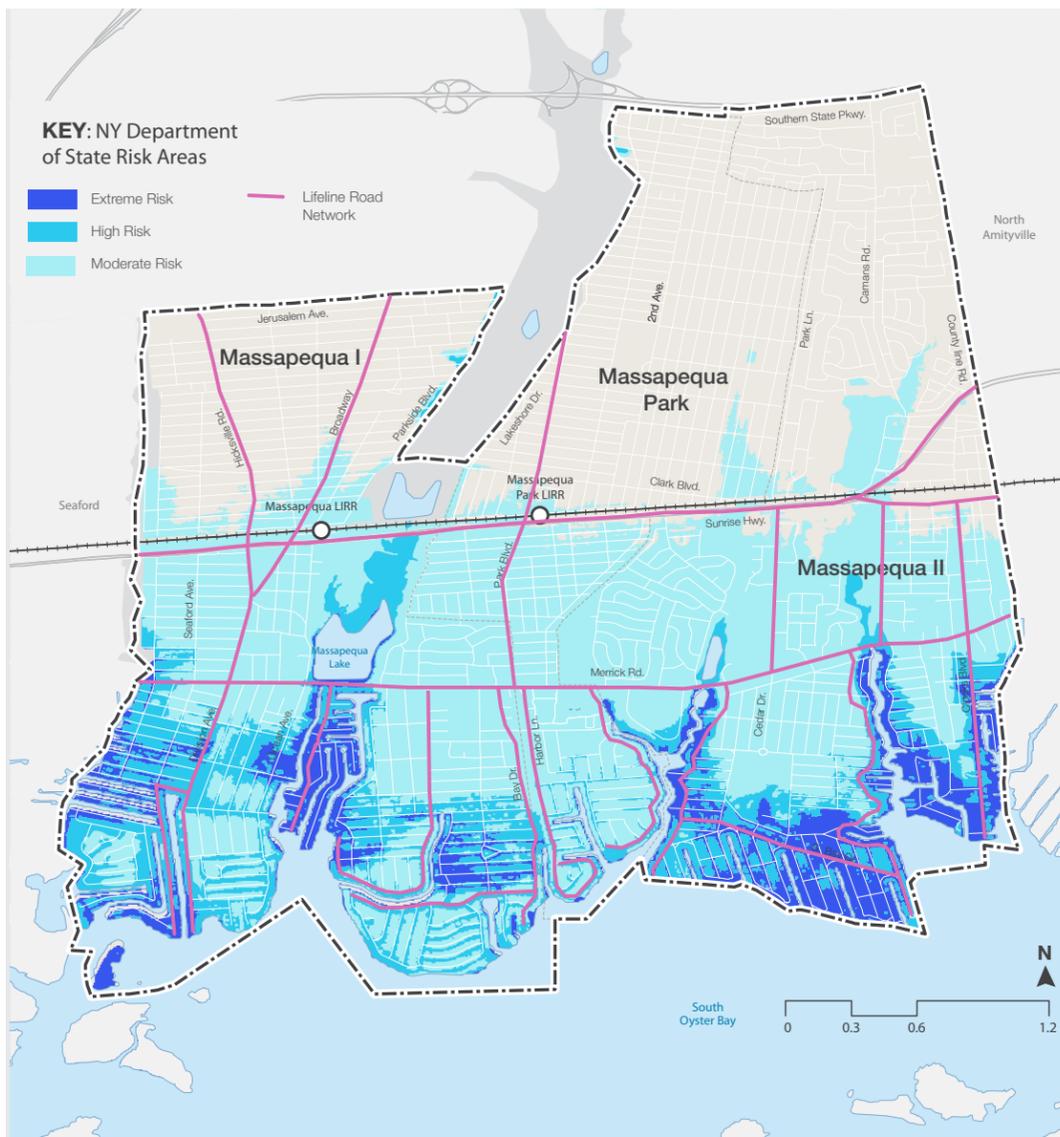


P1

Lifeline Road Network Study

Determine the critical access routes, or “lifeline roads,” used within the community

Cost Estimate: \$35,000 for study



Key Facts

- Project Type: Emergency Readiness
- Recovery Function: Infrastructure
- Project Location/Municipality: Massapequas - Massapequa (I and II) and Village of Massapequa Park
- Primary Target Area Affected: 29 miles of roads (shown at left)
- Consistency with NYRCR: Address short, medium, and long term risks
- Potential Beneficiaries: Residents, businesses, and visitors - particularly those south of Merrick Road

Project Information

The Lifeline Road Network, currently shown in draft form, would begin with a study to determine the critical access routes, or “lifeline roads,” used within the community. The network would focus on life safety and redundancy measures along these streets in order to ensure evacuation and emergency service routes are maintained before, during, and after major storm events.

Once the Lifeline Network is confirmed, these roads would be targeted for these further projects:

P2 Signage - develop and install “Lifeline Network” signage

P3 Streetlighting - install solar powered lights and battery backup

P4 Elevate Roadways - raise key streets susceptible to tidal flooding or storm surge

In the long term, tree trimming programs and undergrounding of utilities may also occur along these roads.

RESPONSE TO STORM: During Superstorm Sandy, roadways flooded and were unlit during storm. Residents needed directions for safe/preferred routes for evacuation and reaching shelter. Downed trees blocked roadways and knocked over utility poles and wires.



Powerlines knocked over during Superstorm Sandy



Flooding on Merrick Road during Sandy

Images: www.ctpost.com and cbsnewyork.files.wordpress.com



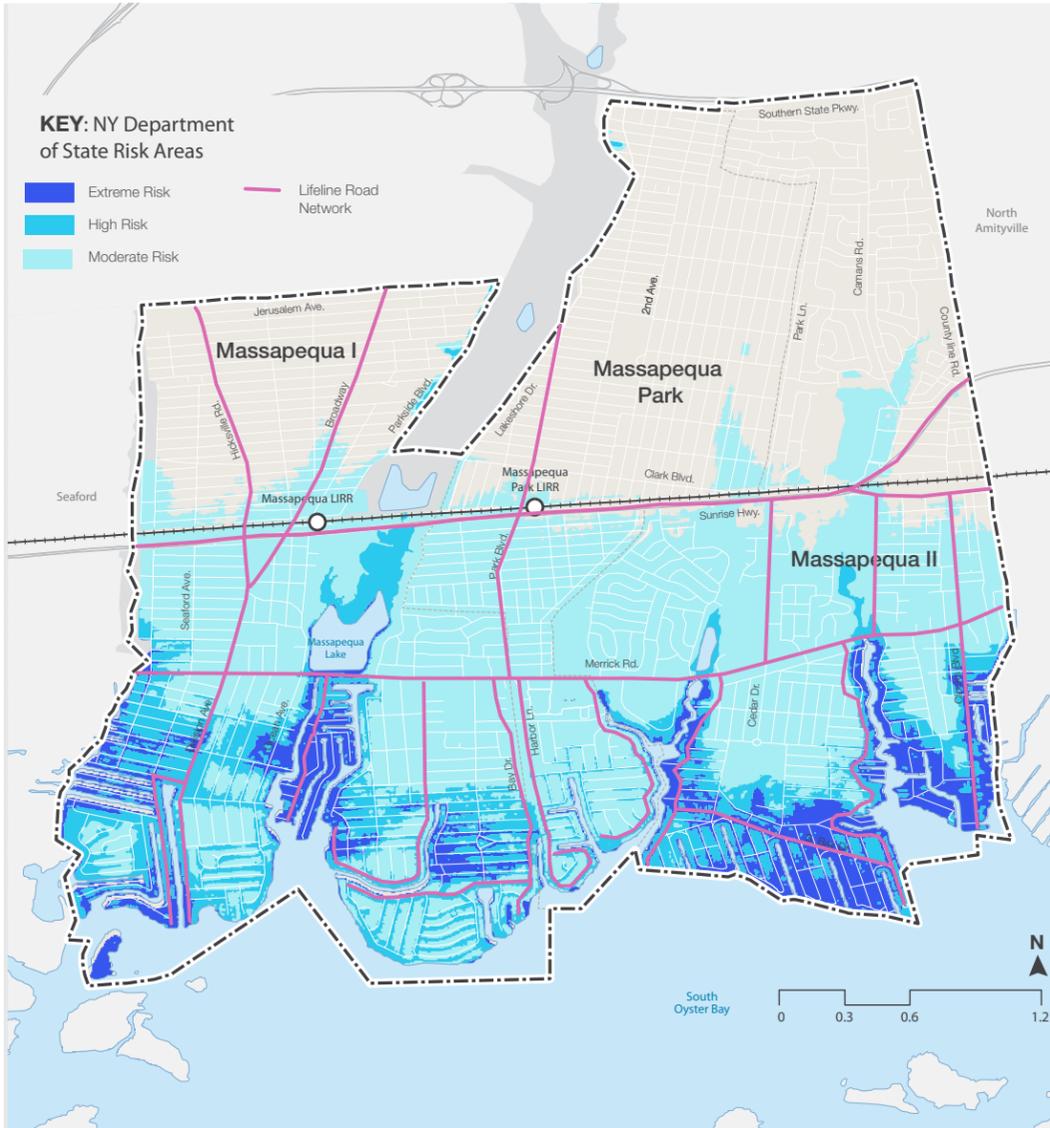
P2

Signage

Lifeline Road Network

Develop and install local “Lifeline Network” signage

Cost Estimate: \$57,000



Key Facts

- Project Type: Emergency Readiness
- Recovery Function: Infrastructure
- Project Location/Municipality: Massapequas - Massapequa (I and II) and Village of Massapequa Park
- Primary Target Area Affected: 29 miles of roads (shown at left)
- Consistency with NYRCR: Address short, medium, and long term risks
- Potential Beneficiaries: Residents, businesses, and visitors - particularly those south of Merrick Road

Project Information

The Lifeline Road Network, would be signed to help residents determine the best local route to take out of the flood risk zone. This system would work in conjunction with existing designated evacuation routes like State Route 135 that are already equipped with signs.

