

# City of Long Beach Annex

This document presents the City of Long Beach’s annex to the *Nassau County Multi-Jurisdictional Hazard Mitigation Plan*.

## Hazard Mitigation Plan Points of Contact

The individuals below have been identified as this jurisdiction’s points of contact for the hazard mitigation plan. These individuals are members of the Planning Committee that met regularly for the update of this plan and will continue to meet in the years ahead to implement it.

Primary Point of Contact	Alternate Point of Contact
Donna M. Gayden City of Long Beach 1 West Chester Street Long Beach, NY 11561 citymanager@longbeachny.gov 516-431-1001	Scott Kemins City of Long Beach 1 West Chester Street Long Beach, NY 11561 lbbuilding@longbeachny.gov 516-510-1005

## Profile

The City of Long Beach covers approximately 2.22 square miles<sup>1</sup> and has a total population of 33,454 according to the American Community Survey 5-year 2018 Estimates. Some of the demographics of the City of Long Beach are summarized in Table 1. This information supported the development of mitigation actions that account for the needs of the most vulnerable individuals in the community.

Table 1: City of Long Beach Demographic Information

Demographic		Demographic	
Below 5 Years Old	4.7%	Black or African American alone	6.8%
Above 65 Years Old	18.4%	American Indian and Alaska Native alone	0.1%
Individuals with Disabilities	7.9%	Asian alone	3.3%
Persons in Poverty	6.9%	Native Hawaiian and other Pacific Islander alone	0.0%
Renters	43.5%	Two or More Races	3.3%
Without a High School Diploma	5.5%	White alone, not Hispanic or Latino, percent	74.1%
Without Access to Broadband Internet	12.3%	Hispanic or Latino	13.5%

<sup>1</sup> This is inclusive of land area only.

There are currently two major developments being undertaken within City boundaries: (1) a ten story multi-family dwelling located at 50 West Broadway and (2) a six story multi-family dwelling located at 661 West Broadway. Approximately 10% of the residential structures have been elevated and therefore brought into FEMA compliance since Super Storm Sandy, equating to approximately 1,200 residential properties. All of the work that has been undertaken is located in the 100-year floodplain because the entire City is in the 100-year floodplain. The jurisdiction continues to maintain zoning and a planning team. By understanding these development trends and how they intersect with hazard-prone areas, this allows for current and future vulnerabilities to be planned for and avoided.

Refer to the **County Profile** section of this plan for additional information related to current and future conditions of the County’s vulnerable population and the natural environment. This information provides important context for understanding hazard mitigation planning.

## Hazard Vulnerability

This section summarizes how the natural hazards profiled in Section 4 of this plan impact the City of Long Beach. The jurisdiction identified Coastal Hazards, Flooding, and Hurricane as the natural hazards that most impact the community. Table 2 shows the sectors of the community that are most likely to be impacted by each hazard. The categories that were considered included the community, economy, health and social services, housing, infrastructure, natural and cultural resources, or no impact. No impact indicates that the jurisdiction did not identify a noticeable impact from the hazard over the past five years, even if the hazard occurs. This information was used to develop a relevant and effective mitigation strategy for the jurisdiction. Detailed hazard event histories, critical facility exposure, and additional vulnerability information can be found in each hazard profile in Section 4 of this plan.

The hazards that most impact the City of Long Beach include: **Coastal Hazards, Flooding, and Hurricane.**

Table 2: City of Long Beach Hazard Impacts

Hazard	Impact Categories
Coastal Hazards	Community, Economy, Health and Social Services, Housing, Infrastructure, Natural and Cultural Resources
Drought	No Impact
Extreme Temperatures	Economy, Health and Social Services
Flooding	Community, Economy, Health and Social Services, Housing, Infrastructure, Natural and Cultural Resources
Ground Failure	No Impact
Hurricane and Tropical Storms	Community, Economy, Health and Social Services, Housing, Infrastructure, Natural and Cultural Resources
Hail	No Impact
Lightning	No Impact
Severe Winter Weather	Community, Economy, Health and Social Services, Housing, Infrastructure, Natural and Cultural Resources

Hazard	Impact Categories
Tornados	No Impact
Wind	Community, Economy, Health and Social Services, Housing, Infrastructure, Natural Cultural Resources

## Capability Assessment

This section summarizes the capabilities that the City of Long Beach has in place that can support hazard mitigation. These capabilities include plans, ordinances, staff, financial resources, and program participation. This Capability Assessment was used to help drive the identification and development of the projects presented in the Mitigation Strategy to make sure that they are appropriate in scope and achievable to implement.

