning Committee will weigh the applicability of management measures according to the nature of the risk and immediacy of hazard, entities involved,

and available resources. Projects will then be prioritized by their capacity to reduce immediate exposure to risk, serve multiple recovery functions, and support the larger recovery strategy.

For the purposes of this planning effort, the following table is a summary of potential management measures for the specific reconstruction strategies identified above. (Table 1) The management measures are divided into regional and local projects, according to time frame (short, medium, and long-term). The timeframe noted is the anticipated total length of calendar time required to fully complete a given project, conservatively recognizing the complexities and duration of permitting, funding and private property access authorization associated with certain types of infrastructure improvement projects. For the purposes of this planning effort, short-term is generally defined as one to three years in length, while medium-term is three to seven years, and long-term projects may extend beyond seven years. All responsible agencies noted are tentative, pending further interagency communication prior to completion of the final plan.

Management Measures			Reconstruction Strategies						Classification					
Potential Project Example	Timeframe	Responsible Entity	Community Planning and Capacity Building	Economic Resilience	Health and Social Services	Housing	Infrastructure Systems	Natural and Cultural Resources	Class 1: Conserve, Restore, and Enhance Natural Protective Features	Class 2: Resilient Construction	Class 3: Structural Defenses	Class 4: Land Use Planning and Regulation	Class 5: Market-Based Methods	Class 6: Increased Awareness and Information
Manage Tidal Flow														
<i>Restore shoreline at Brook Road Park through asphalt removal, living shoreline measures and bulkhead repairs</i>	Short	Town of Hempstead					✓	✓		✓	✓			
Perform a Hydrologic and Hydraulic study of the Hook Creek / Head of Bay Watershed	Short	Nassau County, NYS Department of Environmental Conservation (DEC), NYS Department of State (DOS), South Shore Estuary Reserve (SSER)	✓					✓	✓					
Incentivize contiguous shoreline restoration and protection through vegetated buffering and bulkhead repairs	Medium	Town of Hempstead	✓				✓		✓	✓				
Restore natural shoreline on Town of Hempstead property along Valley Stream known as the Path and remove former pedestrian bridge	Medium	Town of Hempstead					✓	✓	✓					
Coordinate with solutions being developed for Jamaica Bay, the Rockaway Inlet, and the Barrier Island	Long	U.S. Army Corps of Engineers (USACE), NYS DEC, NYC Department of Environmental Protection (DEP)					✓	✓			✓			
Corridor restoration and riverbank stabilization along Valley Stream and Hook Creek	Long	Town of Hempstead, Nassau County					✓	✓	✓		✓			
Study flood protection options along Rockaway Turnpike at Hook Creek and Motts Creek, including moveable storm surge barriers to attenuate tidal flow, and elevation of Rockaway Turnpike	Long	USACE, NYS DEC					✓				✓			
Repair the flood gate at the mouth of Hook Creek and the Doxey Brook stormwater pump.	Short	Nassau County					✓				✓			
Retain Stormwater														
<i>Redevelop Sunrise Multiplex with green infrastructure and subsurface stormwater retention</i>	Short	Green Acres Mall		✓			✓	✓	✓	✓			✓	
County-wide Stormwater Mitigation Plan with Community Education and Awareness	Short	Nassau County	✓				✓				✓			✓
Complete Mill Pond dredging and riverbank stabilization Project	Short	Nassau County						✓	✓					
Develop a strategic approach to utilizing green infrastructure, and implement a pilot project	Short	Mill Brook Civic Association, Town of Hempstead	✓				✓	✓	✓	✓				
Develop a homeowner education campaign with Rain Barrel pilot project and school curriculum with Valley Stream South High School	Short	Boards of Education, Mill Brook Civic Association	✓		✓			✓	✓	✓				✓
Install Green Infrastructure to capture stormwater runoff	Medium	Residents, Mill Brook Civic Association, Town of Hempstead					✓	✓	✓	✓				
Convert impervious pavements to pervious surfaces in school parking lots	Medium	Boards of Education					✓	✓	✓	✓				
Encourage zoning changes for Stormwater Management	Medium	Town of Hempstead	✓							✓		✓		

