

**INCORPORATED VILLAGE OF ISLAND PARK  
(NFIP #360471)**

**REPETITIVE LOSS AREA ANALYSIS  
REPORT**

**MAY 1, 2020**

**PREPARED FOR:  
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INC. VILLAGE OF ISLAND PARK**

**AND**

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**Professional Engineer Certification**

I, Nora M. Brew, P.E. certify that I am currently a New York State registered professional engineer and that this *Repetitive Loss Area Analysis Report*, dated May 1, 2020 in support of the Incorporated Village of Island Park's Community Rating System program application, was prepared under my direction.



Nora M. Brew

Nora M. Brew, P.E.  
Walden Environmental Engineering, PLLC

5/1/2020

Date

## **PREFACE**

This Repetitive Loss Area Analysis Report (RLAA Report) was developed as part of the Incorporated Village of Island Park's (Village) application to the Community Rating System (CRS) program. The Village has taken many actions which exceed federal standards for floodplain management to improve its resilience and readiness to respond to flood disasters, which ultimately protect properties and reduce flood insurance payouts. As a result of these actions, the Village is eligible for reductions in flood insurance costs through insurance premium discounts. Walden Environmental Engineering, PLLC partnered with the Village's Certified Floodplain Manager (Douglas Groth, CFM) and other Village staff to create this RLAA Report in accordance FEMA guidance and direction from the Insurance Services Office, Inc. (ISO) CRS Specialist assigned to this project.



As part of the Village's efforts to mitigate the cost and effects of flooding on property owners, the Village is applying to become a voluntary member of the Federal Emergency Management Agency (FEMA) Community Rating System (CRS). Community participation in the CRS will allow property owners in the community to receive a discount on flood insurance premiums ranging from 5% to 45% based on CRS credit points awarded to the Village.

The insurance premium incentive increases as the community provides documentation detailing a variety of floodplain management activities, including a Repetitive Loss Area Analysis (RLAA). A Repetitive Loss Area is defined as "A property for which two or more National Flood Insurance Program losses of at least \$1,000 each have been paid within any 10-year rolling period since 1978." Analysis of Repetitive Loss Properties indicate areas that are representative of a community's repeated flooding problems.

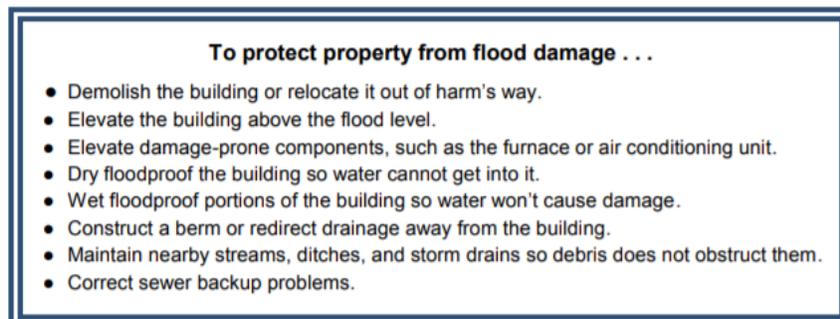
The purpose of an RLAA is to generate mitigation solutions for individual buildings or areas, in contrast to a program that examines community-wide flooding problems and solutions. This RLAA Report has been prepared in accordance with the guidelines presented in the *National Flood Insurance Program Community Rating System Coordinator's Manual* (FEMA, FIA-15, 2017) and *Developing a Repetitive Loss Area Analysis for Credit Under Activity 510 (Floodplain Management Planning) of the Community Rating System* (NFIP/CRS, 2017). The objective of this report is to document and present the Village's implementation of the RLAA five-step planning process as outlined below.

1. **Contact property owners** – Notify all properties in the identified repetitive loss area(s) that a project is beginning that will investigate flood damage and recommend mitigation solutions. This step must be completed before any of the other steps in the RLAA process.
2. **Contact other agencies** - Agencies and organizations that have plans, studies, or reports that may discuss the causes of flooding must be contacted during the planning process, whether they are outside the community or within it. Each agency, organization, or department must be cited in the analysis along with the type of information utilized.
3. **Collect data** - Each building in the repetitive loss area must be visited to collect data and make a preliminary determination of repetitive flooding and appropriate mitigation measures.
4. **Consider mitigation alternatives** - This step requires matching the correct mitigation measure with the flooding problem, based on the data collected and the field visits. Many mitigation measures are available, and multiple options should be considered.

**5. Document the findings** - The findings of the analyses must be documented, and a report must be developed for each repetitive loss area. If the types of buildings, flooding problems, and mitigation measures vary from one area of a community to another, a separate report must be prepared for each. However, if similar conditions (structure types, flood problems and mitigation) exist in multiple areas, they can be grouped into one report. The *CRS Coordinator's Manual* states that the RLAA Report must include the following information:

- A summary of the process that was followed, including how the property owners were involved;
- The problem statement with a map of the area affected. The statement and map may show individual properties or parcels, but cannot show which ones are on FEMA's repetitive loss list;
- A list or table showing basic information for each building, such as address, foundation type, condition, and appropriate mitigation measures;
- The alternative approaches that were reviewed; and
- Action items that include:
  - Who is responsible for implementing the action,
  - When it will be done, and
  - How it will be funded.

Based on the RLAA presented in this report, the Village and Walden have partnered to develop mitigation alternatives to reduce damages from repetitive flooding in the Village. The RLAA considered the property protection measures listed in Figure 360-1 of the *CRS Coordinator's Manual* and the six (6) FEMA mitigation categories listed in Figure 510-4 of the *CRS Coordinator's Manual* as shown below:



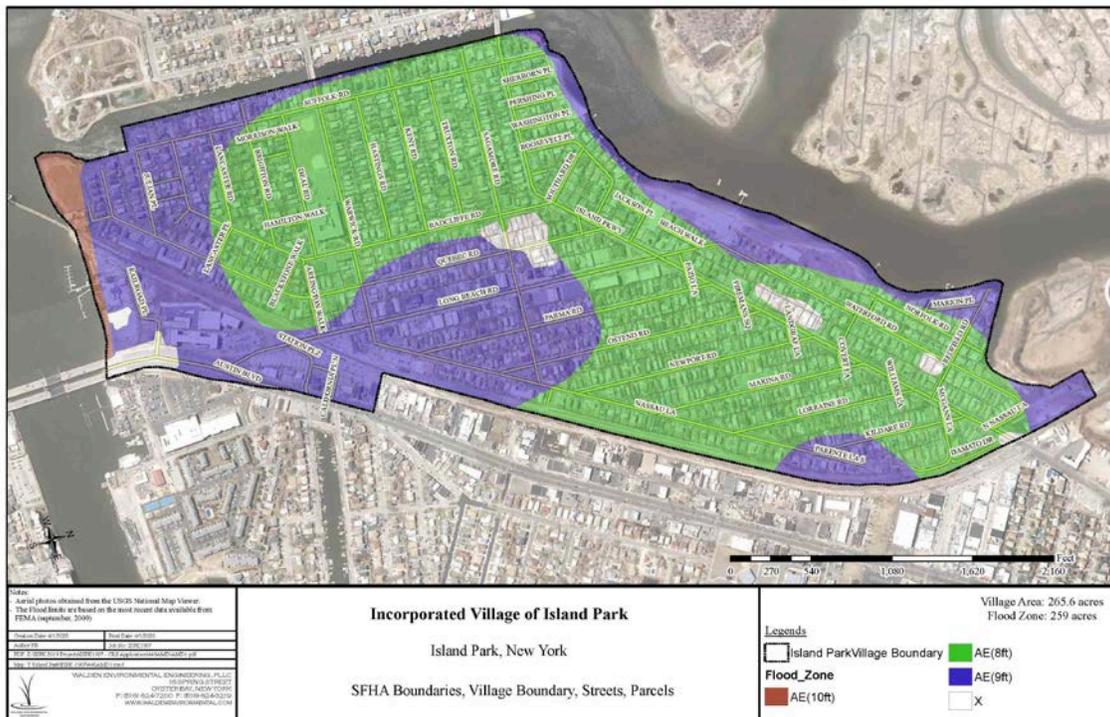
**Figure 2:** Typical Property Protection Measures (FEMA, 2017)

1. **Preventive** activities keep flood problems from getting worse. The use and development of flood-prone areas is limited through planning, land acquisition, or regulation. They are usually administered by building, zoning, planning, and/or code enforcement offices.
  - Floodplain mapping and data
  - Open space preservation
  - Floodplain regulations
  - Erosion setbacks
  - Planning and zoning
  - Stormwater management
  - Drainage system maintenance
  - Building codes
2. **Property protection** activities are usually undertaken by property owners on a building-by-building or parcel basis.
  - Relocation
  - Acquisition
  - Building elevation
  - Retrofitting
  - Sewer backup protection
  - Insurance
3. **Natural resource protection** activities preserve or restore natural areas or the natural functions of floodplain and watershed areas. They are implemented by a variety of agencies, primarily parks, recreation, or conservation agencies or organizations.
  - Wetlands protection
  - Erosion and sediment control
  - Natural area preservation
  - Natural area restoration
  - Water quality improvement
  - Coastal barrier protection
  - Environmental corridors
  - Natural functions protection
4. **Emergency services** measures are taken during an emergency to minimize its impact. These measures are usually the responsibility of city or county emergency management staff and the owners or operators of major or critical facilities.
  - Hazard threat recognition
  - Hazard warning
  - Hazard response operations
  - Critical facilities protection
  - Health and safety maintenance
  - Post-disaster mitigation actions
5. **Structural projects** keep flood waters away from an area with a levee, reservoir, or other flood control measure. They are usually designed by engineers and managed or maintained by public works staff.
  - Reservoirs
  - Levees/floodwalls
  - Diversions
  - Channel modifications
  - Storm drain improvements
6. **Public information** activities advise property owners, potential property owners, and visitors about the hazards, ways to protect people and property from the hazards, and the natural and beneficial functions of local floodplains. They are usually implemented by a public information office.
  - Map information
  - Outreach projects
  - Real estate disclosure
  - Library
  - Technical assistance
  - Environmental education