After developing and installing ‘Lifeline Network’ signage, additional signage should direct residents to information or meet-up centers, community centers, and other centralized public locations with back-up power.

The cost of this project is based on the anticipated development, purchase and installation of signage.

RESPONSE TO STORM: During Superstorm Sandy, residents needed directions for safe and preferred routes for evacuation and reaching shelter.



Sample signage from Palm Beach, Florida



Signage in Tampa, Florida for storm event transport

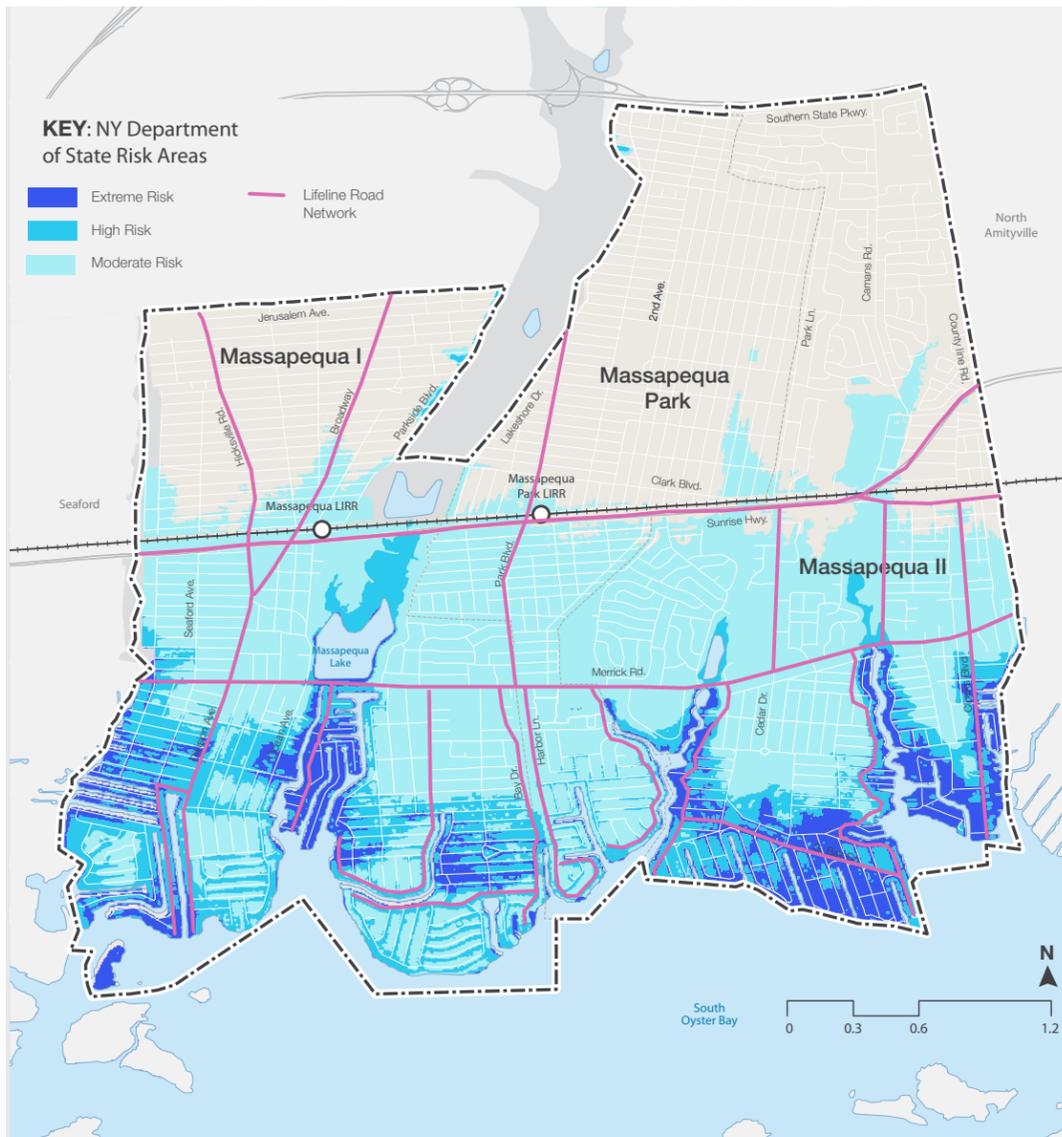
P3

Streetlighting

Lifeline Road Network

Retrofit streetlights and signals along these roads with solar power and battery back-up

Cost Estimate: \$9,100,000



Key Facts

- Project Type: Emergency Readiness
- Recovery Function: Infrastructure
- Project Location/Municipality: Massapequas - Massapequa (I and II) and Village of Massapequa Park
- Primary Target Area Affected: 29 miles of roads (shown at left)
- Consistency with NYRCR: Address short, medium, and long term risks
- Potential Beneficiaries: Residents, businesses, and visitors - particularly those south of Merrick Road

Project Information

To maintain functionality during power outages, streetlights and signals along the Lifeline Road Network, would be retrofitted to operate on solar power with battery back up power. This would make it safe for residents to evacuate during power outages whether by car or on foot and improve security.

Priority will be given to Merrick Road, Sunrise Highway, and intersections.

The cost of this project is based on the anticipated purchase and installation of these lights in locations selected in the study. The estimate includes the entire proposed network.

RESPONSE TO STORM: During Superstorm Sandy, residents needed directions for safe and preferred routes for evacuation and reaching shelter. Downed trees knocked over utility poles and wires making alternative power sources for lights and signals vital.



Solar lighting option



Solar lighting option

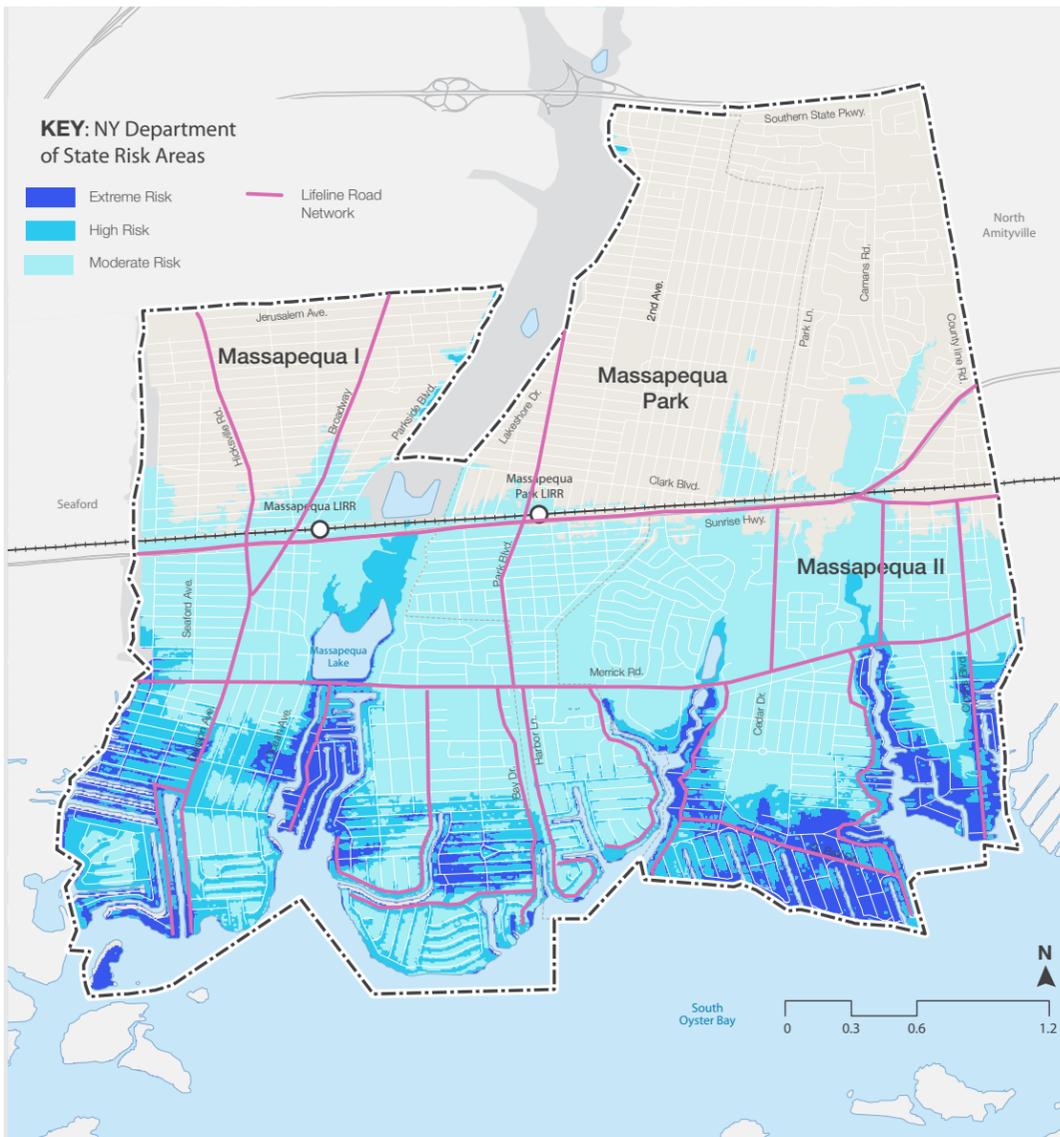
P4

Elevate Roadways

Lifeline Road Network

Raise key streets susceptible to tidal flooding or storm surge

Cost Estimate: \$460,000



Key Facts

- Project Type: Emergency Readiness
- Recovery Function: Infrastructure
- Project Location/Municipality: Massapequas - Massapequa (I and II) and Village of Massapequa Park
- Primary Target Area Affected: subset of 29 miles of roads (shown at left)
- Consistency with NYRCR: Address short, medium, and long term risks
- Potential Beneficiaries: Residents, businesses, and visitors - particularly those south of Merrick Road