### Legal and Regulatory Capability Assessment

Table 3 lists the assessment of existing legal and regulatory tools for the City of Long Beach. The City of Long Beach maintains several key administrative and technical capabilities to support mitigation, including access and functional needs plans, building codes, capital improvement plans, climate action plans, community development plans, comprehensive/master plans, economic development plans, emergency response plans, floodplain management plans, growth management plans, NFIP flood damage prevention ordinances, open space plans, post disaster recovery ordinances, post disaster recovery plans, real estate disclosure requirements, resilience plans, site plan review requirements, small area development plans, special purpose ordinances, stormwater management plans, subdivision ordinances, transportation plans, and zoning ordinances. These capabilities are critical to consider as tools in developing and implementing mitigation strategies. To further enhance their mitigation capabilities, the Village can consider the capabilities in the table below that the Village currently does not have. These additional capabilities would either support creating a legal framework or strategy for implementing a diversity of mitigation actions.

*Table 3: City of Long Beach Existing Legal and Regulatory Capabilities*

Regulatory Tool	Yes / No	Citation (if applicable)
Access and Functional Needs Plan	No	City of Long Beach Zoning Code
Building Code	No	City of Long Beach Zoning Code
Capital Improvement Plan	No	City of Long Beach Zoning Code
Climate Action Plan	No	City of Long Beach Zoning Code
Community Development Plan	No	City of Long Beach Zoning Code
Comprehensive Plan / Master Plan	No	City of Long Beach Zoning Code
Economic Development Plan(s)	No	City of Long Beach Zoning Code
Emergency Response Plan(s)	No	City of Long Beach Zoning Code
Floodplain Management Plan(s)	No	City of Long Beach Zoning Code
Growth Management Plan(s)	No	City of Long Beach Zoning Code

Regulatory Tool	Yes / No	Citation (if applicable)
NFIP Flood Damage Prevention Ordinance(s)	No	City of Long Beach Zoning Code
Open Space Plan(s)	No	City of Long Beach Zoning Code
Post Disaster Recovery Ordinance(s)	No	City of Long Beach Zoning Code
Post Disaster Recovery Plan(s)	No	City of Long Beach Zoning Code
Real Estate Disclosure Requirements	No	City of Long Beach Zoning Code
Resilience Plan(s)	No	City of Long Beach Zoning Code
Site Plan Review Requirement(s)	No	City of Long Beach Zoning Code
Small Area Development Plan(s)	No	City of Long Beach Zoning Code
Special Purpose Ordinance(s)	No	City of Long Beach Zoning Code
Stormwater Management Plan(s)	No	City of Long Beach Zoning Code
Subdivision Ordinance(s)	No	City of Long Beach Zoning Code
Transportation Plan(s)	No	City of Long Beach Zoning Code
Zoning Ordinance(s)	No	City of Long Beach Zoning Code

## Administrative and Technical Capability Assessment

Table 4 lists the assessment of existing administrative and technical tools for the City of Long Beach. The City of Long Beach has a high level of primary administrative and technical capabilities to support mitigation. This includes management, administration, grant writing, engineering, construction, and analysis. Increasing training capacity and expertise of these individuals will support mitigation practice in the City. Diversifying expertise to be inclusive of planning skills will also support mitigation practice.

Table 4: City of Long Beach Existing Staff / Personnel Resource

Staff / Personnel Resource	Yes / No	Details
Emergency Manager(s)	Yes	Director of Emergency Management
Engineer(s) trained in construction practices related to buildings/infrastructure	Yes	Commissioner of Public Works
Engineer(s) with an understanding of natural and/or human caused hazards	Yes	Deputy Commissioner of Public Works
Engineer(s) with knowledge of land development and land management practices	Yes	Zoning Inspector
Grant Writers	Yes	Director of Economic Development

Staff / Personnel Resource	Yes / No	Details
Personnel skilled or trained in Geographic Information Systems	Yes	Deputy Commissioner of Public Works
Personnel trained in construction practices related to buildings/infrastructure	Yes	Building Commissioner
Planner(s) with an understanding of natural hazards	No	
Planner(s) with knowledge of land development and land management practices	No	
Scientist(s) familiar with natural hazards	No	
Surveyors	No	

## Fiscal Capability Assessment

Table 5 lists the assessment of existing fiscal tools for the City of Long Beach. Funding is often the biggest barrier when implementing mitigation programs. The Village is primarily able to fund mitigation programs by incurring debt through general obligation and special tax bonds, levying taxes for specific purposes, utilizing user fees for utility services, capital improvements project funding, CDBG programs, impact fees for home buyers and/or developers, and state mitigation grant programs. City of Long Beach should consider explore additional fiscal capabilities in order to gain access to additional funding for mitigation.