**Figure 3:** Categories of Floodplain Management Activities (FEMA, 2017)

## 2 BACKGROUND

The Village of Island Park is a low-lying area with surface elevations ranging from approximately 4 to 10 feet. Most of the Village is at elevation of 6 feet or less, and the lowest areas occur along the surrounding channels and the Long Island Rail Road. The highest point is in the west-central part of the Village in the vicinity of the intersection between Sagamore Road and Radcliffe Road. The Village is mostly flat, with slopes generally less than one percent. The majority of the Village is in a FEMA-designated Special Flood Hazard Area (Zone AE8 or AE9) as shown on **Figure 4**; the surface elevations are shown on **Figure 5**.



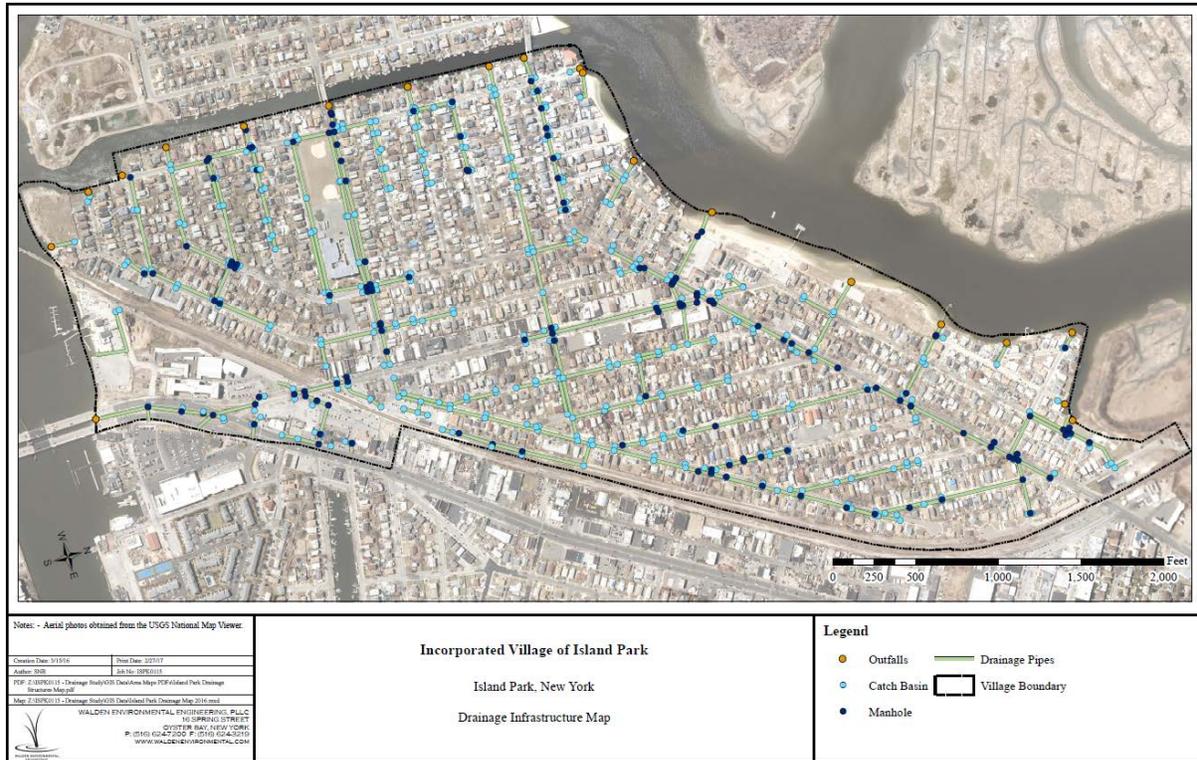
**Figure 4:** Location Map of Special Flood Hazard Area Boundaries (SFHA) by Base Flood Elevation (FEMA, 2009)



**Figure 5:** Island Park Surface Elevation Map, NAVD88

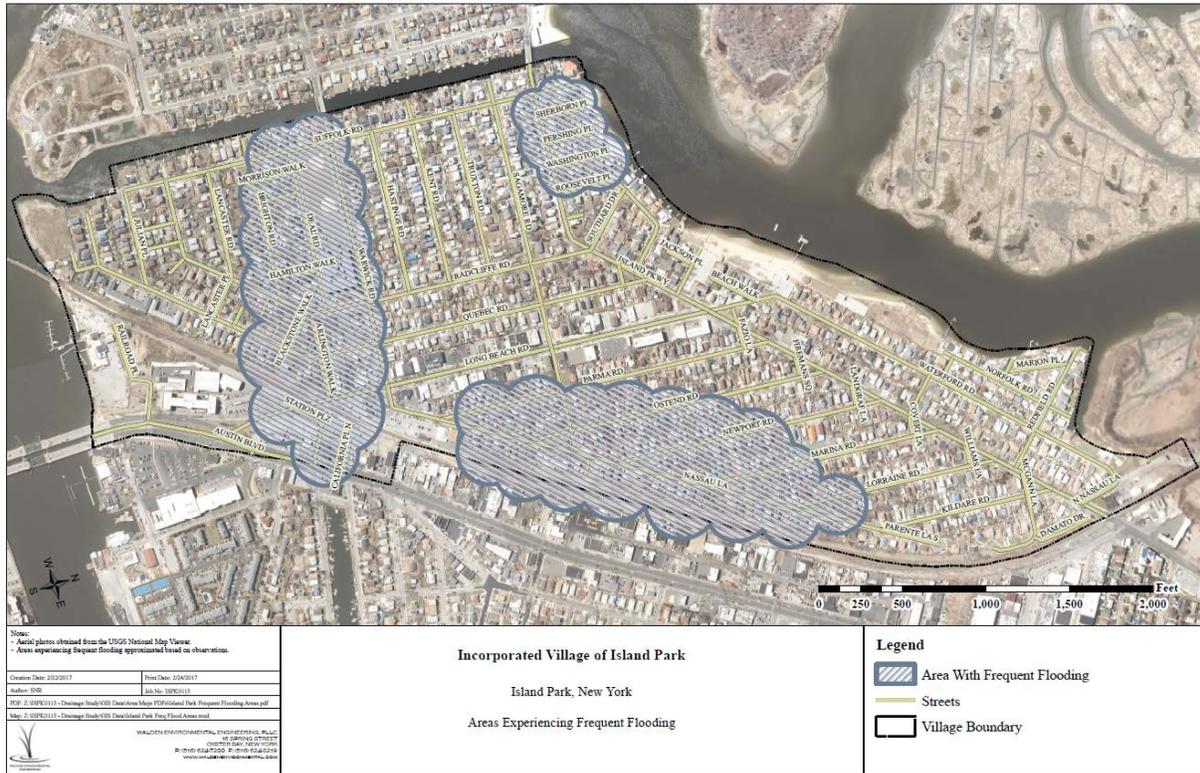
The Village’s low surface elevation coupled with the existing condition of its drainage system results in prolonged street flooding at some locations during rain events, depending on rainfall totals and tide conditions. The flood levels rise and can take many tide cycles to recede because of the system problems identified in the latest comprehensive drainage system evaluation completed in 2017 as part of the Hazard Mitigation Grant Program (HMGP) Phase I system inventory, as detailed in Section 5.1.

The Village does not have a conventional storm water system layout. Rather than having a system of pipes laid out in predictable patterns, the existing infrastructure is complicated and haphazard, reflecting a system that appeared to have been modified with additions of piping and drainage structures over time. The existing Island Park drainage system network includes approximately 59,000 feet of roadways/walkways with over 45,600 feet of piping (ranging in diameter from 2 to 48 inches), 361 catch basin inlets, and 146 drainage manhole junctions. At certain points, the bog material/organic layer underlying the Village does not provide adequate support for the drainage system piping. This creates an environment which leads to differential pipe settlement and breakage, and uneven subsidence of roadways resulting in poor street drainage to catch basins. **Figure 6** depicts the Village’s drainage system infrastructure.



**Figure 6:** Drainage Infrastructure Map, Village of Island Park

The Village of Island Park is also routinely affected by overloading of the storm water drainage system as a result of relatively minor rainfall events in combination with tidal conditions. Storm water in the Village is collected in catch basins and directed through piping to 20 outfalls around the Village for discharge into the channel. Most of the Village’s outfalls either have a bulkhead surrounding the outfall pipe or a headwall supporting the structure. Existing tidal backflow prevention devices (tide valves) on the outfalls do not close effectively; therefore, tidal water flows into the system during times of elevated tide conditions. These diurnal fluctuations in tide reduce the capacity of the Village’s storm water system. Typical high tide events (such as a spring tide), when accompanied by rainfall, lead to regular flooding within the low-lying portions of the Village of Island Park. The existing system does not have the capacity to effectively drain the storm water, so it often takes several tide cycles for the water to recede, resulting in recurrent flooding. This issue is especially notable in the lowest elevation areas within the Village, including Nassau Lane and the area around the Francis X. Hegarty School. **Figure 7** shows the areas of the Village that experience frequent flooding.