Project Information

To maintain provide safe egress along major roads during flood events, key streets susceptible to tidal flooding or storm surge will be raised. Some streets in the proposed Lifeline Road Network, such as Alhambra Road, have already been elevated. The initial study would identify those most in need of elevation and concentrate on these areas, particularly south of Merrick Road.

The cost of this project reflects the construction of a subset of the most critical roadways to elevate after conducting a study to identify them.

RESPONSE TO STORM: During Superstorm Sandy, roadways flooded and clear, elevated evacuation routes were needed for people living south of Merrick Road.



Roadway flooding in Massapequa during Sandy



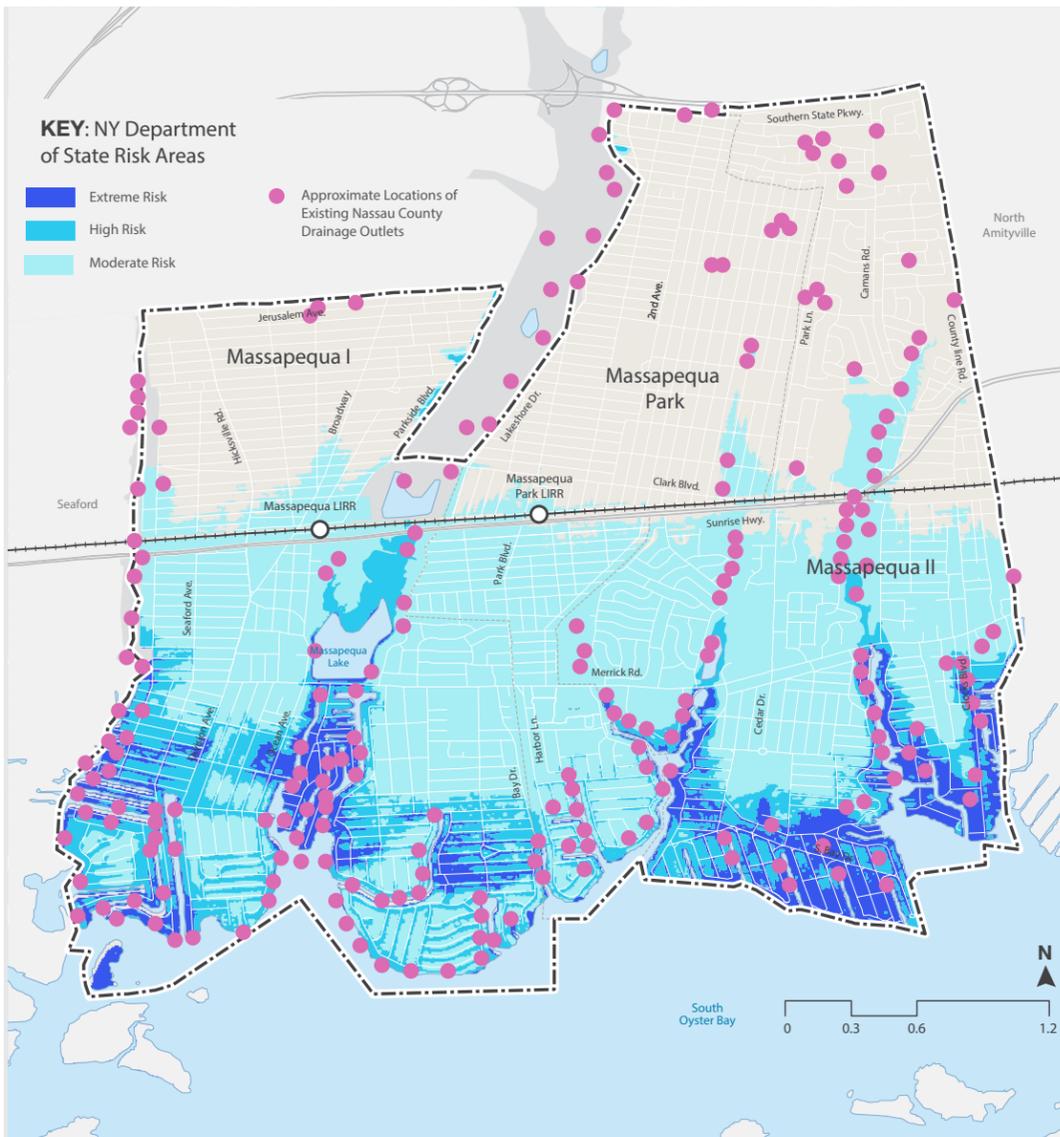
Roadway flooding in Massapequa during Sandy

P5

Flood Diversion and Control

Install structural and natural drainage features including flood valves and outfall pipe lining

Cost Estimate: \$4,900,000



Key Facts

- Project Type: Other Capital Project
- Recovery Function: Infrastructure
- Project Location/Municipality: Massapequas - Massapequa (I and II) and Village of Massapequa Park
- Primary Target Area Affected: community-wide, particularly south of Sunrise Highway
- Consistency with NYRCR: Increase resiliency of key assets
- Potential Beneficiaries: Residents, businesses, and visitors

Project Information

To address flooding throughout the Massapequas, this project will strategically locate structural and natural drainage features to divert flood waters into designated catchment areas. After commissioning an initial study to determine overland flow patterns in flood-prone areas, locations will be identified for drainage, detention, and check-valves on outfall pipes.

The following measures are proposed for diverting and controlling flood waters in the future:

- Install new tidal check valves and backflow preventers to protect roads and adjacent structures from flooding
- Upgrade, inspect and regularly maintain flood valves
- Install outfall pipe lining on 10 pipes in Massapequa Park
- Redirect flows or install new infrastructure to address flooding along Front Street between Philadelphia Avenue and East Lake Avenue

The cost of this project reflects the installation of flood valves, outfall pipe linings, and additional sumps at appropriate identified locations

RESPONSE TO STORM: During Superstorm Sandy, flood valves and drainage pipes failed causing additional damage. This infrastructure needs replacement and repair.