*Table 5: City of Long Beach Existing Fiscal Capabilities*

Resources	Yes / No	Additional Details
Ability to incur debt through general obligation bonds	Yes	
Ability to incur debt through private activity bonds	No	
Ability to incur dept through special tax bonds	Yes	
Authority to levy taxes for specific purposes	Yes	
Authority to utilize user fees for utility services	Yes	
Authority to withhold public expenditures in hazard prone areas	No	
Capital improvements project funding	Yes	City of Long Beach Zoning Code
Community Development Block Grants (CDBG)	Yes	
Impact fees for home buyers and/or developers	Yes	
State mitigation grant programs	Yes	

## Community Classification Assessment

Table 6 lists the assessment of existing community classifications for the City of Long Beach. Participation in the Climate Smart Community program demonstrates increased capabilities of the City related to mitigation. Exploring gaining additional community classifications will guide the City's mitigation programs and support capacity building.

Table 6: City of Long Beach Community Classifications

Classification	Yes/No (or Status)
Building Code Effectiveness Grading Schedule (BCEGS)	Yes – BCEGS Rating of 3
Public Protection Classification Program	No
Community Rating System (CRS)	Yes – CRS Class 7
Other Classifications	Climate Smart Community

## National Flood Insurance Program Summary

This section provides a summary of the floodplain management capabilities for City of Long Beach and how the jurisdiction is meeting the requirements of the National Flood Insurance Program (NFIP). As detailed in their 2020 Floodplain Management Plan, the "City of Long Beach has significant exposure to flooding as one of New York State's barrier island communities. The city is bordered by the Atlantic Ocean to the south and the Reynolds Channel to the north, and is impacted by heavy rainfall events. Historically and most recently, storm events such as Superstorm Sandy have demonstrated how the City of Long Beach can be significantly impacted by flooding."

The City's Building Commissioner is responsible for floodplain management. Training from relevant regulatory agencies such as New York State Department of Environmental Conservation and the Environmental Protection Agency will support the future growth of the City's floodplain management program. The NFIP is administered through the City of Long Beach Building Department. Some of the barriers to running a successful NFIP program in the City include trying to satisfy a myriad of government rules and regulations with limited staff and resources. After flood events, substantial damage determinations are determined by in-house inspectors. The flood maps for this jurisdiction accurately portray the current flood risk. There are currently no RiskMAP projects ongoing in this jurisdiction.

The City reported that 2000 properties were substantially damaged as a result of recent flood events. The City of Long Beach is in good standing with the NFIP. Based on documentation received from NYSDEC, the City had its last Community Assistance Contact on 02/15/2013 and its last Community Assistance Visit on 07/22/2014. There are no NFIP compliance violations that need to be addressed in this jurisdiction.

Subsequent to Hurricane Sandy, over 1200 homes in the City were elevated to mitigate future flood losses at these properties. The City used hazard mitigation funding available through FEMA's Public Assistance program to harden various facilities including, but not limited to, City Hall, MLK Center, Ice Arena, Senior/Recreation Center, West End Community Center,

Wastewater Treatment Plant, and Water Purification Plant. In addition, there are several New York State Governor's Office of Storm Recovery (GOSR) projects that the City has undertaken, including various drainage projects. The City is also installing new bulkheads to the height of the Base Flood Elevation (BFE) to mitigate future flooding and erosion at various locations. The Flood Damage Prevention Ordinance for the City of Long Beach meets minimum requirements. The ordinance was last amended 04/01/1997 and can be referenced in Article 12 of the City of Long Beach Code of Ordinances. Other steps that the City takes to support the floodplain management program and meet NFIP requirements include participating in the Community Rating System. Participation in this program helps to reduce flood insurance premiums for Village residents that have policies through the NFIP.

## Mitigation Strategy

The following section provides an overview of the mitigation strategy for City of Long Beach. It provides an overview of the jurisdiction's previous mitigation actions, proposed actions, and the NYS mitigation worksheets.