**Figure 7:** Map of Areas Experiencing Frequent Flooding (Village of Island Park, 2017)

The Village’s drainage system is not only affected by precipitation and surface runoff, but it is also heavily influenced by the effects of astronomical tides and storm tides. With an average outfall elevation throughout the Village of approximately -0.5 feet (NAVD88), the drainage systems experience a heavy influx of tidal water with the tidal cycle, especially at outfalls where tidal valves do not seal and do not perform effectively.

Village drainage is greatly influenced by the inefficient flow out of the existing system due to pipes sagging into bog material, undersized pipes, etc. Tidal water remains in the system and water is trapped in low spots where the pipes are not sloped toward the outfall. Along some streets, large diameter pipes connect to smaller diameter pipes downstream; pipe sections slope toward the same point creating a collection spot; and there are some road segments where pipes are missing. All of these conditions result in prolonged street flooding.

When high tide is coupled with rain events, the existing system does not have the capacity to drain the storm water, resulting in recurrent flooding, particularly in low elevation areas such as around the school, in the vicinity of Village Hall, and along Nassau Lane, as shown on Figure 5. Flood impacts have been more extreme when storm events coincide with spring or neap tide events.

### 3 FLOOD INSURANCE POLICIES AND REPETITIVE LOSS CLAIMS

The National Flood Insurance Program (NFIP) is the FEMA program which provides affordable property owner flood insurance. Based on the most recent NFIP report provided to the Village, there were 1,028 flood insurance policies-in-force in the Village as of March 31, 2017, with 1,211 total properties in the Village (refer to **Appendix A**). Eighty-five percent of Village properties had flood insurance coverage according to this NFIP report (refer to **Table 1** below). The cost of insurance premiums averages \$1,410 per owner, totaling approximately \$1.5 million in annual premiums Village-wide. The NFIP also reported that there have been 1,755 paid losses in the Village since 1978, with total payouts of \$106,008,369 as of March 31, 2017.

Analyzing the Repetitive Loss (RL) Properties record for the Village, FEMA reported that 341 properties (approximately 28 percent of the total 1,211 Village properties) were considered repetitive loss properties as of March 31, 2017. The total claims on these RL properties were listed as \$47,0775,809 for the same timeframe.

Type of Property	Number of Buildings	Number of Policies In Force	Percent Insured
All Properties	1211	1028	85%
RL Properties	341	286	84%

**Table 1:** Total Number of Buildings and RL Properties Compared to Policies In-Force (FEMA, as of March 31, 2017)

The addresses of the 341 RL properties provided to the Village are presented in **Appendix B** (For internal use only - Protected by the Privacy Act of 1974). Note that the information presented in Appendix B is for internal use only. The Village understands that flood insurance data about private property, including repetitive loss properties, are protected under the Privacy Act of 1974. Personally identifiable information such as the names or addresses of specific properties, whether they are covered by flood insurance or not, whether they have received flood insurance claims, or the amounts of such claims may not be released outside of local government agencies or to the public or used for solicitation or other purposes. All such information presented in this RLAA Report is marked “For internal use only - Protected by the Privacy Act of 1974” and will be redacted from any publicly released RLAA documents. General or aggregated information, such as total claims paid for the community or an area or data not connected to a particular property may be made public.

The RL properties are mapped on **Figure 8** (For internal use only - Protected by the Privacy Act of 1974), which shows that repetitive losses are not limited to distinct areas of the Village. Because the entire Village is subject to the same low-lying conditions and recurrent flood impacts, a single Repetitive Loss Area was delineated covering the entire limits of the Incorporated Village of Island Park.

**Figure 8:** Map of Repetitive Loss Properties in the Village of Island Park

## 4 OUTREACH AND COMMUNITY RESPONSE

After determining that the RLAA encompassed the entire Village limits, the Village mailed to all property owners notice announcing the development of the RLAA and a solicitation for input from the community. Based on Activity 510 in the *CRS Coordinator's Manual*, the Village prepared an outreach letter to advise all property owners that the RLAA would be conducted. In the same mailing, a questionnaire survey was included requesting the property owners' input on the flooding issues experienced at their property and suggestions on how to mitigate the flooding problems. The notice and questionnaire were mailed to all property owners on April 1 & 2, 2020. Refer to **Appendix C** for the outreach mailing which met the following requirements:

- a. The notice can be sent to owners OR residents at the community's discretion if a representative from each property is notified.
- b. The notice cannot be done via a newspaper, newsletter notice, or article.
- c. The notice must advise recipients when and how copies of the draft report can be obtained, and ask for their comments on the draft.

Note that the Village also maintains copies of informational brochures and handouts related to flooding available at all times in the lobby of Island Park Village Hall (located at 127 Long Beach Road, Island Park, NY) as a take-away resource for any interested parties. Additionally, brochures and notification mailers have been distributed to local real estate brokers with information targeted towards potential buyers considering ownership of property in the Village. The brochures and handouts contain information on the availability of flood insurance, provide flood prevention and safety tips, and direct the recipient to additional resources to determine the flood hazard FIRM classification of their property. Copies of these additional public outreach materials are provided in **Appendix D**. Flood related information is also posted on the Village's website ([www.villageofislandpark.com](http://www.villageofislandpark.com)) and the electronic message board outside Village Hall at the gateway to the community.

The Village's outreach has been successful and out of 1,245 properties who were mailed the survey, a total of 152 questionnaires were returned as of April 28<sup>th</sup>, representing a relatively high response rate of 12%. This RLAA Report will be updated as additional questionnaires are returned to the Village.

The questionnaire was based on similar public outreach efforts for flood control projects and contained the following questions.

- Q1: Has your building/home or property ever been flooded? (Yes/No)  
Q2: In what years (or on what dates) did it flood?  
Q3: Where did you get water and how deep did it get?

- Q4: What did you feel was the cause of your flooding? Check all affecting your building.  
 Q5: Have you installed any flood protection measures on your property?  
 Q6: When did you move into or occupy the home/building?  
 Q7: What type of foundation does your building have? (Slab on Grate, Crawlspace, Basement)  
 Q8: Do you have flood insurance? (Yes/No)  
 Q9: Do you want information on protecting your building from flooding? (Yes/No)

Copies of the completed questionnaires with a tabulation of the responses is included in **Appendix E** (For internal use only - Protected by the Privacy Act of 1974). Note that any personally identifiable information will be removed before this RLAA Report is released for public review.

The public responses to the questions have been condensed in the tables below. The data were entered based on the information provided, as the responses have not been verified with the persons who completed the surveys.

Year	Responses	Event
1948	1	
1960	1	
1962	1	
1980	1	
1985	2	
1992	4	"December 1992 Nor'easter" - December 1992
1993	1	
2005	1	
2010	1	
2011	27	"Hurricane Irene" - August 2011 - Tide of 6.63 ft NAVD88 on 8/28/2011 <sup>1</sup>
2012	145	"Superstorm Sandy" - October 2012 - Tide of 9.73 ft NAVD88 on 10/19/12 <sup>1</sup>
2013	2	
2014	1	
2015	1	
2016	1	
2017	1	
2018	1	
2019	1	

**Table 2:** Question 2 Responses - "In what years (or on what dates) did it flood?"

<sup>1</sup> USGS Tidal Gauge Station 01311143 – Hog Island Channel. Note that a "stillwater elevation" of 8 ft or higher (NAVD88) meets or exceeds the 100-year (1 percent) event per the effective FIRM for the area. Therefore, Superstorm Sandy in 2012 qualified as a 100-year return frequency event.

Location	Count	Average	Minimum	Maximum
Basement	30	5.76	3	8
Crawl Space	57	3.65	0.5	12
Finished Floor	114	3.11	0.04	12
Land Only	9	4.38	1	12

**Table 3:** Question 3 Responses – “Where did you get water and how deep did it get?” (Flood depth in feet)

Cause	Count
<b>Storm sewer backup</b>	<b>53</b>
Standing water near house	22
Saturated ground/leaks in basement walls	16
<b>Sea surge or wave action</b>	<b>107</b>
Sanitary sewer backup	14
Sump pump failure/power failure	11
Other	27

**Table 4:** Question 4 Responses - “What do you feel was the cause of your flooding? Check all affecting your building.”

Measure	Count
<b>Sump pump</b>	<b>35</b>
Sewer backup valve	7
Waterproofed walls	17
Regraded property	12
Backup power system/generator	16
<b>Elevated critical utilities</b>	<b>53</b>
Moved things out of basement or crawlspace	37
Other	13

**Table 5:** Question 5 Responses – Recommended Mitigation Measures

<b>Response</b>	<b>Count / Percent</b>
Yes	143 / 93%
No	10 / 7%

**Table 6:** Question 8 Responses - “Do you have flood insurance?”

The responses to Question 8 are somewhat higher than would be expected from the percentage of RL properties insured data from NFIP in Table 1. Possible reasons for the discrepancy may be that questionnaire respondents were more inclined to respond if they were already paying for flood insurance. Another possible reason is that the percentage of insured RL buildings may have increased from March 2017, when the latest RL insurance policy adoption rates were available, to April 2020, when the above survey was conducted.