Denotes Priority Projects

Table 1: Management Measures

Management Measures			Reconstruction Strategies						Classification					
Potential Project Example	Timeframe	Responsible Entity	Community Planning and Capacity Building	Economic Resilience	Health and Social Services	Housing	Infrastructure Systems	Natural and Cultural Resources	Class 1: Conserve, Restore, and Enhance Natural Protective Features	Class 2: Resilient Construction	Class 3: Structural Defenses	Class 4: Land Use Planning and Regulation	Class 5: Market-Based Methods	Class 6: Increased Awareness and Information
Reinforce Power Grid														
Develop a micro-grid storm resistance plan and implement micro-grid pilot project at Green Acres Mall	Short	Long Island Power Authority (LIPA)	✓				✓			✓	✓			
Establish warming / cooling center at Green Acres Mall, given backup power supply	Short	Green Acres Mall, Nassau County	✓		✓									✓
Identify renewable energy sources that could be used to maintain power during emergency situations	Medium	Town of Hempstead, Nassau County	✓				✓			✓				
Extend the natural gas network, especially to critical facilities	Medium	National Grid					✓			✓				
Move utility lines underground in forested areas, with higher priority for those connecting to critical infrastructure	Long	Long Island Power Authority (LIPA)					✓			✓				
Strengthen Communication and Coordination														
Coordinate with Nassau County Disaster Response Planning Efforts to increase community awareness	Short	Nassau County, Town of Hempstead	✓		✓									✓
Assist the County with emergency response by identifying vulnerable populations	Short	Mill Brook Civic Association in partnership with Nassau County OEM	✓		✓									✓
Expand neighborhood communications network for information and awareness by establishing a Community Emergency Response Team (CERT)	Short	Mill Brook Civic Association	✓		✓									✓
Continue NYRCR Planning Committee engagement and project status monitoring after completing the Final NYRCR Plan	Short	New York State, Mill Brook Civic Association	✓											✓
Enhance Economic Opportunity														
Encourage resilient design and construction practices for home improvement projects and new home construction	Short	Town of Hempstead		✓		✓				✓		✓		✓
Evaluate opportunities to rehabilitate properties along Green Acres Road South with stormwater management measures	Medium	Town of Hempstead, Nassau County		✓						✓		✓		
Maintain economic viability of the community's key economic assets	Long	Town of Hempstead, Nassau County		✓								✓	✓	

Denotes Priority Projects

Table 1: Management Measures

3.4 REGIONAL PERSPECTIVE

South Valley Stream is an unincorporated area within the Town of Hempstead and borders both the Five Towns NYRCR Planning Area and the Borough of Queens in New York City; thus, regional plans and projects in neighboring jurisdictions may have significant relevance for South Valley Stream's NYRCR Plan.

The community NYRCR Planning Committee's membership reflects the many different issues and geographic diversity within the Mill Brook and North Woodmere communities. The open nature of NYRCR Planning Committee meetings encourages collaboration with other regional initiatives, and strengthens the lines of communication with the Town of Hempstead and Nassau County.

Current and proposed projects such as the ongoing Mill Pond eco-restoration, the recently approved rezoning of regional shopping malls, and the proposed repair of the nearby Mill Road Pump Station, will impact the proposed reconstruction strategies developed through the NYRCR planning process.

Noted regional initiatives and organizations reviewed during or engaged through this process include:

- Five Towns NYRCR Planning Committee
- Nassau County
- Town of Hempstead

- Nassau Urban County Consortium
- US Army Corps of Engineers
- Long Island Regional Economic Development Council
- Long Island Regional Planning Council
- Cleaner Greener Consortium of Long Island
- New York State Coastal Management Program
- Long Island Regional Economic Development Council Infrastructure Working Group
- Long Island South Shore Estuary Reserve

Furthermore, many challenges and reconstruction strategies identified are beyond the jurisdictional control of South Valley Stream. Therefore, it is important that the NYRCR process is inclusive of community, town, county, state and federal agencies that share jurisdictional control and responsibility in South Valley Stream NYRCR Planning Area.

Reconstruction strategies will be evaluated by the NYRCR Planning Committee on a regional basis, rather than in a vacuum, considering current or proposed projects as well as parallel planning efforts such as the Long Island Regional Economic Development Council (LIREDC) Regional Plan and Long Term Community Recovery (LTCR) plans. As all NYRCR Planning Committees work through

the planning process, collaboration with Planning Committees in other parts of Nassau County as well as New York City will lead to coordinated reconstruction strategies that can serve multiple recovery functions.



Figure 15: Regional Map

SOUTH VALLEY STREAM

4.0 PUBLIC ENGAGEMENT



4.0 PUBLIC ENGAGEMENT

The plan for engaging the South Valley Stream community has been structured to encourage broad participation from all sectors of the planning area. The goal has been to actively engage the community in the process of creating a reconstruction program that envisions a resilient and sustainable future for South Valley Stream.