### Previous Mitigation Actions

**Project Table #1 – 6:**

Action	Install and Raise Bulk Heading Along Reynolds Channel	Install Check Valves for Critical Infrastructure	Build City Command Center	Comprehensive Drainage Analysis of the City	Canal flood gates Along Reynolds Channel	City Wide Tree Maintenance and Pruning Program
Risk Category	Flooding, Severe Weather, Wave Action, Erosion	Flooding	Earthquakes, Severe Weather, Extreme Winds, Erosion, Wave Action, Flooding	Flooding	Flooding	Severe Weather, Flooding, extreme Winds
Project Status	In Progress 40% Complete	In Progress	Complete	Not Started	Not Started	Complete
Project Status Description	Construction in progress: West End Bulkhead, Heron and Doyle canals, Bay Drive Washington to Magnolia	Check valve installations will continue through the City's Annual Marine Construction contract.	The office of Emergency Management is fully operational.	Funding not approved.	Funding not approved.	Developed tree planting master plan.
Carried Forward to 2020 Plan	Yes	Yes	No	No	No	No
Required Changes	No	No				

**Project Table #7 - 12:**

Action	Perform Routine Maintenance of City's Storm Drains	Annual Event to promote Disaster Resistant Development	Mitigation of Masonry Exterior. Installation of parapet walls and water-resistant materials.	Install Permanent Generator - installed at the Long Beach Medical Center	Install permanent generators at the Lido Complex, Lindell Elementary School & East Elementary School	Upgrade Exterior Envelope at Long Beach High School
Risk Category	Flooding	Earthquakes, Severe Weather, Extreme Winds, Flooding	Infiltration of Water	Loss of electrical power	Loss of Electrical Power	Damage to roof and curtainwall systems
Project Status	Ongoing	Ongoing	Complete	Complete	Complete	Complete



<b>Action</b>	<b>Perform Routine Maintenance of City's Storm Drains</b>	<b>Annual Event to promote Disaster Resistant Development</b>	<b>Mitigation of Masonry Exterior. Installation of parapet walls and water-resistant materials.</b>	<b>Install Permanent Generator - installed at the Long Beach Medical Center</b>	<b>Install permanent generators at the Lido Complex, Lindell Elementary School &amp; East Elementary School</b>	<b>Upgrade Exterior Envelope at Long Beach High School</b>
<b>Project Status Description</b>	The City's Sewer Maintenance Dept. cleans catch basins and storm drains as part of the phase II Storm Water program.	The City participates in Disaster Resistance Development.	Parapet reconstruction was completed at the Long Beach Nursing Home at 375 East Bay Drive.	The permanent generator for the South Nassau Free Standing Emergency Department was installed	Parapet reconstruction was completed at the Long Beach Nursing Home at 375 East Bay Drive.	They have completed the upgrade of the exterior envelope of the High School.
<b>Carried Forward to 2020 Plan</b>	No	Yes	No	No	No	No
<b>Required Changes</b>		No				

## Proposed Mitigation Actions

Project Table #1-7:

<b>Project Number</b>	<b>CLB_1</b>	<b>CLB_2</b>	<b>CLB_3</b>	<b>CLB_4</b>	<b>CLB_5</b>	<b>CLB_6</b>	<b>CLB_7</b>
<b>Project Name</b>	Annual Event to promote Disaster Resistant Development	City of Long Beach/Nassau County Waste Water Treatment Plant Diversion Project (FEMA 406 Mitigation)	Drainage Improvement Project (GOSR)	Dry Flood Proofing Municipal Building Complex (PW-04066)	Hazard Mitigation-150 W. Pine St. Complex (PW-433528 Emmie-0449)	Hazard Mitigation-Animal Shelter (PW-433524 Emmie-04134)	Hazard Mitigation-Fire Houses Station 1 Maple, Station 2 Indiana (PW-433525 Emmie-04134)
<b>Goal being met</b>	4	1,2,3,4,5,6	1,2,3,4,5	1, 3	1,2,3,4,5	1,2,3,4,5	1,2,3,4,5
<b>Hazards to be mitigated</b>	Earthquakes, Severe Weather, Extreme Winds, Flooding	Flooding	Flooding	Flooding	Flooding	Flooding	Flooding
<b>Description of the Problem</b>	Development in the City of Long Beach should be constructed in a way that is resistant and resilient to future disasters of all kinds.	The City of Long Beach WWTP is antiquated and not compliant with existing regulatory requirements.	This facility is in the floodplain and vulnerable to repetitive flooding. It was damaged during Hurricane Sandy.	The Municipal Building Complex, located at 1 West Chester Avenue, Long Beach, NY, is a critical facility that houses City Hall, the Police Department, and the Fire Department. During Hurricane Sandy, this facility s flooded by storm surge from the Atlantic Ocean that rose to approximately 9"	This facility is in the floodplain and vulnerable to repetitive flooding. It was damaged during Hurricane Sandy.	This facility is in the floodplain and vulnerable to repetitive flooding. It was damaged during Hurricane Sandy.	This facility is in the floodplain and vulnerable to repetitive flooding. It was damaged during Hurricane Sandy.