<b>Response</b>	<b>Count / Percent</b>
Yes	78/ 51%
No	76 / 49%

**Table 7:** Question 9 Responses – “Do you want more information on protecting your building from flooding?”

The Village is committed to continuing its efforts to inform the public and solicit input from the community related to flood impacts and mitigation. It will continue to share information and host meetings as a forum for open discussions with the community.

## 5 COORDINATION WITH OTHER AGENCIES

As the second part of the RLAA five step planning process, the Village of Island Park sent coordination letters to a variety of agencies that may have conducted flood studies, drainage studies, watershed master plans, or any drainage improvement projects part of a capital improvement plan. The letter also requested the agency provide any available information related to causes of flooding, such as projects implemented or planned to mitigate flood hazards, drainage improvements, dredging, coastal storms, or sea level rises. These letters were mailed in late March – early April 2020 to the following agencies:

- Nassau County Department of Public Works (NCDPW)
- National Oceanic and Atmospheric Administration (NOAA)
- New York State Department of Environmental Conservation (NYSDEC)
- New York State Department of State (NYSDOS)
- U.S. Army Corps of Engineers

At the time of this report, no responses have been received from the above agencies regarding ongoing projects or efforts that may supplement the Village's RLAA. The Village will update the RLAA as appropriate based on any information received from the agencies.

To carry out the RLAA, FEMA's Flood Insurance Rate Maps (FIRMs) and Flood Insurance Study for the area were obtained from the agency. The two FIRM Panels and FIS that cover the Village of Island Park which were evaluated as part of the CRS application process are listed here:

1. FIRM Panel **36059C0306G**, effective date September 11<sup>th</sup> 2009
2. FIRM Panel **36059C0307G**, effective date September 11<sup>th</sup> 2009
3. Flood Insurance Study (FIS) Nassau County, New York (All Jurisdictions), FEMA, September 11<sup>th</sup> 2009

The Village is performing or has completed projects as detailed below to mitigate flood impacts; these projects are under the jurisdiction of FEMA, the New York State Governor's Office of Storm Recovery (GOSR), Nassau County and NYSDEC. These projects are complementary to the mitigation measures evaluated in the RLAA.

### 5.1 FEMA – Hazard Mitigation Grant Program Drainage Improvements Project

The Incorporated Village of Island Park (Village) is currently implementing HMGP Project

#4085-0031 Flood Protection for the Major Infrastructure of Island Park Project Phase II. This project consists of the design and related engineering, administrative and economic analysis services for the Village-wide storm water drainage system improvements project. This project is being funded by and must comply with the requirements of the Federal Emergency Management Agency's (FEMA) Hazard Mitigation Grant Program (HMGP). A complete evaluation of the Village's drainage system was conducted and alternatives were developed to improve drainage and reduce flooding during Phase I of the HMGP project in 2016-2017, as summarized in the Phase I Hazard Mitigation Grant Program (HMGP) Comprehensive Drainage Study and Plan ("Phase I Report", Walden, August 2017). Based on the Phase I report and the associated Benefit Cost Analysis, FEMA issued an approval letter dated October 1, 2018, authorizing the Village to proceed with the HMGP Phase II drainage improvements project design. Storm water in the Village is collected in catch basins and directed through piping to 20 outfalls around the Village for discharge into the channel. The existing tidal backflow prevention devices on the outfalls are ineffective; therefore, tidal water flows into the system during times of elevated tide conditions. These diurnal fluctuations in tide reduce the capacity of the Village's storm water system. When high tide is coupled with rain events, the existing system does not have the capacity to drain the storm water, resulting in regular "nuisance flooding". This issue is especially notable in the lowest elevation areas within the Village, including Nassau Lane and the area around Francis X. Hegarty School. Maps submitted with the CRS application show the surface elevations in the Village, the drainage system structures, and the areas of the Village that are subject to recurrent flooding.

The approach conceptualized at the completion of HMGP Phase I focused improvements on those areas most frequently impacted by flooding in order to make the best use of the HMGP funding and improve overall conditions throughout the Village. By targeting replacement of drainage system components beginning at the outfalls, the current inflow of tidal water into the system will be stopped. Increasing pipe sizes and ensuring that pipes are sloped to drain to the outfalls will also reduce flooding by promoting effective positive drainage. The HMGP Phase II design is considering re-routing stormwater from low lying areas through newly designed gravity pipes and associated infrastructure to minimize the distance to the outfalls and improve drainage outflow. In addition, select municipal bulkheads will be replaced with elevated structures to help reduce inflow over the bulkheads.

The following are the recommended actions detailed in the Phase I report which when designed (HMGP Phase II) and implemented (HMGP Phase III) will have a positive impact on drainage within the Village.

- Replace tide valves on all Village outfalls to be retained for the improved system

- Replace drainage, resurface streets, install new curbs/gutters based on Phase I evaluation; the Phase I report estimates that approximately 25,000 linear feet of roads would be upgraded based on the anticipated HMGP funding available.
- Install swirl separators at select locations to aid in MS4 compliance and facilitate future drainage system maintenance cleaning. Note that the Village has funding available from a grant awarded under the 2006 Nassau County Environmental Bond Act. It might be possible to use this funding to supplement the HMGP Phase II and III funds, provided that there is no duplication of costs.
- At Village outfall locations, replace select bulkheads that are damaged or low, and in their current state allow tidal waters to enter landward.
- Install knee wall along the rear property lines on Nassau Lane to control LIRR overland stormwater runoff
- Implement sustainable measures
  - Permeable pavement in Masone Beach and Bank of America parking lots
  - Rain gardens at 7 locations along Long Beach Road (public “triangle” areas)
  - Bioswales along Pershing Place, Sherborne Place and Washington Place, and two other locations to be selected by the Village
  - Bioretention street trees at 50 locations
  - Beach replenishment
  - Beach stabilization

During HMGP Phase I, comprehensive cleaning and CCTV inspections of the storm drainage infrastructure within the Village limits, including along the County roads, was completed. Every storm drain and pipe was inspected during the complete system inventory. The Village collaborated with Nassau County during the drainage studies it was performing in Barnum Island and Harbor Isle as the study in the Village progressed. Based on the field data collected during the HMGP project, detailed GIS mapping was generated to depict the drainage system layout, pipe diameters, surface elevations, etc. as the basis for modeling to evaluate system performance and development of improvement alternatives.

The on-going HMGP Phase II design includes land surveying, geotechnical/structural site evaluations, engineering designs, hydraulic/hydrologic modeling, cost estimating, Benefit Cost Analysis, permitting, preparation of technical specifications and bidding documents, meetings, reporting, project management, and quality control in accordance with the project objectives as stated in FEMA’s Phase II project approval letter. The Village expects the HMGP Phase II design to be completed in 2020 - 2021.

The drainage system inspection and inventory work completed during Phase I of the Village’s HMGP project found little consistency in the piping networks throughout the Village. Some roadways have parallel piping runs along both sides of the street while others have single pipes

in the center or down one side of the street. On Long Beach Road, between the area of Warwick Road and Sagamore Road, sections of pipe are dead-ended where they should have been connected to promote effective drainage. The system also has bottleneck points where larger diameter pipes flow into smaller diameter pipes, choking the flow and causing ineffective drainage.

While it would be ideal to replace the entire Village drainage system from outfalls to catch basins, manholes, piping and streets, this is not an option due to cost limitations. Therefore, the HMGP Phase II design is focusing improvements on those areas most frequently impacted by flooding in order to make the best use of the HMGP funding and improve overall conditions throughout the Village.

The Village will prioritize road sections for improvements based on an evaluation of flooding problems, taking into account road conditions and the cost of the improvements vs. the amount of available funding. The reduction in flooding associated with the Village's drainage system improvements will realize many benefits, including but not limited to the following:

- Fewer homes will be flooded (based on projected flood levels and first floor elevations)
- Less street flooding/Fewer days of impassable roads
- Fewer lost work days
- Fewer business closures and associated economic losses
- Fewer weather-related school closures
- Less damage to cars
- Decreased flood insurance premiums
- Increased property values
- More homes will be returned to the Village tax roll
- Increased level of public safety by reducing impacts on evacuation routes and emergency response times

By reducing the flood impacts currently experienced in the Village on a relatively frequent basis, the residents' quality of life will be improved by the drainage system modifications implemented by the FEMA-funded HMGP project. The Island Park community supports the project and is anxious to see the improvements move into construction.

## **5.2 New York Rising Community Reconstruction (NYRCR) Program Projects**

The Village has been working with GOSR to implement several projects to increase the community's storm resilience. These projects were developed following Superstorm Sandy and conceptualized in the *Barnum Island/Oceanside/Island Park, Harbor Isle NYRCR Plan (2016)*. Within the Incorporated Village of Island Park, GOSR is funding the Island Park Firehouse

expansion and floodproofing project which will enhance the Village's emergency operations in the event of future flood events. This project is in the final design/bidding phase at this time.

GOSR is also coordinating with the Island Park School District to harden the Francis X. Hegarty School against storm events.