THE PUBLIC ENGAGEMENT PLAN:

The establishment of the South Valley Stream NYRCR Planning Committee: includes a broad range of community leaders -- long term residents, business representatives, institutional leaders, and municipal representatives. The NYRCR Planning Committee has met three times to date, and has provided input on:

- The issues currently facing South Valley Stream as a result of Superstorm Sandy.
- South Valley Stream's existing assets and the opportunities that these assets can contribute to the future of the area.
- Preliminary visions for the area that can be initiated through the current planning process.
- Input regarding the format and content for the first public engagement event.
- Major outreach for that event in order to "get the word out" about the project, the planning process and the public engagement session.

The convening of the first Public Engagement Event: this event was held on October 15, 2013. Approximately 50 people attended, and a summary of the input received at this session will be provided in a separate document. A second event will be held in November 2013.

On-going public information: provided via a project website for the South Valley Stream NYRCR Planning Area (<http://stormrecovery.ny.gov/nycrcr/community/south-valley-stream>), and has been posted on the State's Facebook page.

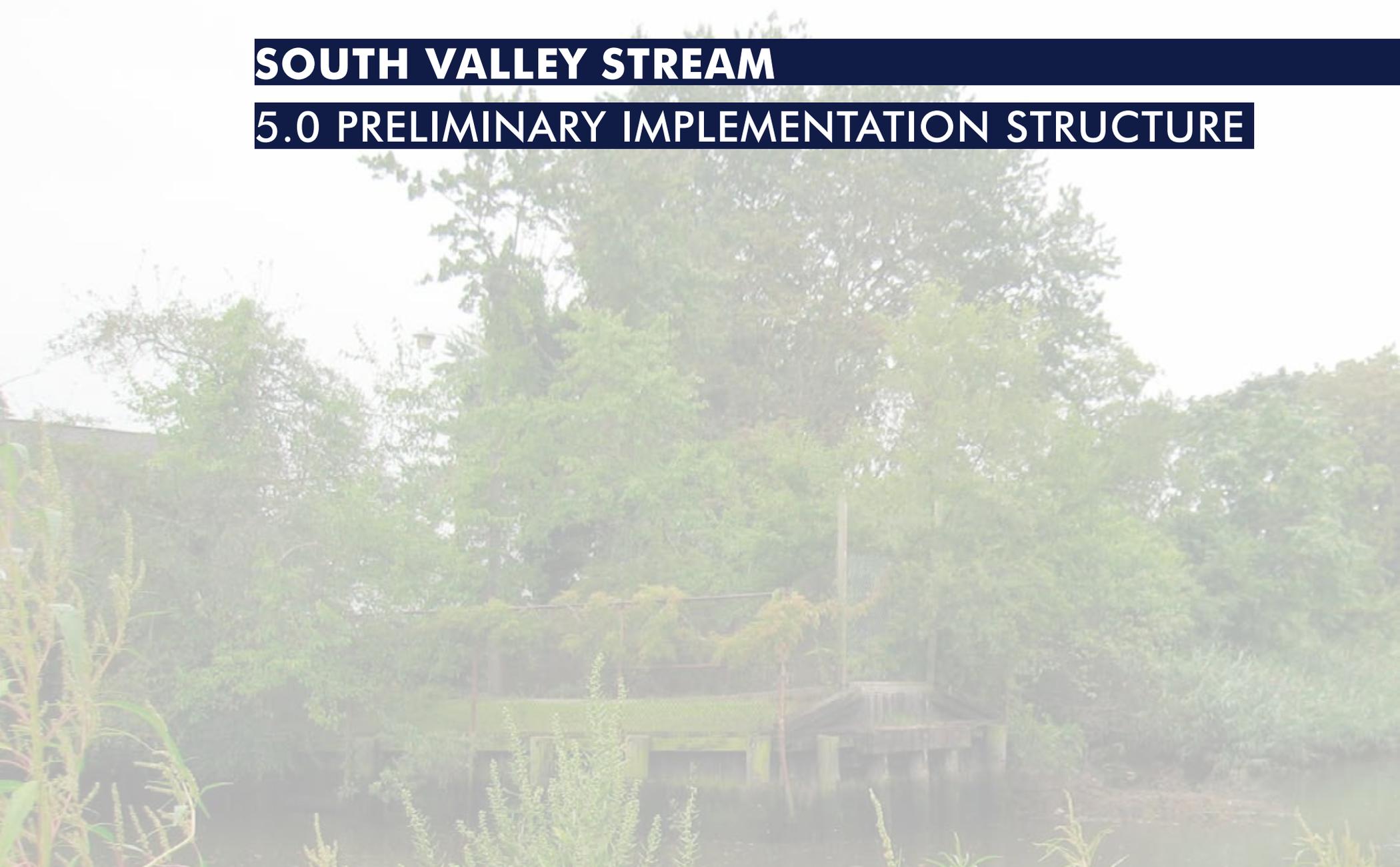
Finally, the NYRCR Planning Committee have actively pursued a variety of strategies to inform people about the NYRCR planning process and the first public engagement event. These techniques have included:

- Electronic notices sent to a broad range of individuals and organizations in the South Valley Stream area.
- Flyers distributed to local stores, schools, community facilities and residences.
- Media ads and postings on community calendars through local news sources.
- Press releases to local newspapers.
- All Planning Committee meetings are open to the public and details about the meetings are posted on the NYRCR website (<http://www.stormrecovery.ny.gov/community-reconstruction-program>).

The NYRCR Planning Committee is currently in the process of planning the next Public Engagement Event, which will be structured to achieve meaningful input regarding the NYRCR Conceptual Plan, and how the initial strategies and potential projects outlined in the NYRCR Conceptual Plan can best be achieved.

SOUTH VALLEY STREAM

5.0 PRELIMINARY IMPLEMENTATION STRUCTURE



5.0 PRELIMINARY IMPLEMENTATION STRUCTURE

The community will identify several key projects and reconstruction strategies in the categories of community planning and capacity building, economic, health and social services, housing, infrastructure, and natural and cultural resources. These projects will then be evaluated further based on several factors including time range (immediate, intermediate, long-range), geographic scope (regional or local), financial cost, and benefits (public versus private interests).

Assessing the benefits and costs of the project is imperative to determine if the project is feasible and proceeding with an implementation structure. Once the costs and benefits have been determined and the project is deemed feasible, timeline, funding source and responsible agency will be identified.

Determining Benefits:

The benefits of a reconstruction project should focus on hazard risk reduction and increasing public safety. The risk reduction estimate (or hazard loss avoidance) may be determined through use of the New York State Risk Assessment Tool or the Hydrologic Engineering Centers River Analysis System (HEC-RAS) model, dependent on available data and nature of the project.

Additional benefits (co-benefits) to a project may include sustainability, economic benefits, environmental benefits and health and social

benefits. Examples include the number of potential lives saved and expected economic gains, such as community revitalization.

Determining Costs:

Project costs should be based off the scope of work and include management, construction cost (including administration and management), life cycle costs (annual maintenance), useful life (number of years before the project will need to be replaced).

Costs should also consider the socio-economic impacts such as displacement of population.

Note: Projects using FEMA grant programs will need to utilize FEMA's Cost Benefit Analysis software. There are several FEMA standards that can be used when estimating costs vs. benefits with this program.

Timeframe:

Immediate/Intermediate/Long-Range Implementation – an action that could reasonably be implemented in two (2) years or less would be an Immediate action; within two to five (2-5) years would be Intermediate; and an action that would take longer than five (5) years to enact would be Long-Range.

Funding Sources:

Several funding sources exist and are dependent on the nature of the project. Grants are widely used though they are typically competitive.

Examples of funding sources include:

- CDBG-DR Funding
- FEMA Funding (pre-disaster, post-disaster)
- Hazard Mitigation Assistance (HMA) Program: post-disaster (Hazard Mitigation Grant Program [HMGP]) and pre-disaster (Pre-Disaster Mitigation [PDM], Flood Mitigation Assistance [FMA])
- Other Federal Agencies (USACE, Environmental Protection Agency [EPA])
- Public-private partnerships
- Local Funding including taxation and Bonds

APPENDIX

A: EXISTING PLANS AND STUDIES

There are a diversity of plans, policies, procedures and resources available that address the existing conditions, regulatory frameworks, community goals and issues and resilience opportunities in South Valley Stream. These resources have been produced by a variety of stakeholders including public agencies at all levels (federal, state, county, town and village), regional planning groups, non-profit organizations, academic institutions, community stakeholders and private groups. A brief summary of the relevant regulatory and advisory documents is included below:

Regulatory

Federally approved Significant Coastal Fish and Wildlife Habitats (NYSDOS, NYSDEC)

East Hempstead Bay, the water body to the south of South Valley Stream, is designated as a Significant Coastal Fish & Wildlife Habitat. For each designated SCFWH site, a habitat map and narrative are created to provide site-specific information. The habitat narrative constitutes a record of the basis for the significant coastal fish and wildlife habitat's designation and provides specific information regarding the fish and wildlife resources that depend on this area. General information is also provided to assist in evaluating impacts of proposed activities on characteristics of the habitat which are essential to the habitat's values.