Project Number	CLB_1	CLB_2	CLB_3	CLB_4	CLB_5	CLB_6	CLB_7
				above ground floor level, or 18" above ground grade of 7.41" NAVD88.			
<b>Description of the Solution</b>	Hold an annual event to promote disaster resistant development and familiarize the construction and development industry about resilient building practices as well as local and state standards and regulations.	Convert Wastewater Treatment Plant to a pump station and divert flow to the Bay Park Sewage Treatment Plant.	Address chronic flood prone areas.	Dry flood proof the buildings and elevate City Hall mechanicals above the SFHA to reduce risk of flood damage in the future.	Floodproof complex. Install sump pumps. Install elevated emergency generator.	Replace four doors with flood proof units. Replace three windows with flood resistant units. Seal all exterior penetrations. Fortify exterior wall surfaces by wrapping building with fiber-reinforced polymer material. Install sump pump system and backflow prevention device.	Flood proof buildings.
<b>Critical Facility</b>	No	Yes	Yes	Yes	Yes	No	Yes
<b>EHP Issues</b>	No	No	No	Yes	No	No	No
<b>Estimated Timeline</b>	Ongoing	Design for Long Beach portion 90% complete. Construction Fall 2020.	Construction Fall 2020	In progress	Design 90% complete. Construction Fall 2022.	Design not initiated. Construction Fall 2022.	Hazard Mitigation Plan pending approval by FEMA.
<b>Lead Agency</b>	Community Development	City of Long Beach	City of Long Beach	City of Long Beach	City of Long Beach	City of Long Beach	City of Long Beach
<b>Estimated Costs</b>	\$10000	\$80000000	\$5045000	\$847014	\$3086378	\$89623	\$156733
<b>Estimated Benefits</b>	Encourage disaster resistant development in the City of Long Beach.	Protect critical facility Infrastructure.	Mitigate flooding.	Protect critical facilities.	Protect against loss of equipment.	Avoid future property damage.	Avoid future property damage.
<b>Potential Funding Sources</b>	Municipal budget	FEMA	FEMA	FEMA	FEMA	FEMA	FEMA

Project Table #8-15:

Project Number	CLB_8	CLB_9	CLB_10	CLB_11	CLB_12	CLB_13	CLB_14	CLB_15
<b>Project Name</b>	Hazard Mitigation-Long Beach City Hall (PW-433520 Emmie-04066)	Hazard Mitigation-Long Beach Ice Arena (PW-433532 Emmie-03978)	Hazard Mitigation-MLK Center (PW-433529 Emmie-03901)	Hazard Mitigation-Recreation and Senior Center (PW-433505 Emmie-04154)	Hazard Mitigation-Waste Water Treatment Plant (PW-433508 Emmie-00309)	Hazard Mitigation-Water Purification Plant (PW-4333509 Emmie-0293)	Install Check Valves for Critical Infrastructure	Northshore Critical Infrastructure Project (FEMA 404 Mitigation Project)
<b>Goal being met</b>	1,2,3,4,5	1,2,3,4,5	1,2,3,4,5	1,2,3,4,5	1,2,3,4,5,6	1,2,3,4,5	1, 3	1,2,3,4,5
<b>Hazards to be mitigated</b>	Flooding	Flooding	Flooding	Flooding	Flooding	Flooding	Flooding	Flood Mitigation, Coastal Erosion Protection and Infrastructure Preservation
<b>Description of the Problem</b>	This facility is in the floodplain and vulnerable to repetitive flooding. It was damaged during Hurricane Sandy.	This facility is in the floodplain and vulnerable to repetitive flooding. It was damaged during Hurricane Sandy.	This facility is in the floodplain and vulnerable to repetitive flooding. It was damaged during Hurricane Sandy.	This facility is in the floodplain and vulnerable to repetitive flooding. It was damaged during Hurricane Sandy.	This facility is in the floodplain and vulnerable to repetitive flooding. It was damaged during Hurricane Sandy.	This facility is in the floodplain and vulnerable to repetitive flooding. It was damaged during Hurricane Sandy.	This facility is in the floodplain and vulnerable to repetitive flooding. It was damaged during Hurricane Sandy.	The existing shoreline located on the Northshore of Long Beach between Monroe Blvd and Long Beach Veterans Memorial Park is in an extreme state of decay. This area is subject to extreme flooding
<b>Description of the Solution</b>	Install stop log system at all points, sump pumps. Replace front entry. Flood proof brick façade.	Replace entry doors. Install Stop log system. Replace windows with flood resistant windows. Seal exterior penetrations. Install sump pumps and backflow preventer on sanitary sewer line.	Strengthen masonry wall and corrugated steel walls. Install flood resistant doors, backflow devices and sump pumps.	Stop log system at all points, sump pumps, replacement of frontal perimeter doors with flood proof units, flood proofing brick façade, erection of perimeter walls.	Protect proposed pump station that will be built as part of the diversion project.	Protect Water Purification Plant and ancillary facilities.	Install Check Valves for Critical Infrastructure	Construct new bulkhead adjacent to critical facilities along Reynolds Channel and a storm water pump at Riverside Blvd.
<b>Critical Facility</b>	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes
<b>EHP Issues</b>	No	No	No	No	No	No	No	No
<b>Estimated Timeline</b>	Hazard Mitigation Plan pending	Design 60% complete. Construction Spring 2021.	Design 60% complete. Construction Spring 2021.	Hazard Mitigation Plan pending approval by FEMA.	Hazard Mitigation Plan submitted and	Hazard Mitigation Plan pending approval by FEMA.	In Progress	Construction Spring 2021

Project Number	CLB_8	CLB_9	CLB_10	CLB_11	CLB_12	CLB_13	CLB_14	CLB_15
	approval by FEMA.				pending approval by FEMA.			
Lead Agency	City of Long Beach	City of Long Beach	City of Long Beach	City of Long Beach	City of Long Beach	City of Long Beach	City of Long Beach Department of Public Works	City of Long Beach
Estimated Costs	\$170985	\$58950	\$351846	\$561574	\$94000000	\$638096	To be determined	\$32332175
Estimated Benefits	Protect critical facility.	Avoid future property damage.	Avoid future property damage.	Avoid future property damage.	Protect critical infrastructure.	Protect critical infrastructure.	Protect critical facilities.	Protect critical infrastructure.
Potential Funding Sources	FEMA	FEMA	FEMA	FEMA	FEMA	FEMA	Municipal budget	FEMA

## **Mitigation Action Worksheets**

The following pages contain mitigation action worksheets that provide additional detail some of the jurisdiction's proposed mitigation actions.

## Nassau County Multi-Jurisdictional Hazard Mitigation Plan

Name of Jurisdiction: City of Long Beach

NYS DHSES Action Worksheet			
Project Name:	Northshore Critical Infrastructure Protection Project - FEMA 404 Mitigation Project		
Project Number:	Leave Blank		
Risk / Vulnerability			
Hazard of Concern:	Flood Mitigation, Coastal Erosion Protection and Infrastructure Preservation		
Description of the Problem:	The existing shoreline located on the Northshore of Long Beach between Monroe Blvd and Long Beach Veterans Memorial Park is in an extreme state of decay. This area is subject to extreme flooding.		
Action or Project Intended for Implementation			
Description of the Solution:	The proposed project will stabilize the shoreline by installing bulkheading. In addition a storm water pump station will be installed to discharge storm water during a flood event. Utilities (i.e., water, sewer, gas) will be replaced as well.		
Is this project related to a Critical Facility?	Yes	<input checked="" type="checkbox"/>	No
(If yes, this project must intend to protect to the 500-year flood event or the actual worst damage scenario, whichever is greater.)			
Level of Protection:	100 year flood (Base Flood Elevation)	Estimated Benefits (losses avoided):	Qualitative. Protect infrastructure including gas, electric, water, sewer, Long Island Rail Road
Useful Life:	100 Years		
Estimated Cost:	\$32,000,000		
Plan for Implementation			
Prioritization:	Leave Blank	Desired Timeframe for Implementation:	Two Years
Estimated Time Required for Project Implementation:	Six Months	Potential Funding Sources:	FEMA 404
Responsible Organization:	City of Long Beach	Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Three Alternatives Considered (including No Action)			
Alternatives:	<i>Action</i>	<i>Estimated Cost</i>	<i>Evaluation</i>
	No Action	\$0	Shoreline vulnerable
	Bulkheading only	\$15,000,000	Limited mitigation. Flooding to remain a concern.
	Install only the storm water pump station	To be determined	The shoreline will still be vulnerable and the utilities will still need to be replaced.
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			