### **5.3 Nassau County Transit-Oriented Development Project**

Nassau County is using Community Development Block Grant – Disaster Recovery funds and coordinating with GOSR to implement a streetscape, traffic-calming and drainage improvements project in the downtown area of the Village of Island Park. This project, referred to as the Island Park Downtown Revitalization & Transit-Oriented Development Project includes infrastructure improvements to increase storm resiliency and promote transit and economic growth. These improvements will be constructed along a section of Long Beach Road, including new drainage piping, catch basins, and street tree plantings to improve drainage and reduce flooding.

### **5.4 NYSDEC – Beach Way Shoreline Stabilization**

The Village-owned property at the end of Beach Way (the “Beach Way property”), located directly southwest of Masone Beach, experienced significant erosion during recent years due to storms of increasing frequency and intensity. A shoreline stabilization project was completed in the fall of 2019 to support the Village's commitment to provide erosion protection, reduce land depletion, and protect the Beach Way property and neighboring private properties.

The Beach Way shoreline stabilization project included the following:

- Installing a 130 linear foot gabion wall over an area of approximately 1,000 square feet, consisting of approximately 35 cubic yards of base layer granular gravel stone and 65 cubic yards of gabion baskets.
- Installation of the gabion baskets wall included the removal of approximately 80 cubic yards of existing riprap.
- Aquatic restoration, enhancement and establishment activities included the planting of a 2-foot wide by 130-foot long (260 square feet) plot of cord grass immediately seaward of the new gabion wall. Approximately 65 cubic yards of soil was placed below the Spring high water line to facilitate the plantings.

The Beach Way shoreline stabilization project was completed in accordance with the conditions of the NYSDEC Tidal Wetlands Permit and the U.S. Army Corps of Engineers Nationwide General Permit issued for the work.

The local community voiced support for this shoreline stabilization project; no opposition was reported to the Village.



The field data were collected using a spreadsheet to guide the data collection and photographs of each inspected structure were taken to compile a database of information for the RLAA. The data were tabulated, converted to GIS format and maps were generated to depict the RLAA findings based on the in-person inspections.

The compilation of field data is presented in **Appendix F** (For internal use only - Protected by the Privacy Act of 1974). The data collected included foundation type (basement, crawlspace, or slab on grade), condition (new, good, fair, poor), and foundation material (CMU, poured concrete, brick, piles). The building conditions were rated as follows:

- **New:** Buildings undergoing new construction and/or newly completed construction.
- **Good:** Buildings that are not new construction, but showing no signs of any need for maintenance or repair.
- **Fair:** In need of maintenance or repair but still able to withstand design loads.
- **Poor:** Structures in need of immediate repair, possibly unable to withstand design loads.

In addition, other relevant information was recorded as appropriate.

**Table 8** below presents is a summary of the building inspection findings. As shown, 88% of buildings inspected were in either “New” or “Good” condition, with only 2% listed as “Poor”. Poured concrete made up the majority (69%) of the foundation materials for properties inspected, while a significant number of properties had elevated concrete foundations. The overwhelming majority of the Village is in a Special Flood Hazard Area (Zone AE 8 or AE9), so most properties in the RL Area lie within the floodplain. As shown in **Table 9**, properties are predominantly residential, have slab on grade foundations, and are not elevated structures. While a small portion of the properties have a crawl space, very few have basements.

Area	Building Condition				Foundation Material				Property Type		
	New	Good	Fair	Poor	CMU	Poured Concrete	Brick	Concrete/Piles	Residential	Commercial	Other
RL Area	16%	72%	10%	2%	12%	69%	1%	18%	94%	5%	1%

**Table 8:** Repetitive Loss Area Building Inspection – Type, Condition and Foundation Materials

Area	Construction Type			Structure Elevated?		Foundation Type		
	Wood Frame	Masonry	Other	Yes	No	Slab On Grade	Crawlspace	Basement
RLAA	95%	4%	1%	21%	79%	86%	11%	3%

**Table 9:** Repetitive Loss Area Building Inspection – Construction and Foundation Type

The foundation details based on the questionnaire responses are shown below on **Figure 10** (For internal use only - Protected by the Privacy Act of 1974).

**Figure 10:** RLAA Building Foundation Inspection Map, based on Village inspections conducted April 2020.

## 6.2 NFIP Policy Claims

Walden performed a comprehensive evaluation of the cause of insurance claims by analyzing dates reported on the Village’s distributed NFIP records in Step 1. Specifically, the financial effects of Superstorm Sandy in 2012 qualified as an approximately 100-year (1%) return frequency event, based on water level readings at USGS Station 01311143 (Island Park, NY) and by comparing these data to the latest Flood Insurance Rate Maps (FIRM) produced for the area (FEMA, 2009). As such, the extents of the impacts from Superstorm Sandy were not unexpected, and almost all policy payouts were within the regulated floodplain. Nonetheless, the financial impact of Sandy was significant. Based on **Tables 10 and 11**, adjusted for 2017 dollars, Superstorm Sandy alone accounted for 36% of all NFIP loss payouts from 1978 to 2017. In addition to the mitigation projects outlined in Step 4, the Village’s outreach emphasis on carrying flood insurance would have considerable benefits even if the outreach was mildly successful. At a massive \$117,670 payout per claim, based on Table 11, if the remaining 16% of properties impacted by Sandy did not have a flood insurance policy, this represents a potential loss of \$7,665,360 in NFIP claims money in 2020 dollars. The average annual premium of flood insurance for a resident is about \$1,405.

Type of Property	Land Use		
	Residential	Other Non-Residential	Total
All Properties	\$98,318,916.00	\$7,689,453.00	\$106,008,369.00

**Table 10:** Loss (Payout) Data for all properties. (FEMA Community Information System, current as of 3/31/2017.)

Area	Payments			
	2012 Dollars	Total	2020 <sup>1</sup> Dollars	Average Payout/Claim (2020 Dollars)
RL Area	\$35,796,271	342	\$40,243,012	\$117,670

**Table 11:** Loss (Payout) During Hurricane Sandy (2012) (FEMA, 2018)

<sup>1</sup>Based on the U.S. Labor Department’s Bureau of Labor Statistics Consumer Price Index (CPI).

**Figures 11 and 12** (For internal use only - Protected by the Privacy Act of 1974) below show the relationship between the insurance payouts and estimated flood depths throughout the Village.

**Figure 11:** Moderate correlation is shown between reported flood depth and total NFIP policy payments on RL properties.

**Figure 12:** NFIP Policy Payout Map for RL Area (1978-2018)

## 7 MITIGATION ALTERNATIVES

Walden and the Village reviewed alternative approaches to evaluate property protection measures and drainage improvements to determine the most feasible options. The review looked at all of the property protection measures listed in Figures 360-1 and 510-4 of the 2017 *CRS Coordinator's Manual* that are relevant to the types of buildings in the RL Area (entire Village).

### Community Acceptance

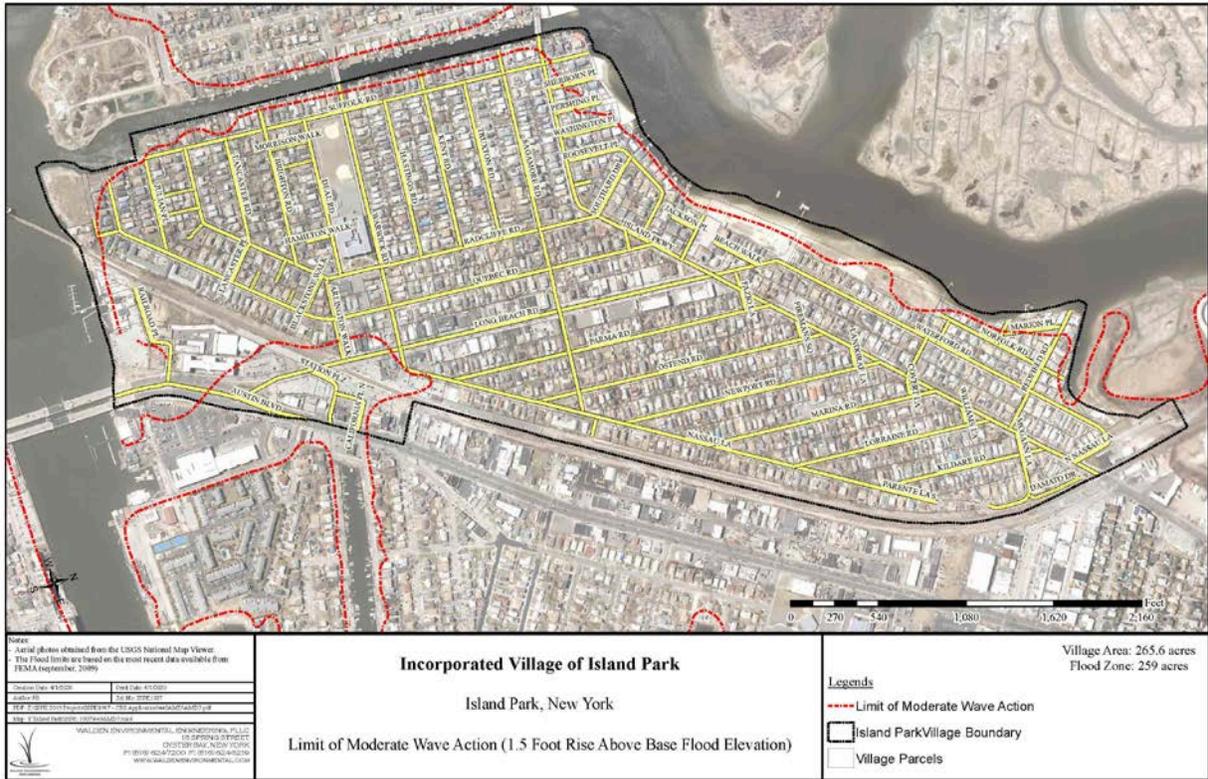
One of the first major steps in selecting mitigation strategies is determining a level of community acceptance for each measure. During the Step 2 research of existing Village projects, Walden determined there was large community acceptance for the Village's two proposed projects - FEMA HMGP Phase II Drainage Improvements, as well as the NYSDEC Beach Way Stabilization project.