Tidal check valve with backflow preventer



Tideflex check valve

Images: news.thomasnet.com and www.tideflex.com

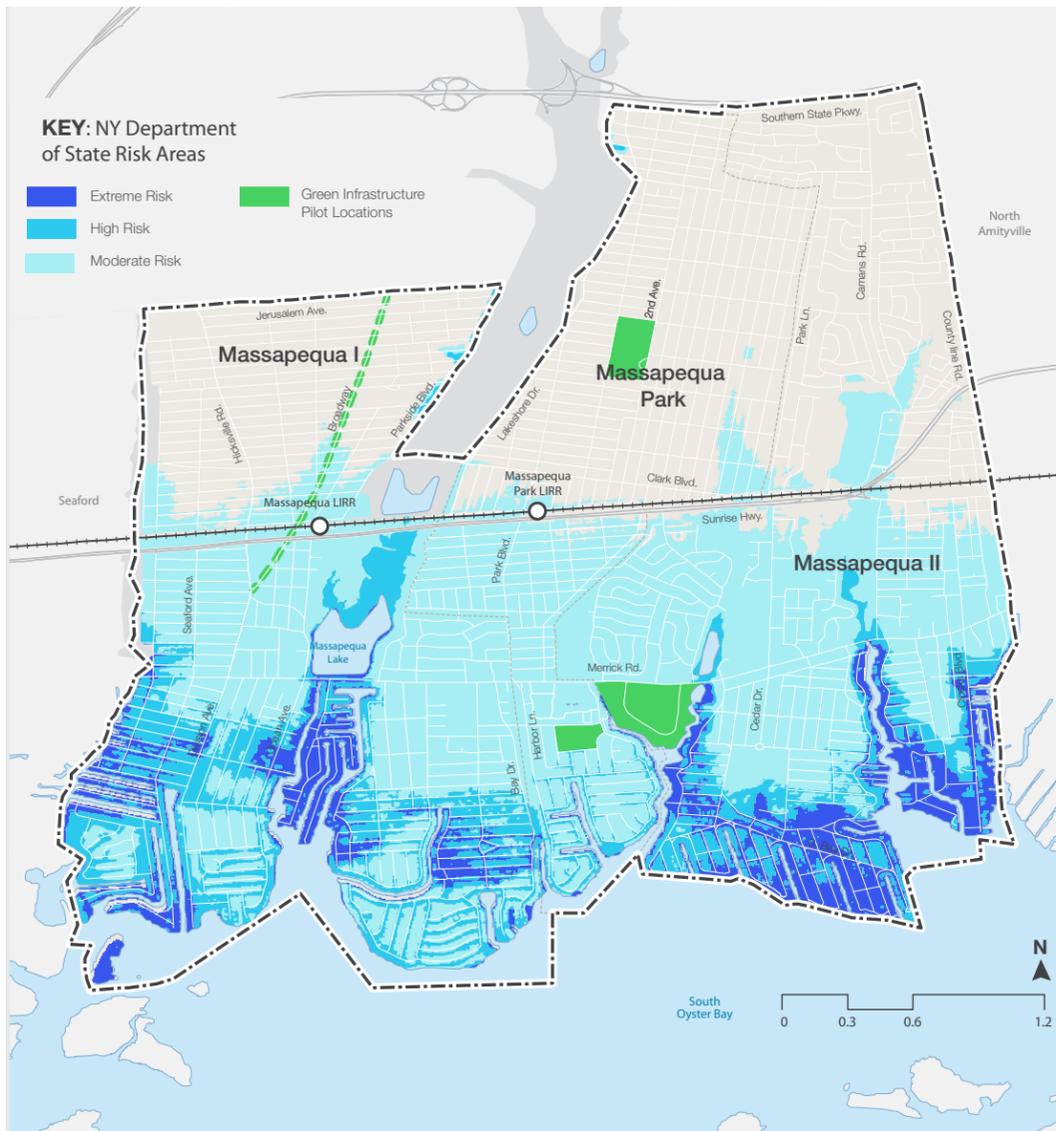


P6

Green Infrastructure Pilots

Control flooding with a combination of hard infrastructure and natural systems

Cost Estimate: \$2,200,000



Key Facts

- Project Type: Other Capital Project
- Recovery Function: Natural and Cultural Resources
- Project Location/Municipality: Massapequa I and Village of Massapequa Park
- Possible Pilot Locations: Broadway, Birch Lane Elementary, McKenna Elementary School & Nassau County Police Academy, John Burns Town Park
- Consistency with NYRCR: Address short, medium, and long term risks
- Potential Beneficiaries: Residents, businesses, and visitors

Project Information

Flooding occurs regularly with storms and tides. Green infrastructure designed to make the community more resilient by controlling flooding with a combination of hard infrastructure and natural systems. In the Massapequas, green infrastructure will improve stormwater management by addressing pump stations, storm drains, culverts, and outflow valves.

A preliminary study will collect information to identify road elevations and drainage improvements on major roads for stormwater management, improved drainage, flood control, and pollution reduction.

The pilot projects will test different project types: public realm (roads), private realm (parking lots) and open space (parks and preserves). After installation, potential infiltration and open channel bioswale projects will be studied.

Broader green infrastructure policy would encourage the installation of permeable paving in new developments, mall parking lots, and school parking lots, as well as developing a rain barrel program for residential properties across the Massapequas. The community should also work with neighboring hamlets, villages, and Nassau County to establish a region-wide stormwater management program and to create and implement a comprehensive green infrastructure plan.



Bioswale in Milwaukee, Wisconsin



Permeable paving

More information about Green Infrastructure is available at: www.cnt.org/repository/gi-values-guide.pdf

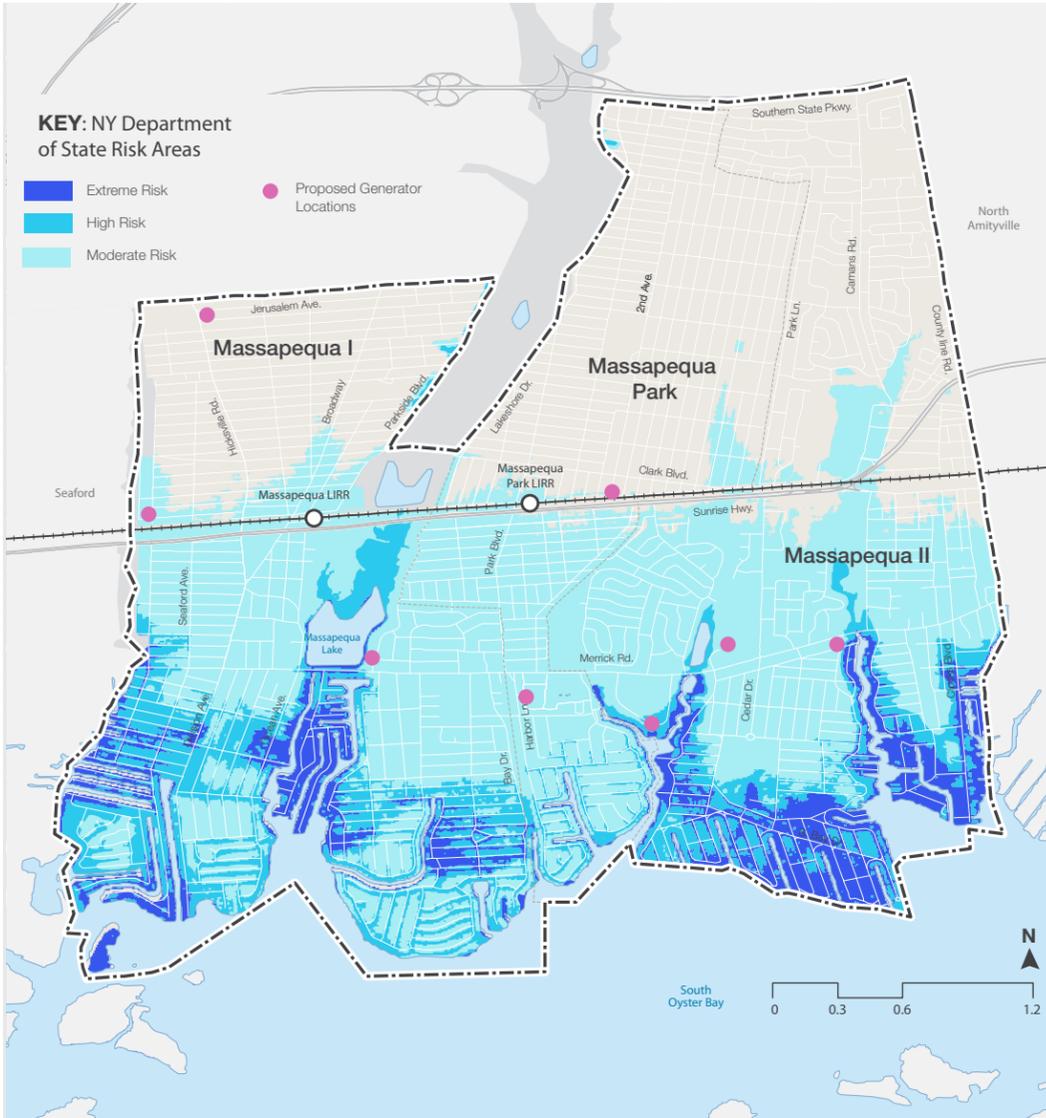


P7

Generators for Critical Facilities

Ensure that critical facilities have backup power during and after major storm events

Cost Estimate: \$2,000,000



Key Facts

- Project Type: Emergency Readiness
- Recovery Function: Community Planning and Capacity Building
- Project Location/Municipality: Massapequas - Massapequa (I and II) and Village of Massapequa Park
- Primary Target Area Affected: Critical facilities such as fire and police centers and emergency shelters
- Consistency with NYRCR: Balance costs and benefits
- Potential Beneficiaries: Residents during storm events

Project Information

Intended to create necessary redundancy as a safety measure, alternative power generators will be purchased and installed at critical facilities. Emergency shelters, community centers, and fire stations need to have backup power during and after major storm events. At critical assets and evacuation sites, permanent generators will be installed on the roofs or upper floors to prevent flood damage during storm events.

At minimum, the following locations (shown on the map above) will receive generators:

- Town Hall South and Town Hall North (in Oyster Bay)
- Community Center in Marjorie Post Park
- Bay Constable Building at John Burns Park
- Massapequa Park Community Center at Brady Park
- Southgate Community Center
- All local fire stations

The Red Cross Shelter at McKenna Elementary and Massapequa Park Village Hall already have generators in place.

RESPONSE TO STORM: Residents have voiced concerns that there were too few centers in the community with power during Superstorm Sandy. This project is a response that provides more critical facilities that will be operable during a storm.



Sample 600kW Natural Gas Generator



Sample 600kW Natural Gas Generator

Images: www.gensetdiesel-generator.com and www.sunecochna.com

Note: Alternative Power for the generators is a high priority. Photovoltaic generators were also priced and cost 18 times more than natural gas generators.