## Instructions

(Name of Jurisdiction) \_\_\_\_\_

NYS DHSES Action Worksheet			
Project Name:	Each action must have a unique project number referenced here and in the Action Tables.		
Project Number:	Each action must have a unique project name referenced here and in the Action Tables.		
Risk / Vulnerability			
Hazard of Concern:	Identify the hazard being addressed with this action.		
Description of the Problem:	Provide a detailed narrative of the problem. Describe the natural hazard you wish to mitigate, its impacts to the jurisdiction, past damages and loss of service, etc. Include the street address of the property/project location (if applicable), adjacent streets, and easily identified landmarks such as water bodies and well-known structures, and end with a brief description of existing conditions (topography, terrain, hydrology) of the site.		
Action or Project Intended for Implementation			
Description of the Solution:	Provide a detailed narrative of the solution. Describe the physical area (project limits) to be affected, both by direct work and by the project's effects; how the action would address the existing conditions previously identified; proposed construction methods, including any excavation and earth-moving activities; where you are in the development process (e.g., are studies and/or drawings complete), etc., the extent of any analyses or studies performed (attach any reports or studies).		
Is this project related to a Critical Facility?		Yes <input type="checkbox"/>	No <input type="checkbox"/>
(If yes, this project must intend to protect to the 500-year flood event or the actual worst damage scenario, whichever is greater.)			
Level of Protection:	Identify the level of protection the proposed project will provide. Ex. 100-year (1%) flood.	Estimated Benefits (losses avoided):	Identify the benefits that implementation of this project will provide. If dollar amounts are known, include them. If dollar amounts are unknown or are unquantifiable, describe the losses that will be avoided.
Useful Life:	Identify the number of years the project will provide protection against the hazard.		
Estimated Cost:	Identify all estimated costs associated with implementation.		
Plan for Implementation			
Prioritization:	Identify the priority based on the prioritization method agreed upon.	Desired Timeframe for Implementation:	Identify the desired start time for this project. Ex. Within 6 months.
Estimated Time Required for Project Implementation:	Provided the estimated time required to complete the project from start to end.	Potential Funding Sources:	Multiple sources of potential funding should be listed when appropriate.
Responsible Organization:	Identify the name of a department or agency responsible for implementation, not the jurisdiction.	Local Planning Mechanisms to be Used in Implementation, if any:	Consider the use of local planning mechanisms that will be used to implement this project.
Three Alternatives Considered (including No Action)			
Alternatives:	<i>Action</i>	<i>Estimated Cost</i>	<i>Evaluation</i>
	No Action	\$0	
	Alternative 1 Brief Description		Include a description of pros/cons of Alternative 1.
	Alternative 2 Brief Description		Include a description of pros/cons of Alternative 2.
Progress Report (for plan maintenance)			
Date of Status Report:	This section should be completed during plan maintenance/evaluation.		
Report of Progress:	Describe what progress, if any, has been made on this project. If it has been determined the jurisdiction no longer wishes to pursue implementation, state that here and indicate why.		
Update Evaluation of the Problem and/or Solution:	Provide an updated description of the problem and solution, and what has happened since initial consideration/development.		