As described in Step 2, the FEMA HGMP drainage improvements call for a full evaluation of the Village's drainage system and improvements such as replacement of tide valves on all Village outfalls, replacement damaged or low outfall bulkheads, replacement of drainage, gutters, curbs, and street resurfacing. Additionally, the project calls for knee walls along LIRR-adjacent property lines to control stormwater runoff, as well as sustainable measures such as bioswales, permeable pavement at Masone Beach and Bank of America parking lots, beach replenishment and stabilization.

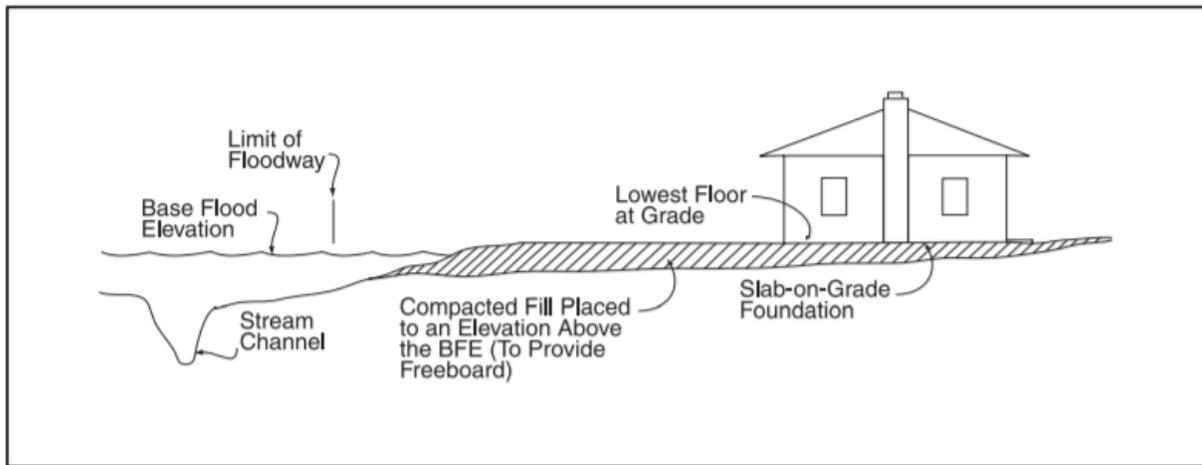
The second alternative mitigation measure, the Beach Way Shoreline Stabilization, completed in 2019, called for the installation of a gabion wall, gabion baskets, as well as soil placement and cord grass planting. Completion of this project provides erosion protection, reduces land depletion, and protects neighboring private properties from flood related erosion and damage.

**Figure 13** shows the Limit of Moderate Wave Action in the Village, which indicates the mapped extent of potential wave action in the event of a storm surge given the coastal nature of the community. Possible property-specific alternatives include elevating structures, elevating utilities, as well as dry or wet floodproofing.

While the mitigation efforts discussed in RLAA Steps 4 and 5 are primarily focused on the Village's drainage issues, since most properties are slab on grade and non-elevated, when elevating a structure is not practicable, individual property owners could potentially benefit from ensuring compacted fill placed beneath buildings as outlined in **Figure 14** and FEMA Technical Bulletin 10.



**Figure 13:** Limit of Moderate Wave Action (FEMA, 2009)



**Figure 14:** Possible slab on grade configuration with compacted fill placed above BFE, per FEMA Technical Bulletin 10, *Ensuring that Structures Built on Fill In or Near Special Flood Hazard Areas are Reasonably Safe From Flooding.*

**Table 12** compares the various property protection measures that were considered as options to reduce flooding in the Village.

Measure	Description	Potential For Success
<b>Demolition/Relocation</b>	The structure at risk would be torn down or relocated to a non-flood zone area.	<b>Low.</b> The community is mostly comprised of residential buildings with high occupation, so demolitions are not feasible. As nearly the entirety of the Village lies within the SFHA and 100% of the Village lies within the RL area, there is little to no non-SFHA land to relocate structures to.
<b>Elevation</b>	A structure at risk would be raised above the Base Flood Elevation (BFE). Per the Residential Code of New York State, R323.1.3.3 – Freeboard, a freeboard of two feet shall be added where the design flood elevation or other elevation requirements are specified.	<b>Moderate-Low.</b> 86% of the structures in the RL area are slab-on-grade, which increases the difficulty of raising structures. 2% of buildings are in “Poor” condition and would require reinforcement before elevation. 20% of structures (253 structures) are already elevated, so this has been adopted to a small degree.
<b>Elevate Utilities</b>	Move vital building components above the base flood elevation to limit damage. Per the Residential Code of New York State, R323.1.5 Protection of Mechanical and Electrical Systems, electrical systems, equipment and components, HVAC and plumbing appliances, plumbing fixtures duct systems, and other service equipment shall be located at or above the design flood elevation, plus freeboard as specified in section R323.1.3.3.	<b>High.</b> The public has shown high support of this measure in the survey results. Basement infill with venting should also be considered. If infill is done properly, a flood insurance policy will be rated based on the new lowest floor living level. The higher the reference level of the lowest floor, the more significant the insurance premium decreases will be.

<b>Dry Floodproofing</b>	Dry floodproofing involves sealing a building to prevent floodwaters from entering. This includes waterproof coatings or covers to prevent floodwater from passing through the walls, installing waterproof and installing devices that prevent sewer and drain backup.	<b>Moderate.</b> The maximum safe height for dry floodproofing is 3 feet. Higher elevations can result in building collapse due to the differential between interior and exterior pressure.
<b>Wet Floodproofing</b>	Water is allowed to enter the structure via openings and damage is reduced by using flood resistant materials.	<b>Moderate.</b> Engineered openings or other static openings designed to allow floodwaters to enter a livable area are typically disabled / covered and are not encouraged. For infilled basements, garages, and crawlspaces, venting is highly encouraged and often successful.
<b>Barrier Protection</b>	Barriers, such as floodwalls and levees, can be built around a structure to contain or control floodwaters. A levee is a manmade structure usually made of compacted soil. A floodwall is a structure typically made of concrete and/or masonry. Both can be hidden as aesthetic elements (decorative walls and landscaping elements.)	<b>Low-Moderate.</b> The maximum recommended height of floodwalls or levees is 4 feet (3 feet above the BFE + 1 foot of freeboard.) However, the driveways and other entranceways would have to be equipped with a floodproof gated opening and would rely on either human-intervention or an automated gate system. Both vary in reliability and introduce additional complexity.
<b>Drainage System Maintenance</b>	Maintain nearby streams, ditches, and storm drains so debris does not obstruct them.	<b>Moderate-High.</b> Based on survey data and historic flooding (See Step 1), storm sewer backup is the second most often cause of flooding

		issues in the Village. While this will not resolve sea surge/tidal issues, the existing condition of the drainage systems currently creates issues during rain events. Ensuring continual maintenance will resolve rainfall related issues.
<b>Sewer Backflow Prevention</b>	Septic sewer lines should have backflow prevention to keep infiltration / inflow from filling basements and other low-lying structures.	<b>Moderate-High.</b> This is a cost-effective and critical step toward dry-floodproofing. However, there is little benefit once a structure is inundated by flooding.

**Table 12:** RL Area Property Protection Measures

In addition to the property protection measures above, Walden and the Village also consulted FEMA’s list of Floodplain Management Activities (See **Figure 3**). The evaluation of these activities is presented in **Table 13**.

<b>Measure</b>	<b>Description</b>	<b>Potential For Success</b>
<b>Natural Resource Protection</b>	Preserve or restore natural areas or the natural functions of floodplain and watershed areas.	<b>High.</b> As previously recommended and carried out by the Village (see Step 2), restoration of eroded areas can provide wave action protection. The Beach Way area that was reconstructed was within the Limit of Moderate Wave Action per <b>Figure 13</b> and included soil replanting native grass replanting, and the installation of a gabion wall.
<b>Emergency Services</b>	These are measures taken during an emergency to minimize its impact.	<b>High.</b> The Village Firehouse Expansion Plan will allow for greater operational capability

		to address immediate issues during a flood.
<b>Structural Projects</b>	Keep flood waters away from an area with levees, reservoirs, or other flood control measures.	<b>Critical.</b> As previously recommended (see Step 2), carrying out the Village’s Phase II FEMA HMGP drainage improvements should be considered. Roadway improvements and resurfacing, and new curb installation allows for better drainage flow. Swirl separators allow for easier drainage system maintenance. Select outfall bulkhead replacements will mitigate inflow of tidal waters.
<b>Public Information</b>	Activities which advice property owners, potential property owners, and visitors about the hazards and ways to protect themselves and their property.	<b>Critical.</b> As detailed in Step 3, many Village properties are not adequately insured and could benefit from CRS Activity 370, Flood Insurance Promotion, as part of the broader outreach under Activity 330 CRS. The Village should continue to develop outreach projects targeting under-insured or un-insured residents.