Nassau County Department of Public Works Drainage Requirements (Nassau County Department of Public Works)

The Phase II Storm Water Regulations requires all municipalities in Nassau County to prepare and implement a Storm Water Management Program. A major component of the County's Storm Water Management Program is the drainage requirements set by the Department of Public Works for the development of Subdivisions. This comprehensive document includes the drainage requirements for street grading and drainage and the requirements for erosion and sediment control.

Nassau County Stormwater Management Program Plan (Nassau County, 2009)

The Nassau County Stormwater Management Plan (NCSWMP) includes a listing of Best Management Practices (BMPs) that have been implemented by the County and a coalition of local municipalities in order to achieve the regulatory standard of reducing pollutants in the County's storm water to the maximum extent practicable. Initial measurable goals and an implementation schedule were developed for each of the BMPs in the NCSWMP.

Town of Hempstead Adopted 2013 Budget (Town of Hempstead, 2013)

Town of Hempstead's 2013 spending plan for

municipal programs and services. Hempstead maintains 1,200 miles of roadway, operates over 200 parks, pools, beaches and marinas, collects garbage from 85,000 homes, provides water to 130,000 customers and furnishes life enhancing services to over 190,000 senior citizens. At \$419.4 million, this 2013 budget proposal presents a modest positive adjustment of 1.1 percent or \$4.6 million over the 2012 figure.

Advisory

Hurricane Sandy Rebuilding Strategy (U.S., Hurricane Sandy Rebuilding Task Force, 2012)

The Rebuilding Strategy document developed by the task force establishes guidelines for the investment of the Federal funds made available for recovery. The document focuses on long-term rebuilding, and strategies to sponsor coordination amongst various agencies to remove obstacles to resilient rebuilding.

Nassau County Draft Master Plan (Nassau County, 2010)

Master Plan recommends targeting development in growth areas, which account for approximately 10% of Nassau's land area. Specifically identified growth areas include "Transit-Oriented" downtowns, the Nassau Hub, and the Grumman Property. The Master Plan details changes in demographic and economic conditions for past decades and projects future changes through 2030. In addition, the Master Plan identifies specific policy tools to encourage growth, diversify the housing stock, protect commercial and residential neighborhoods, improve transportation, and reduce costs to residents.

Nassau County Multi-Jurisdictional Hazard Mitigation Plan (Nassau County, 2007)

Description of various hazards, identification of assets in hazard areas, estimated damages in assessment areas (includes assets exposed to storm surge), development trends in hazard areas and capabilities and resources. Asset information and community specific recommendations are developed for some communities; however, this information is sparse for South Valley Stream. Implementation strategies and mitigation measures can be learnt from recommendations for neighboring communities. Document lists federal technical assistance and funding programs to assist in long-term recovery.

Long Island Regional Economic Development Council Strategic Plan (LIREDC, 2011)

Long term economic development strategy discusses 13 priority projects. Infrastructure strategies include: Revitalize downtowns and commercial centers; Repair and upgrade aging infrastructure; Create new housing opportunities; Promote new government policies to foster economic growth. Natural Asset Strategies include: Improve sustainable agriculture

enterprises; Improve the Economic Potential and Employment Opportunities of Fisheries & Aquaculture; Enhance Ecotourism Activities and Infrastructure

Cleaner Greener Long Island (Cleaner Greener Consortium of Long Island, 2013)

Cleaner Greener Consortium of Long Island is group of municipalities and non-governmental organizations organized to articulate a community based vision for a more sustainable future. Goals and strategies were developed for the following subject areas: Economic development and workforce housing; energy; transportation; land use and livable communities, waste management; water management; governance and implementation. The Plan is intended to serve as a common point of reference for local governments, non-governmental organizations, businesses and residents. It includes initiatives for implementation, objectives and performance targets, as well as a wealth of baseline information (in the appendices) that can be incorporated into comprehensive plans, management plans, zoning, and other planning and strategy initiatives.