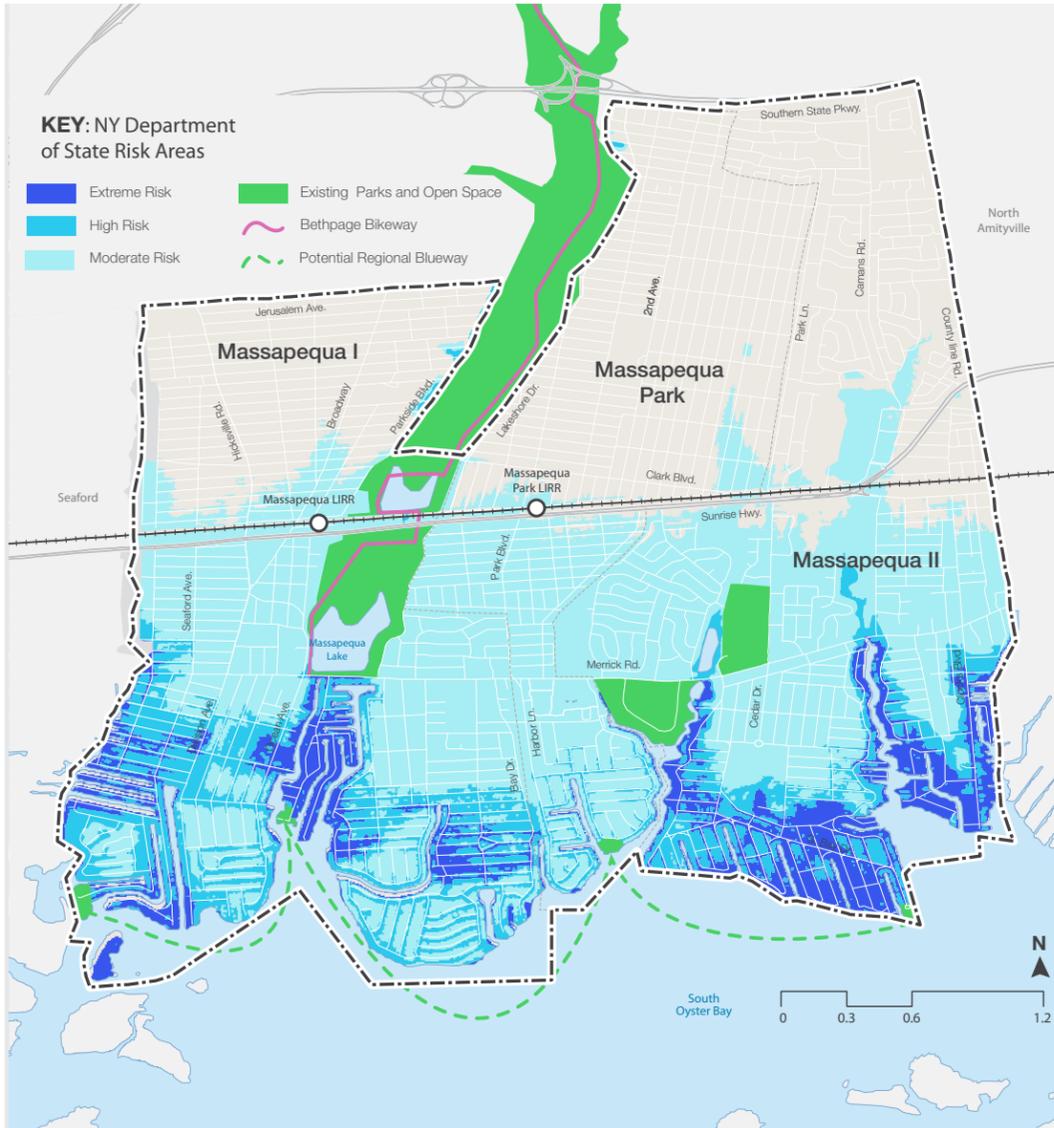


P8

Redesign Parks & Open Space

Redesign waterfront parks, public access, and ecological open space to help absorb storm water

Cost Estimate: \$200,000 for study



Key Facts

- Project Type: Recreation
- Recovery Function: Natural and Cultural Resources
- Project Location/Municipality: Massapequas - Massapequa (I and II) and Village of Massapequa Park
- Primary Target Area Affected: Neighborhoods south of Merrick Road
- Consistency with NYRCR: Address short, medium and long term risks
- Potential Beneficiaries: Residents and visitors with improved access to the waterfront and more resilient parks

Project Information

Building on the Massapequas' ecological and waterfront assets this project would create a plan that ensured that the parks and open spaces in the community served to improve resilience, enhance economic development, and add value to the surrounding homes and quality of life. The goal of the study is to identify ways to develop and expand tourism activities and infrastructure related to the beaches and marine resources; revise zoning to allow new uses in new areas including waterfront restaurants and retail and more outdoor dining; incorporate water retention and drainage into active and passive open space; address and mitigate beach-front and park erosion in ways that respond naturally to coastal processes; and ensure revitalization and redevelopment plans incorporate expanded open space to preserve neighborhood character, improve recreational access, and improve local environmental quality.

Unique projects will focus on improvements to

P9 Alhambra Park

P10 Bayfront Park

P11 Colleran Park

RESPONSE TO STORM: Existing parks were severely damaged during Superstorm Sandy and have the potential to be rebuilt in ways that make them more resilient.



Massapequa Preserve - existing open space asset



John Burns Town Park - existing park asset

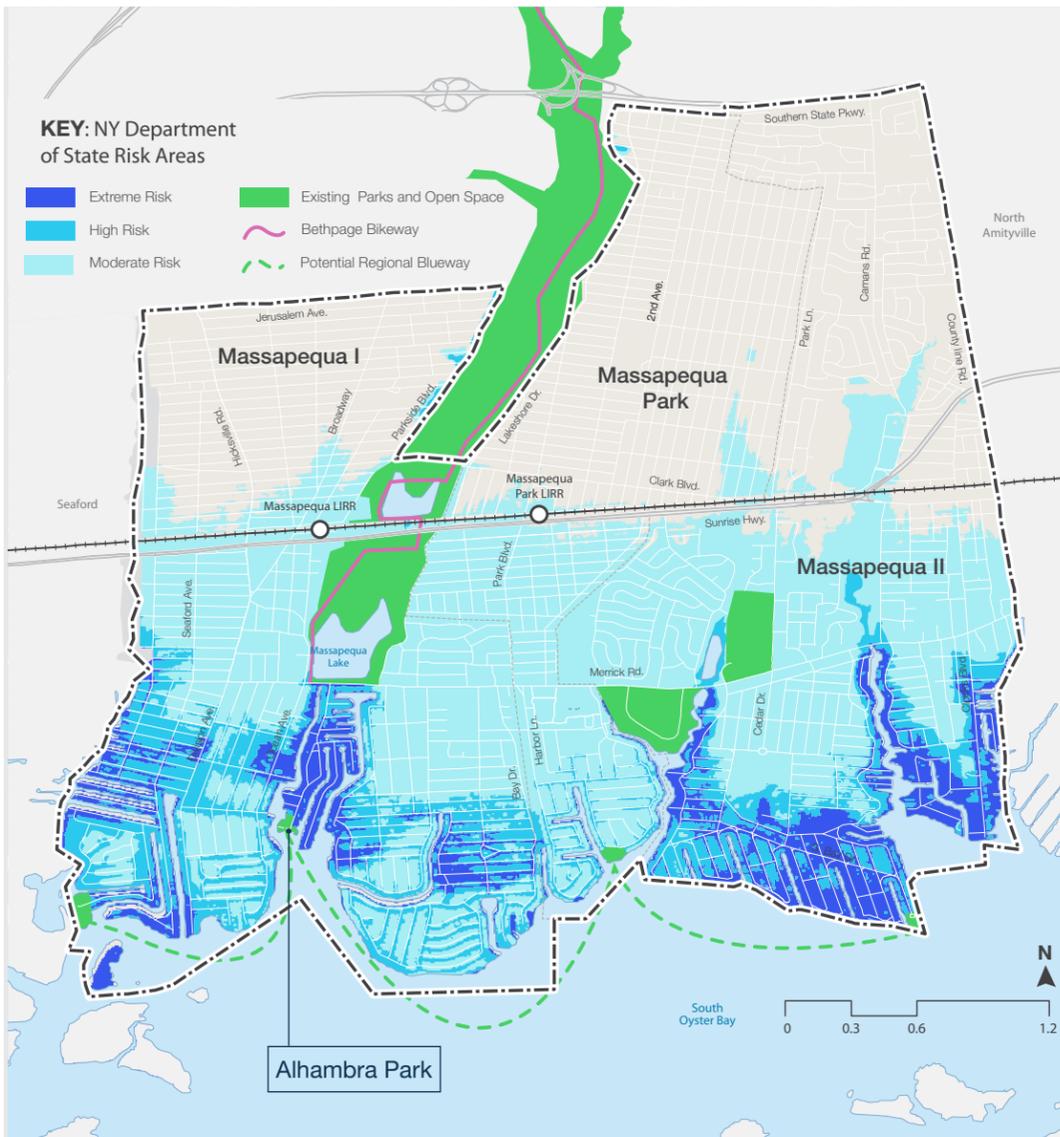
Images: Sasaki



Alhambra Park

Redesign waterfront park then install playground, kayak launch, and permeable paths and parking

Cost Estimate: \$4,000,000



Key Facts

- Project Type: Social/Community Services
- Recovery Function: Natural and Cultural Resources
- Project Location/Municipality: Massapequa I (owned by the Town of Oyster Bay)
- Primary Target Area Affected: Neighborhoods south of Merrick Road, particularly along Alhambra road
- Consistency with NYRCR: Address short, medium and long term risks
- Potential Beneficiaries: Residents and visitors with improved access to the waterfront and more resilient parks

Project Information

The Town of Oyster Bay plans to install a new playground, permeable parking area, gazebo, kayak-launching area, and a new bulkhead in the new expanded Alhambra Park where property has recently been acquired and already undergone remediation. Additionally, the development of walking paths with permeable paving around bioswales and storm water retention ponds, and the installation of energy-efficient lighting and signage will make the park more environmentally sustainable and better able to withstand future storm damage.