**Table 13:** Floodplain Management Activities in RL Area

## 8 FINDINGS

The RLAA completed for the Village of Island Park evaluated all properties within the Village boundaries because the entire Village was determined to be a single Repetitive Loss Area. The five-step RLAA process has been completed as documented herein. The most feasible mitigation alternatives for the Village are summarized below.

- The most effective alternative to protect a structure from future flood impacts (and thus eliminate flood insurance claims) is to elevate the building above the base flood elevation in accordance with Village code requirements. When a residential structure is elevated, the finished floor elevation must be at least 2 ft above the base flood elevation at that location. All other Village Building Department requirements apply. Property owners are responsible for all costs associated with building elevations. Grant funding may be an option to subsidize the costs of such projects. To date, approximately 250 homes in the Village have been raised for flood protection.
- Property owners may opt to dry floodproof structures avoid damage caused by flood waters. Dry floodproofing should be conducted in accordance with FEMA guidelines. Property owners are responsible for all costs associated with dry floodproofing. Grant funding may be an option to subsidize the costs of such projects.
- Utilities and mechanical systems may be elevated above the base flood elevation to protect against flood impacts and avoid the need to replace flood damaged equipment. Property owners are responsible for all costs associated with utility/mechanical system elevation.
- Village drainage system improvements including tide valve replacement and installation of new catch basins and drainage piping will increase the system capacity and reduce recurrent nuisance flooding. Design of these improvements is in progress and design/construction will be funded by FEMA under the HMGP grant award.
- Replacement of select Village bulkheads and construction at higher elevations will reduce the volume of storm surge water that can overtop the bulkheads and flood the streets. Design of these bulkhead improvements is in progress and design/construction will be funded by FEMA under the HMGP grant award.
- The Village Firehouse expansion and floodproofing project will protect this emergency response facility from storm damage and keep it operational to serve the community in the event of future emergency conditions.

- Miscellaneous other drainage improvements conceptualized under the HMGP program and other Village projects (including the Transit Oriented Development project) would reduce flooding and protect properties from damage.
- Shoreline stabilization projects similar to the Beach Way project completed in 2019 (Section 5.4) will strengthen the coastal areas bordering the Village, reduce loss of land due to erosion and increase storm resiliency.
- The Village implements a drainage system maintenance and inspection program to ensure the system remains in good condition and performs effectively (refer to **Appendix G**).

The single Repetitive Loss Area was handled as a single analysis. Step 4 detailed mitigation projects that are under consideration. Step 5 focuses on the High and Critical priorities. (See **Table 14**). The only difference in these two labels is that Critical projects address specific Village CRS program requirements.

<b>Project</b>	<b>Responsible Parties</b>	<b>Completion Date</b>	<b>Funding</b>
<b>Elevation of residential structures</b>	Private Owners	Following Substantial Improvement	Private
<b>Demolition/Relocation: HMGP Flood Protection</b>	Village of Island Park	TBD	Village of Island Park, FEMA Hazard Mitigation Grant Program
<b>Elevate Utilities</b>	Private Owners	Following Substantial Damage / Substantial Improvement	Private
<b>Dry Floodproofing</b>	Private Owners	Following Substantial Damage / Substantial Improvement	Private
<b>Natural Resource Protection: Beach Way Shoreline Stabilization</b>	Village of Island Park	Completed in Fall 2019	Village of Island Park
<b>Structural Projects: HGMP Flood Protection</b>	Village of Island Park	TBD pending funding	Village of Island Park, FEMA Hazard Mitigation Grant Program
<b>Public Information: Flood Insurance Promotion</b>	Village of Island Park	April 2020	Village of Island Park

**Table 14:** Priority Mitigation Measures

Once this RLAA Report has been reviewed and approved by FEMA/ISO, it will be finalized and adopted by the Village Board of Trustees. Private and sensitive information (specific, identifiable data on a particular property) will be removed and the RLAA Report will then be issued for public review.

The Village understands that it must prepare an annual RLAA evaluation report to be submitted with the community's annual CRS recertification. The RLAA update will review the flooding and building conditions as well as any changes to FEMA's repetitive loss list, to determine whether the number of buildings on the list or other circumstances have changed, and revise the mapping and action items accordingly. The Village will develop a program to comply with these and other applicable CRS requirements.

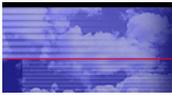


**Figure 15:** Elevation of structures has been adopted by approximately 20% of the buildings inspected since the effects of Super Storm Sandy in 2012.



**Figure 16:** Elevated utilities are a common mitigation choice, reflected in the Village's outreach survey performed in April 2020.

**APPENDIX A**  
**March 31, 2017 NFIP Insurance Report**



Community Information System

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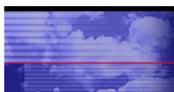
Insurance Overview

As of 03/31/2017

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<b>Community:</b>	ISLAND PARK, VILLAGE OF	<b>State:</b>	NEW YORK
<b>County:</b>	NASSAU COUNTY	<b>CID:</b>	360471

Overview	Occupancy	Zone	Pre/Post FIRM
<b>Total by Community</b>		<b>Group Flood Insurance</b>	
<b>Total Number of Policies:</b>	1,028	<b>Total Number of Policies:</b>	0
<b>Total Premiums:</b>	\$1,449,459	<b>Total Premiums:</b>	\$0
<b>Insurance in Force:</b>	\$277,255,200	<b>Insurance in Force:</b>	\$0
<b>Total Number of Closed Paid Losses:</b>	1,755	<b>Total Number of Closed Paid Losses:</b>	5
<b>\$ of Closed Paid Losses:</b>	\$106,008,371	<b>\$ of Closed Paid Losses:</b>	\$151,160
<b>Post Firm Minus Rated Policies</b>		<b>Manufactured Homes</b>	
<b>Total Number of Minus Rated Policies:</b>	35	<b>Total Number of Policies:</b>	0
<b>A Zone Minus Rated Policies:</b>	35	<b>Total Number of Closed Paid Losses:</b>	0
<b>V Zone Minus Rated Policies:</b>	0	<b>\$ of Closed Paid Losses:</b>	\$0
<b>ICC</b>		<b>1316</b>	
<b>Total Number of ICC Closed Paid Losses:</b>	27	<b>Number of Properties by Community:</b>	0
<b>\$ of ICC Closed Paid Losses:</b>	\$718,815		
<b>Substantial Damage Losses</b>			
<b>Number of Substantial Damage Closed Paid Losses:</b>	341		



Community Information System

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### Community Repetitive Loss

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Community	State	Regional	National				
				AE, A1-30, AO, AH, A	VE, V1-30, V	B, C, X	TOTAL
RL Buildings (Total)			268		0	73	341
RL Buildings (Insured)			229		0	57	286
RL Losses (Total)			808		0	188	996
RL Losses (Insured)			691		0		842
RL Payments (Total)			\$38,201,462.93	\$0.00	\$8,874,346.62		\$47,075,809.55
Building			\$34,163,218.07	\$0.00	\$7,030,118.56		\$41,193,336.63
Contents			\$4,038,244.86	\$0.00	\$1,844,228.06		\$5,882,472.92
RL Payments (Insured)			\$32,508,693.47	\$0.00	\$6,075,158.75		\$38,583,852.22
Building			\$29,042,975.36	\$0.00	\$4,908,804.27		\$33,951,779.63
Contents			\$3,465,718.11	\$0.00	\$1,166,354.48		\$4,632,072.59

<b>Post - FIRM SFHA RL Buildings:</b>	22
<b>Insured Buildings with 4 or More Losses:</b>	50
<b>Insured Buildings with 2-3 Losses &gt; Building Value:</b>	6
<b>Total Target RL Buildings:</b>	56



Community Information System

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# Insurance Occupancy

As of 03/31/2017

<b>Community:</b>	ISLAND PARK, VILLAGE OF	<b>State:</b>	NEW YORK
<b>County:</b>	NASSAU COUNTY	<b>CID:</b>	360471

Overview Occupancy Zone Pre/Post FIRM

	Policies in Force	Premium	Insurance in Force	Number of Closed Paid Losses	\$ of Closed Paid Losses	Adjustment Expense
<b>Single Family</b>	713	\$933,085	\$193,767,200	1,236	\$75,354,025.57	\$2,540,346.14
<b>2-4 Family</b>	257	\$342,580	\$64,770,100	457	\$22,127,894.05	\$844,378.22
<b>All Other Residential</b>	11	\$36,866	\$3,843,000	11	\$836,997.24	\$25,745.00
<b>Non Residential</b>	47	\$136,928	\$14,874,900	51	\$7,689,453.98	\$197,023.61
<b>Total</b>	1,028	\$1,449,459	\$277,255,200	1,755	\$106,008,369.00	\$3,607,492.00

	Policies in Force	Premium	Insurance in Force	Number of Closed Paid Losses	\$ of Closed Paid Losses	Adjustment Expense
<b>Condo</b>	2	\$1,950	\$560,000	19	\$369,810.10	\$16,304.67
<b>Non Condo</b>	1,026	\$1,447,509	\$276,695,200	1,736	\$105,638,560.74	\$3,591,188.30
<b>Total</b>	1,028	\$1,449,459	\$277,255,200	1,755	\$106,008,370.00	\$3,607,492.00

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Community Information System