Places to Grow, The Long Island Index (2010)

Report analyzed the future growth potential for Long Island, focusing on the Island's ability to accommodate forecasted residential and commercial growth in transit-rich downtowns through an analysis of infrastructure capacity, land use, and demographic data. The report found that nearly 8,300 acres of vacant land and parking lots lie within a ½ mile radius of downtown centers (or Long Island Rail Road [LIRR] stations). Report supports targeting future growth to downtowns given the host of environmental, social, and economic advantages. In addition, the report cites the downtown revitalization efforts of the Village of Mineola which adopted

overlay zoning district to attract and incentivize transit-oriented development.

Long Island Infrastructure Priorities to Recover from Hurricane Sandy (Long Island Association, 2012)

This list represents the work of several leading organizations on Long Island. Priorities are listed in the following order: (1) Public Health: Wastewater Treatment Facilities, Water Supply and Solid Waste; (2) Utilities: Electric, Gas and Telecommunications; (3) Transportation, Transit and Shoreline; (4) Housing. Infrastructure needs were at the top of the list because of the significant public health and economic development impacts of wastewater treatment facilities, water supply and solid waste. These priorities are also responsive to the charge given to the Infrastructure Working Group of Governor Cuomo's Long Island Regional Economic Development Council.

Nassau County 2013 Annual MS4 Report (Nassau County Stormwater Coalition, 2013)

The Nassau County Stormwater Management Plan (NCSWMP) is a comprehensive program to reduce the levels of contaminants in Nassau County's storm water runoff and educate the public about their impacts on storm water. Nassau County has taken the lead in coordinating the NCSWMP and acting as a clearinghouse of information for concerned parties. The Nassau County Department of Public Works Water Engineering Unit is in charge of implementing the plan, including water testing, education, and pollution prevention measures. The six elements of the NCSWMP are: Public Education, Public Involvement, Illicit Discharge Detection and Elimination, Construction Site Storm Water Runoff Control and Post-Construction Storm Water Management, Pollution Prevention and Good Housekeeping for Municipal Operations.

Nassau Urban County Consortium 5 Year Consolidated Plan (Nassau County, 2010)

Presents a five-year strategy for addressing housing and community revitalization needs within the 34 member Urban County Consortium. It includes a One Year Action Plan for spending approximately \$21,524,865 in Community Development Block Grant, Home Investment Partnerships (HOME), Emergency Shelter Grant and program income funds. Funds will be spent on a wide range of housing and community development activities including new construction and rehabilitation of housing; commercial and economic improvements; public services for senior, youths and low income persons; architectural barrier removal in private homes and in public buildings; homeless shelter operations and renovation; acquisition, demolition and relocation activities of blighted properties in targeted redevelopment areas; infrastructure improvements in low income areas; and other related activities.

Nassau County Infill Redevelopment Feasibility Study: Cultivating Opportunities for Sustainable Development (Nassau County, Regional Plan Association, and NY-CT Sustainable Communities Consortium, 2013)

Feasibility study of sustainable infill development and presents opportunities to promote transit-orientated development around up to three (3) Long Island Rail Road (LIRR) stations in the Preliminary Regional Nassau Hub Study Area. Closest LIRR stations in study are Rockville Centre and Baldwin.

Long Island 2035 Sustainability Plan and Visioning Initiative (Long Island Regional Planning Council/Nassau County/Suffolk County/New York Metropolitan Transportation Council/Regional Plan Association, 2009)

Established to help achieve a regional public consensus on where the next generation of Long Islanders could live and work, the transportation systems needed to support these settlements and the public and private actions required to ensure a prosperous, equitable and environmentally sustainable Long Island.

Long Island 2035 Comprehensive Sustainability Plan (Nassau County/Suffolk County/LIREDC/LI2035, 2010)

Involved stakeholder input from Leadership Advisory Cabinet (LAC), made up of key government officials and private sector stakeholders. LAC tested and vetted strengths, weaknesses, issues and opportunities facing region and identified a vision, goals and objectives for the Long Island 2035 Regional Comprehensive Sustainability Plan. The plan is focused into four general areas: Economy, Infrastructure, Human Systems, and the Built and Natural Environments.

Long Island South Shore Estuary Reserve - Comprehensive Plan (NYSDOS, 2001)

The Long Island South Shore Estuary Reserve encompasses one of the New York State's unique estuaries and its 326 square mile watershed in Nassau and Suffolk counties. The plan provides a blueprint for the long-term health of the Reserve's bays and tributaries, its tidal wetlands and wildlife, and its tourism and economy.