With its easy access for kayaks, the park will also be linked to the proposed regional Blueway, and being due south of the Massapequa Preserve, it will be linked to the existing Bethpage Bikeway.

The cost of this project is based on the anticipated construction of bulkheads, kayak launch, gazebo, playground, and permeable parking lot.

RESPONSE TO STORM: Adjacent storm damaged parcels were purchased to expand the existing park. Public access to the waterfront enhances public awareness and contributes to community building.



Aerial of Alhambra Park site



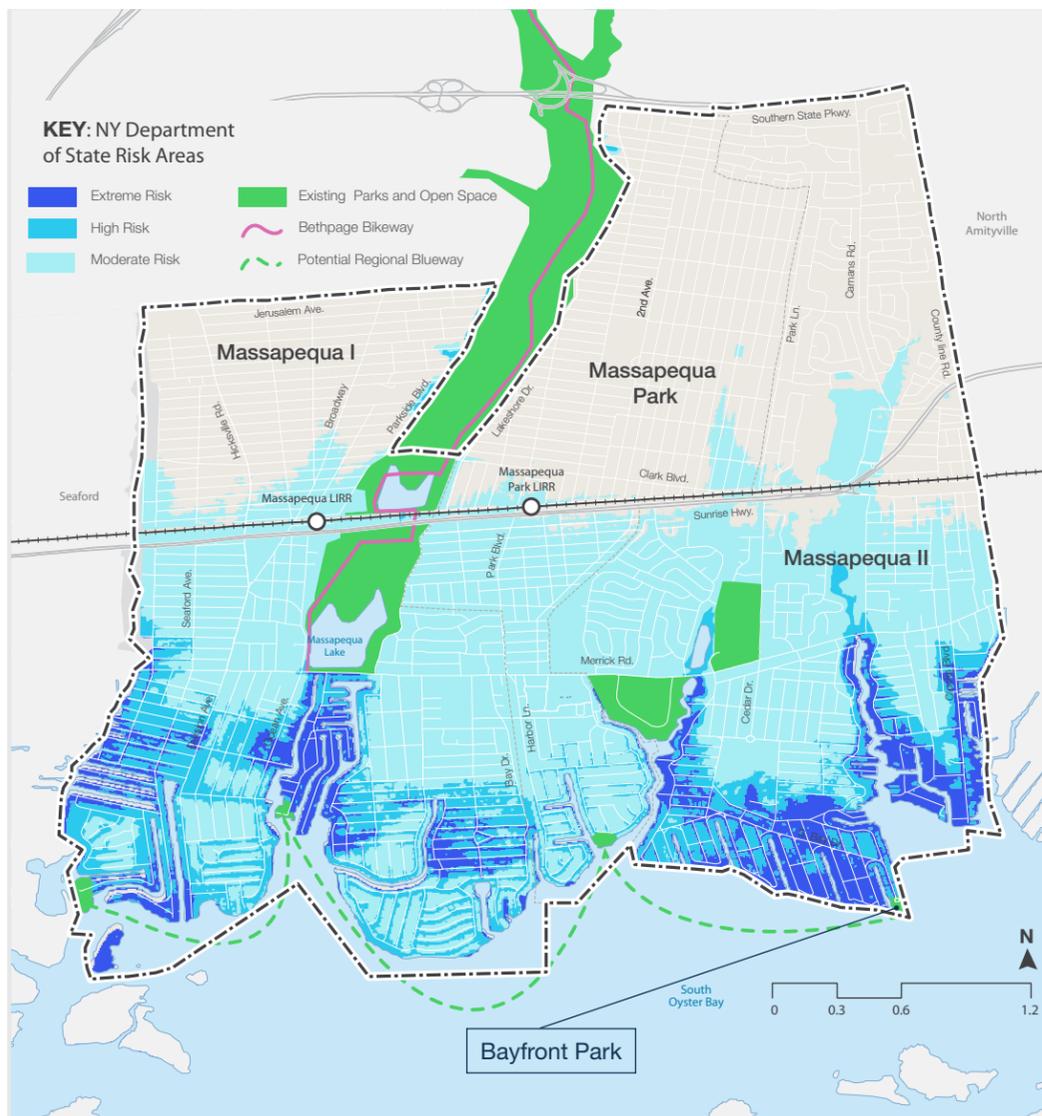
Kayak launch in Port Washington, New York

P10

Bayfront Park

Redesign waterfront park installing playground, repairing bulkhead, and expanding pier

Cost Estimate: \$4,100,000



Key Facts

- Project Type: Social/Community Services
- Recovery Function: Natural and Cultural Resources
- Project Location/Municipality: Massapequa II (owned by the Town of Oyster Bay)
- Primary Target Area Affected: Neighborhoods south of Merrick Road, particularly in Nassau Shores
- Consistency with NYRCR: Address short, medium and long term risks
- Potential Beneficiaries: Residents and visitors with improved access to the waterfront and more resilient parks

Project Information

The Town of Oyster Bay plans to install a new playground and repair the bulkhead at Bayfront park to address damage from Superstorm Sandy. Additionally, the Town will add walkways with permeable paving around bioswales and storm water retention ponds, rest area for cyclists, fitness stations, an expanded pier, and energy efficient lighting.

The park will also be linked to the proposed regional Blueway and the existing Bethpage Bikeway.

The cost of this project is based on the anticipated construction and repair of bulkheads, playground, walkways, and pier.

RESPONSE TO STORM: Existing park was severely damaged during Superstorm Sandy. Public access to the waterfront enhances public awareness and contributes to community building.



Aerial of Bayfront Park site



Cyclist rest area in Red Mountain Park, Mesa, AZ

Images: storms.ngs.noaa.gov and www.djwriter.com

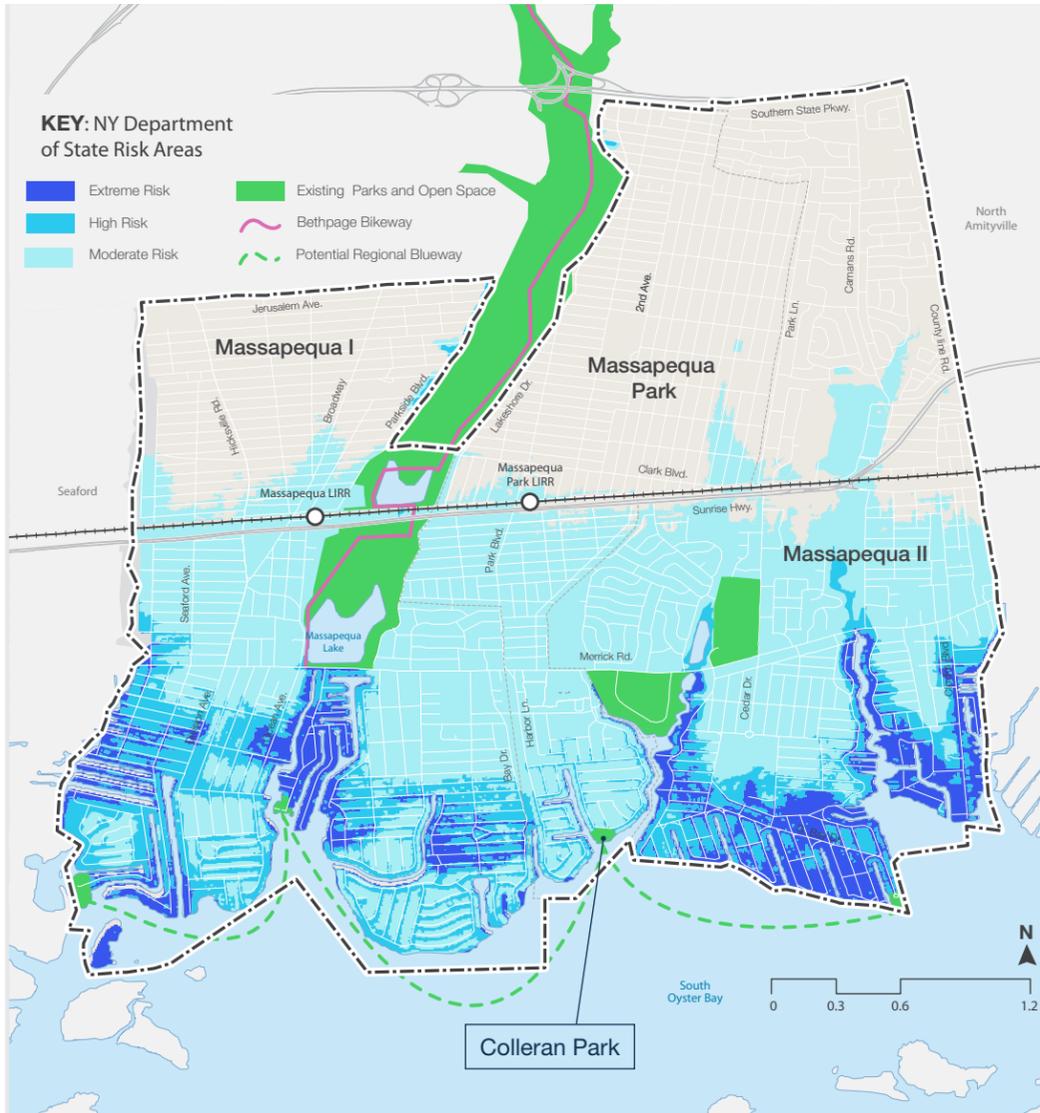


P11

Colleran Park

Stabilize shoreline with bulkhead and riprap then resurface playground

Cost Estimate: \$1,700,000



Key Facts

- Project Type: Social/Community Services
- Recovery Function: Natural and Cultural Resources
- Project Location/Municipality: Massapequa Park
- Primary Target Area Affected: Neighborhoods south of Merrick Road, particularly in Bar Harbour
- Consistency with NYRCR: Address short, medium and long term risks
- Potential Beneficiaries: Residents and visitors with improved access to the waterfront and more resilient parks