## Nassau County Multi-Jurisdictional Hazard Mitigation Plan

Name of Jurisdiction: City of Long Beach

NYS DHSES Action Worksheet			
Project Name:	City of Long Beach Nassau County Waste Water Treatment Plant (WWTP) Diversion Project		
Project Number:	Leave Blank		
Risk / Vulnerability			
Hazard of Concern:	Flood Mitigation		
Description of the Problem:	The City of Long Beach WWTP is antiquated and not compliant with existing regulatory requirements.		
Action or Project Intended for Implementation			
Description of the Solution:	Convert WWTP to a pump station and divert flow to Bay Park Sewage Treatment Plant.		
Is this project related to a Critical Facility?	Yes	<input checked="" type="checkbox"/>	No
<small>(If yes, this project must intend to protect to the 500-year flood event or the actual worst damage scenario, whichever is greater.)</small>			
Level of Protection:	500 year flood	Estimated Benefits (losses avoided):	Protection of critical infrastructure and redirection of pollutants to Reynolds Channel
Useful Life:	100 years		
Estimated Cost:	\$80,000,000		
Plan for Implementation			
Prioritization:	Leave Blank	Desired Timeframe for Implementation:	Two years
Estimated Time Required for Project Implementation:	One year	Potential Funding Sources:	FEMA 406 Mitigation WIIA Consolidated Funding
Responsible Organization:	City of Long Beach/Nassau County	Local Planning Mechanisms to be Used in Implementation, if any:	N/A
Three Alternatives Considered (including No Action)			
Alternatives:	<i>Action</i>	<i>Estimated Cost</i>	<i>Evaluation</i>
	No Action	\$0	\$0
	Renovate WWTP to meet current codes and standards.	\$100,000,000	Additional cost and detriment to the environment.
	Conduct a study to develop other alternatives.	To be determined.	This does not solve the current problem in a timely matter.
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



## Instructions

(Name of Jurisdiction) \_\_\_\_\_

NYS DHSES Action Worksheet			
Project Name:	Each action must have a unique project number referenced here and in the Action Tables.		
Project Number:	Each action must have a unique project name referenced here and in the Action Tables.		
Risk / Vulnerability			
Hazard of Concern:	Identify the hazard being addressed with this action.		
Description of the Problem:	Provide a detailed narrative of the problem. Describe the natural hazard you wish to mitigate, its impacts to the jurisdiction, past damages and loss of service, etc. Include the street address of the property/project location (if applicable), adjacent streets, and easily identified landmarks such as water bodies and well-known structures, and end with a brief description of existing conditions (topography, terrain, hydrology) of the site.		
Action or Project Intended for Implementation			
Description of the Solution:	Provide a detailed narrative of the solution. Describe the physical area (project limits) to be affected, both by direct work and by the project's effects; how the action would address the existing conditions previously identified; proposed construction methods, including any excavation and earth-moving activities; where you are in the development process (e.g., are studies and/or drawings complete), etc., the extent of any analyses or studies performed (attach any reports or studies).		
Is this project related to a Critical Facility?		Yes <input type="checkbox"/>	No <input type="checkbox"/>
(If yes, this project must intend to protect to the 500-year flood event or the actual worst damage scenario, whichever is greater.)			
Level of Protection:	Identify the level of protection the proposed project will provide. Ex. 100-year (1%) flood.	Estimated Benefits (losses avoided):	Identify the benefits that implementation of this project will provide. If dollar amounts are known, include them. If dollar amounts are unknown or are unquantifiable, describe the losses that will be avoided.
Useful Life:	Identify the number of years the project will provide protection against the hazard.		
Estimated Cost:	Identify all estimated costs associated with implementation.		
Plan for Implementation			
Prioritization:	Identify the priority based on the prioritization method agreed upon.	Desired Timeframe for Implementation:	Identify the desired start time for this project. Ex. Within 6 months.
Estimated Time Required for Project Implementation:	Provided the estimated time required to complete the project from start to end.	Potential Funding Sources:	Multiple sources of potential funding should be listed when appropriate.
Responsible Organization:	Identify the name of a department or agency responsible for implementation, not the jurisdiction.	Local Planning Mechanisms to be Used in Implementation, if any:	Consider the use of local planning mechanisms that will be used to implement this project.
Three Alternatives Considered (including No Action)			
Alternatives:	<i>Action</i>	<i>Estimated Cost</i>	<i>Evaluation</i>
	No Action	\$0	
	Alternative 1 Brief Description		Include a description of pros/cons of Alternative 1.
	Alternative 2 Brief Description		Include a description of pros/cons of Alternative 2.
Progress Report (for plan maintenance)			
Date of Status Report:	This section should be completed during plan maintenance/evaluation.		
Report of Progress:	Describe what progress, if any, has been made on this project. If it has been determined the jurisdiction no longer wishes to pursue implementation, state that here and indicate why.		
Update Evaluation of the Problem and/or Solution:	Provide an updated description of the problem and solution, and what has happened since initial consideration/development.		