Project Information

The Village of Massapequa Park plans to stabilize the shoreline of Colleran Park with bulkhead and riprap based on the community approved plan to prevent further erosion. The Village will also resurface the playground to repair protective rubber damaged by Superstorm Sandy.

With a beach landing, the park will be linked to the proposed regional Blueway, and the existing Bethpage Bikeway.

The cost of this project is based on the anticipated installation of bulkhead, riprap, and rubber playground surface

RESPONSE TO STORM: Existing park was severely damaged during Superstorm Sandy. Public access to the waterfront enhances public awareness and contributes to community building.



Aerial of Colleran Park site



Bulkhead and riprap revetment

Images: storms.ngs.noaa.gov and farrellmarine.com





Integrated Communication Network

A regionally coordinated, one-stop-shop for disaster and emergency information, communication and training

Cost Estimate: (Phase 1) \$20,000 - 100,000 per CR Area

Project Information

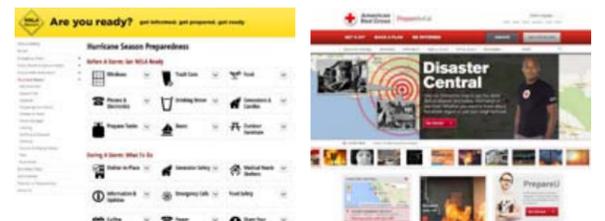
Create a single source for comprehensive information and emergency assistance and establish a communication network that more effectively links the local government with emergency management agencies, faith-based groups, and non-profit organizations to direct aid and recovery efforts to the community's socially vulnerable populations.

Benefits: Phase 1 of this project would evaluate existing emergency communication systems and determine additional needs, with an emphasis on coordination across multiple jurisdictions. Phase 2 would establish a centralized location (such as a website) with consistent "branding" to make disaster information identifiable, and regular updates to keep information current. Phase 3 would include the creation of an educational component, using the website to promote educational seminars on disaster planning. Both phase 2 and 3 have the potential for private and nonprofit sponsorships and partnerships.

Relationship to Disasters: During and after Superstorm Sandy many residents did not know where to look for emergency information. Some community members did not understand the severity of the storm and were unable to evacuate after conditions became unsafe, putting themselves and emergency responders at risk. Following the storm, power outages and lack of cellphone service left residents unable to communicate with friends and family members, and without a means to find emergency resource information.

Key Facts

- Project Type: Emergency Readiness
- Recovery Function: Community Planning and Capacity Building
- Project Location/Municipality: Nassau County
- Primary Target Area Affected: Nassau County
- Consistency with NYRCR: Coordinate with regional initiatives
- Potential Beneficiaries: All Nassau County residents impacted by future disasters



Business Continuity Program

Establish a business continuity program to ensure that businesses can maintain essential functions during and after emergency events

Cost Estimate: \$35,000 - \$40,000 per CR Area

Project Information

Business continuity planning ensures that businesses have the capability to maintain essential functions during a range of potential emergencies. The assistance provided by a Business Continuity Program would include planning assistance, access to alternative spaces or facilities, communications provisions, and provisions for vital records backup and management.

Benefits: The Business Continuity Program would help small businesses to create their own plans for continuing operations under adverse conditions, such as a major storm. The program would work with Adelphi University and the Business Continuity Institute to lead training session for local business owners. Training sessions will include assisting business owners to create a database to store, update and/or view temporary emergency power requirements for their establishments. This data will help owners procure emergency power generation supplies before a disaster, and prioritize temporary power requirements.

Relationship to Disasters: After Superstorm Sandy some 124 Massapequa business, representing 366 employees applied for disaster management assistance after Superstorm Sandy. These applications verified a total of \$3.7 million in real property damage, \$1.3 million of machinery damage, an inventory loss of \$249,188 and a leaseholder improvement loss of \$624,995. Of these applications, only 32 (25.8%) were approved for an amount totaling just under \$2.2 million, roughly one third of the \$6 million in verified damage assistance applied for.

Key Facts

- Project Type: Emergency Readiness
- Recovery Function: Economic, Community Planning and Capacity Building
- Project Location/Municipality: Nassau County
- Primary Target Area Affected: Nassau County
- Consistency with NYRCR: Drive economic growth
- Potential Beneficiaries: Nassau County businesses impacted by future disasters





South Shore Stormwater System Modeling and Analysis

Evaluate condition and ownership of stormwater drainage systems and identify solutions for stormwater management

Cost Estimate: \$500,000 - 600,000 per CR Area

Project Information

This project would first document the condition and ownership of stormwater drainage systems in the region, and use hydraulic and hydrologic modeling to study surface and subsurface stormwater drainage patterns. A study of the Sunrise Highway Conduit should also be performed to address drainage issues in upland areas.

Benefits: Modeling and analysis is necessary to help identify and prioritize solutions for stormwater management. This includes capital projects, updated maintenance requirements, regulatory improvements, public awareness programs, and other property-owner assistance measures. These initiatives would increase the capacity of the stormwater system and reduce flooding issues in the region.

Relationship to Disasters: Rain and storm surge during Sandy overwhelmed the stormwater drainage system and exacerbated flooding. Additionally, localised flooding is frequently observed during heavy rainfall or high tides.

Key Facts

- Project Type: Planning and Additional Study
- Recovery Function: Infrastructure
- Project Location/Municipality: Nassau County
- Primary Target Area Affected: Nassau County
- Consistency with NYRCR: Increase resiliency of key assets
- Potential Beneficiaries: Nassau County residents and businesses



South Shore Shoreline Conditions Analysis and Restoration Program

Analyze shoreline conditions and incentivize coordinated improvements to reduce erosion and mitigate flooding

Cost Estimate: \$100,000 - \$200,000 per CR Area

Project Information

Develop a program to incentivize and provide support for coordinated and continuous shoreline improvements along private waterfront properties, including measures to reduce erosion and provide protection against tidal action and storm surge. This program would include the creation of a digital inventory to assess shoreline conditions, and analyze potential strategies to restore shorelines to pre-Irene and pre-Sandy conditions. Pilot projects should be implemented and monitored at a local level.

Benefits: Shoreline improvements such as hard or hybrid structures, living shorelines, wave attenuation measures such as oyster reefs, and other natural solutions can help mitigate shoreline erosion and protect coastal properties from flooding and degradation.

Relationship to Disasters: Irene and Sandy caused widespread damage to Long Islands southern coastline. Many protective coastal features were effected, compromising their ability to control erosion and flooding.

Key Facts

- Project Type: Protective Measures
- Recovery Function: Natural and Cultural Resources, Infrastructure
- Project Location/Municipality: Nassau County
- Primary Target Area Affected: Nassau County
- Consistency with NYRCR: Increase resiliency of key assets
- Potential Beneficiaries: Nassau County residents





Lifeline Transportation Network

Identify and establish a system of local roads that lead to evacuation routes and Community Resource Centers

Cost Estimate: \$100,000 - 120,000 per CR Area

Project Information

Perform a study to identify a system of local roads that lead to Nassau County designated evacuation routes, Community Resource Centers, and evacuation centers. These “Lifeline Roads” should be prioritized for resilience and response measures such as debris cleaning, and clearly identified with uniform signage. Street lights and signals should be independently powered, and cell phone towers in proximity to the network should be required to maintain additional backup power resources.

Benefits: Establishing and publicizing a designated lifeline transportation network would ensure that residents and emergency responders can move throughout the community during and immediately after a major storm event.

Relationship to Disasters: Emergency responders had difficulty accessing heavily flooded areas during Sandy, and some residents who did not or were unable to evacuate before the storm made landfall were trapped in their homes. Even after the storm, debris on roadways made movement difficult.

Key Facts

- Project Type: Planning and Additional Study
- Recovery Function: Infrastructure
- Project Location/Municipality: Nassau County
- Primary Target Area Affected: Nassau County
- Consistency with NYRCR: Increase resiliency of key assets
- Potential Beneficiaries: Nassau County residents



Regional Energy Action Plan

Evaluate options for distributed generation and microgrid implementation, and smart grid technology integration

Cost Estimate: (Initial study) \$1,000,000

Project Information

Perform a study to identify opportunities for distributed generation and microgrid deployment, and smart grid integration into the existing electricity distribution system. Potential projects should incorporate community-driven planning and design, and leverage public-private partnerships for funding resources.

Benefits: Distributed generation resources can lower energy costs, and combined with a microgrid system can enhance grid reliability for all electricity customers. Smart grid technology can help utilities identify and service faults and outages faster, and allows for more efficient and reliable operation. These technologies also create new opportunities for jobs in clean energy industries, and overall contribute to a cleaner environment.

Relationship to Disasters: During Sandy, Irene, and many other minor storms damage to overhead utility lines resulted in power outages, which lasted for days in some parts of the region.

Key Facts

- Project Type: Utilities
- Recovery Function: Infrastructure
- Project Location/Municipality: Nassau County
- Primary Target Area Affected: Nassau County
- Consistency with NYRCR: Coordinate with regional initiatives
- Potential Beneficiaries: Nassau County residents and businesses





Commercial Redevelopment

Eastern Massapequa

Attract new businesses to vacant commercial properties and redevelop retail for mixed-use

Project Information

Given the large parking lots, aging mall, and vacant commercial properties in Eastern Massapequa, this project proposes to redevelop the area along major commercial corridors. The first phase would identify and remedy infrastructure deficiencies (power transmission and sewage management) and top priorities for attracting development. A tax stabilization program may also be established for the redeveloped land.

With redevelopment, the area should include a facility with expanded health care services to ensure that residents have access to a full service medical hospital with emergency care close to the community as well as housing options for seniors and first time home buyers. Building medium density residential development here provides an alternative to living in extreme and high risk zones.

Key Facts

- Project Type: Other Capital Project
- Recovery Function: Economic Development
- Project Location/Municipality: Massapequa II
- Primary Target Area Affected:



Downtown Master Plan

Engage in a comprehensive masterplanning process for the community's commercial districts

Project Information

To better prepare for economic development and community planning in the future, this project proposes the development of a Downtown Master Plan that includes the provision of incentives to stimulate the redevelopment of vacant, abandoned, and under-used properties with strategies such as streamlined approval processes and updated land use regulations. The Town of Oyster Bay and the Village of Massapequa Park would engage in a comprehensive masterplanning process for the downtown and commercial districts to encourage economic development that embraces and supports small, independent businesses in commercial corridors. Both governments should encourage the development of business association and/or work with business owners to establish business improvement districts in the community. Design standards for commercial corridors, particularly Merrick Road, should be established and planning efforts should support green infrastructure initiatives.

Key Facts

- Project Type: Planning and Additional Study
- Recovery Function: Community Planning and Capacity Building
- Project Location/Municipality: Massapequa I and Village of Massapequa Park
- Primary Target Area Affected: Downtown areas near LIRR stations and along Merrick Road



F3

Emergency Preparedness

Purchase tidal gauges, communication vehicles for fire department, army truck, and muscle wall system

Project Information

Emergency preparedness and disaster action planning for the Massapequas would include the following actions:

- Create a network for checking on and contacting seniors and other vulnerable groups in the event of an emergency.
- Purchase and install tidal gauges to better prepare for storms and initiate evacuation.
- Purchase emergency response ready communication vehicles and necessary equipment for the fire department and a 5-ton army truck with pump and tank
- Purchase Muscle Wall Mitigation system to use in lieu of sandbags.
- Potentially purchase additional sand bags, chain saw, large portable water pumps, heavy duty boat trailers, and an emergency boat for Bay Constables.

Key Facts

- Project Type: Emergency Readiness
- Recovery Function: Community Planning and Capacity Building
- Project Location/Municipality: Massapequas - Massapequa (I and II) and Village of Massapequa Park
- Primary Target Area Affected: community-wide



F4

Transit-Oriented Development

Infill Study

Develop area near LIRR Stations transit-supportive mix of uses

Project Information

A Transit-Oriented Infill Development Study near the Massapequa and/or Massapequa Park LIRR Stations would evaluate the potential for creating a mixed-use, transit-supportive redevelopment by repurposing surface parking lots and vacant parcels. The first phase would identify appropriate parcels, make necessary infrastructure upgrades to support redevelopment, and enact zoning changes as necessary. A station area plan would identify existing barriers.

The transit-oriented redevelopment may include housing options for seniors and first time home buyers as well as housing alternatives to residents who want to relocate from extreme and high risk zones. The construction of structured parking would provide emergency parking during a flood event. Additionally, the project would improve job access and revitalize transit hubs.

Key Facts

- Project Type: Planning and Additional Study
- Recovery Function: Economic Development
- Project Location/Municipality: Massapequa I and Village of Massapequa Park
- Primary Target Area Affected: along Sunrise Highway



F5

Voluntary Acquisition Program

Initiate program for voluntary acquisition of damaged property for redevelopment or open space

Project Information

Property damaged by storm events can be acquired by communities using CDBG-DR funding and other money to be redeveloped or preserved as open space.

After the 2008 flooding in Iowa, Cedar Rapids initiated a voluntary property acquisition program and has since built a park incorporating best practices in stormwater management.



Cedar Rapids during flood



Plan for waterfront park (under construction)

Key Facts

- Project Type: Planning and Additional Study
- Recovery Function: Housing
- Project Location/Municipality: Massapequas - Massapequa (I and II) and Village of Massapequa Park
- Primary Target Area Affected: Neighborhoods along the waterfront and canals south of Merrick Road

F6

Communication Network

Create a single source for comprehensive information and emergency assistance

Project Information

An integrated communication network would improve local disaster action planning for emergency preparation and readiness, evacuation, recovery efforts, and coordinating services across the region. This project would create a single source for comprehensive information and emergency assistance as well as develop non-digital systems for sharing community news in the event of an emergency.

RESPONSE TO STORM: Based on concerns voiced by residents, it is critical to establish a communication network that more effectively links the local government with emergency management agencies, faith-based groups, and non-profit organizations to direct aid and recovery efforts to the community's socially vulnerable populations.

Key Facts

- Project Type: Emergency Readiness
- Recovery Function: Community Planning and Capacity Building
- Project Location/Municipality: Massapequas - Massapequa (I and II) and Village of Massapequa Park
- Primary Target Area Affected: community-wide





Emergency Cell Phone Service

Improve mobile phone networks and ensure that they function during storm events

Project Information

This project proposes to work with local cellular service providers and regulatory agencies to expand service areas and equip cell towers with emergency backup power.

RESPONSE TO STORM: Based on concerns voiced by residents, it is essential that mobile phone networks are improved to ensure that they function during storm events.

Key Facts

- Project Type: Emergency Readiness
- Recovery Function: Infrastructure
- Project Location/Municipality: Massapequas - Massapequa (I and II) and Village of Massapequa Park
- Primary Target Area Affected: community-wide



Emergency Parking

Designate areas outside of flood zones to be used for parking by residents in evacuation zones

Project Information

Residents have requested that areas outside of flood zones to be designated for use by residents in evacuation zones for off-street parking and storage during emergencies and major storm events and without being ticketed or towed. This may include new structured parking near rail stations.

RESPONSE TO STORM: During Superstorm Sandy cars were damaged because of a lack of parking available to residents who wanted to move cars to a safe location during the storm.

Key Facts

- Project Type: Emergency Readiness
- Recovery Function: Community Planning and Capacity Building
- Project Location/Municipality: Massapequas - Massapequa (I and II) and Village of Massapequa Park
- Primary Target Area Affected: various locations, likely north of Sunrise Highway



A1

Underground Utility Lines

Lifeline Road Network

Bury utility lines in conjunction with roadway improvements along the Lifeline Road Network

A2

Tree Trimming

Lifeline Road Network

Prioritize these roads for regular tree trimming, remove problem trees, and replant strategically

A3

Bay Constable Building

Elevate and rebuild the Bay Constable Building at John Burns Park

A4

Smart-Grid Back-up Power

Develop a community-scale system for alternative back-up power generation and distribution

A5

Bike Trails

Improve and expand access to bicycle paths and waterways with more lanes and trails

A6

Utility & Wastewater Protection

Flood-proof new underground distribution substations and sewage pump stations





Natural Gas Modernization

Work with National Grid to modernize natural gas distribution infrastructure



Fuel Tank Security

Amend building and planning regulations to phase out the use of oil fuel tanks south of Merrick Road



Community Shelter Network

Develop local standards for emergency shelters/ resource centers with power, food, and information



Resiliency Education

Develop educational materials about flood prone areas and storm warning systems



Emergency Animal Shelters

Establish a refuge center for animals or families with animals to go to during a storm event



Residential Generator Rebates

Provide rebates for residential installations of natural gas or propane generators



A13

Revise Zoning & Building Codes

Make recommendations to revise zoning, planning and building code regulations for resilient design

A14

Improve Governance & Funding

Improve interface with Oyster Bay and create shared services for local governments and schools

A15

Inclusive Housing Plan

Develop a housing opportunities plan to accommodate aging residents and first-time buyers

A16

Transportation Improvements

Develop and expand mobility and transit options to reduce congestion and diversify transport options

A17

Youth and Teen Engagement

Provide community engagement opportunities and activities, including employment and recreation

A18

Arts and Culture

Encourage and support community theater, arts, and other cultural programs