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Insurance Pre/Post FIRM

As of 03/31/2017

<b>Community:</b>	ISLAND PARK, VILLAGE OF	<b>State:</b>	NEW YORK
<b>County:</b>	NASSAU COUNTY	<b>CID:</b>	360471

<b>Overview</b>	<b>Occupancy</b>	<b>Zone</b>	<b>Pre/Post FIRM</b>
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Pre-FIRM

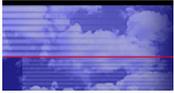
	Policies in Force	Premium	Insurance in Force	Number of Closed Paid Losses	\$ of Closed Paid Losses	Adjustment Expense
<b>A01-30 &amp; AE Zones</b>	522	\$1,119,291	\$122,898,100	1,153	\$59,238,159.05	\$2,064,877.70
<b>A Zones</b>	0	\$0	\$0	7	\$73,644.18	\$2,625.00
<b>AO Zones</b>	0	\$0	\$0	0	\$0.00	\$0.00
<b>AH Zones</b>	0	\$0	\$0	0	\$0.00	\$0.00
<b>AR Zones</b>	0	\$0	\$0	0	\$0.00	\$0.00
<b>A99 Zones</b>	0	\$0	\$0	0	\$0.00	\$0.00
<b>V01-30 &amp; VE Zones</b>	0	\$0	\$0	0	\$0.00	\$0.00
<b>V Zones</b>	0	\$0	\$0	0	\$0.00	\$0.00
<b>D Zones</b>	0	\$0	\$0	0	\$0.00	\$0.00
<b>B, C &amp; X Zone</b>	317	\$196,246	\$97,949,800	380	\$28,807,590.72	\$974,512.53
<b>Standard</b>	310	\$193,383	\$95,499,800	101	\$5,799,719.38	\$198,659.86
<b>Preferred</b>	7	\$2,863	\$2,450,000	279	\$23,007,871.34	\$75,852.67
<b>Grand Total</b>	839	\$1,315,537	\$220,847,900	1,540	\$88,119,393.00	\$3,042,014.00

Post-FIRM

	Policies in Force	Premium	Insurance in Force	Number of Closed Paid Losses	\$ of Closed Paid Losses	Adjustment Expense
<b>A01-30 &amp; AE Zones</b>	124	\$88,305	\$34,364,500	124	\$10,860,913.43	\$340,164.96
<b>A Zones</b>	0	\$0	\$0	0	\$0.00	\$0.00
<b>AO Zones</b>	0	\$0	\$0	0	\$0.00	\$0.00
<b>AH Zones</b>	0	\$0	\$0	0	\$0.00	\$0.00
<b>AR Zones</b>	0	\$0	\$0	0	\$0.00	\$0.00
<b>A99 Zones</b>	0	\$0	\$0	0	\$0.00	\$0.00
<b>V01-30 &amp; VE Zones</b>	0	\$0	\$0	0	\$0.00	\$0.00
<b>V Zones</b>	0	\$0	\$0	0	\$0.00	\$0.00
<b>D Zones</b>	0	\$0	\$0	0	\$0.00	\$0.00
<b>B, C &amp; X Zone</b>	65	\$45,617	\$22,042,800	71	\$6,773,265.07	\$214,007.78
<b>Standard</b>	62	\$44,414	\$20,992,800	29	\$2,423,449.27	\$78,999.67
<b>Preferred</b>	3	\$1,203	\$1,050,000	42	\$4,349,815.80	\$135,008.11
<b>Grand Total</b>	189	\$133,922	\$56,407,300	195	\$17,634,178.00	\$554,171.00

- Home
- Search
- Previous Search
- Community
- CRS
- CAC/CAV
- Maps
- SOS
- Insurance
- CAP-SSSE
- CAV Selection

- CIS Reports
- Links
- Request/Feedback
- FAMS
- Log Out



Community Information System

Release 4.10.00.00, 03/30/2017 -- Build 005, Skip Navigation Logged in as: muhrs [ Session expires in 20 mins ]

Insurance Zone

As of 03/31/2017

<b>Community:</b>	ISLAND PARK, VILLAGE OF	<b>State:</b>	NEW YORK
<b>County:</b>	NASSAU COUNTY	<b>CID:</b>	360471

Overview	Occupancy	Zone	Pre/Post FIRM			
	Policies in Force	Premium	Insurance in Force	Number of Closed Paid Losses	\$ of Closed Paid Losses	Adjustment Expense
<b>A01-30 &amp; AE Zones</b>	646	\$1,207,596	\$157,262,600	1,281	\$70,140,751.48	\$2,406,272.66
<b>A Zones</b>	0	\$0	\$0	7	\$73,644.18	\$2,625.00
<b>AO Zones</b>	0	\$0	\$0	0	\$0.00	\$0.00
<b>AH Zones</b>	0	\$0	\$0	0	\$0.00	\$0.00
<b>AR Zones</b>	0	\$0	\$0	0	\$0.00	\$0.00
<b>A99 Zones</b>	0	\$0	\$0	0	\$0.00	\$0.00
<b>V01-30 &amp; VE Zones</b>	0	\$0	\$0	0	\$0.00	\$0.00
<b>V Zones</b>	0	\$0	\$0	0	\$0.00	\$0.00
<b>D Zones</b>	0	\$0	\$0	0	\$0.00	\$0.00
<b>B, C &amp; X Zone</b>						
Standard	372	\$237,797	\$116,492,600	132	\$8,226,215.15	\$278,039.53
Preferred	10	\$4,066	\$3,500,000	78	\$4,550,833.92	\$162,002.73
<b>Total</b>	<b>1,028</b>	<b>\$1,449,459</b>	<b>\$277,255,200</b>	<b>1,498</b>	<b>\$82,991,443.00</b>	<b>\$2,848,938.00</b>

- Home
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- FAMS
- Log Out

**APPENDIX B**

**Repetitive Loss Properties (\*\*FOR INTERNAL USE ONLY - PROTECTED BY THE  
PRIVACY ACT OF 1974\*\*)**

**APPENDIX C**  
**PUBLIC OUTREACH MAILING AND QUESTIONNAIRE**

Mayor  
MICHAEL G. MCGINTY

Deputy Mayor  
JOSEPH M. ANNARELLA

Trustees  
IRENE P. NAUDUS  
BARBARA A. VOLPE-RIED  
MICHAEL GAGLIARDI



Village Clerk  
CONSTANCE L. CONROY

Corporation Counsel  
SUSAN B. BOLAND

Deputy Corporation Counsel  
CHRISTIAN P. BROWNE

Treasurer  
MARISA A. SILVIO

Village Office  
127 LONG BEACH ROAD  
ISLAND PARK, NEW YORK 11558  
516-431-0600  
FAX 516-431-0436

## NOTICE TO ALL PROPERTY OWNERS REGARDING FLOOD PROTECTION INFORMATION

Dear Property Owner:

This letter is to inform you that your property **is located in or near a flood hazard area** known for past flooding problems, called a floodplain. The Village of Island Park is part of the Outer Barrier of Long Island. It is bordered on the West by Island Park Channel, a man-made canal. The southerly border is Reynolds Channel, and bordered by the rails of the Long Island Rail Road to the East and North. In recent years, Hurricane Sandy (2012) produced the highest water elevations (10.89 ft) and widespread financial damage in the Village. Even though your property may not have been flooded recently, living in or near a flood zone means the risk of damage due to flooding is always present and you should take precautions. Someday, surge levels could affect your property and you should be prepared for the same.

### Flood Safety

Handouts on flood safety measures and procedures are available at Island Park Village Hall and the Island Park Public Library. Some of the flood safety precautions included are: shutting off gas and electricity, staying away from power lines, not walking through flowing water, and not driving in flooded areas. Drowning is the number one cause of death during a flood; electrocution is the number two cause of death. Don't smoke, use candles or any other open flames unless you know that the gas has been turned off in the area; use a flashlight instead. In addition, the Island Park Public Library has a collection of reference materials on this subject.

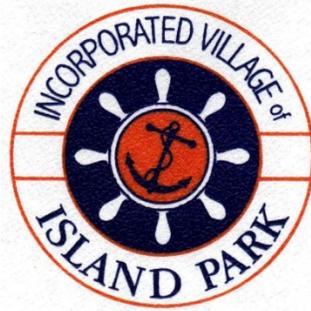
### Flood Insurance

Having a flood insurance policy may help pay for repairs after a flood and, in some cases, it may help pay for the cost of elevating a substantially damaged building. Approximately 95% of the homes in Island Park are located in the Flood Hazard area. Flood Insurance is available to all property owners and renters, not just for those located in flood zones. If you do not already carry flood insurance on your property, contact your insurance agent, as damage caused by flooding is **not** covered by the basic homeowner's insurance policy. Because the Village of Island Park participates in the National Flood Insurance Program (NFIP), you can purchase a separate flood insurance policy. This flood insurance is backed by the federal government and is available to everyone. Carrying such a policy, even if you're not in a flood zone, is prudent because hurricanes and Nor'easters occur relatively often in our area. The Village has a handout on flood insurance requirements that may help people who are applying for a mortgage on a property that is in a flood hazard area. If you would like to make an inquiry, please contact the Building Department at 516-431-0600, between the hours of 9:00 AM and 4:30 PM, Monday-Friday.

Mayor  
MICHAEL G. MCGINTY

Deputy Mayor  
JOSEPH M. ANNARELLA

Trustees  
IRENE P. NAUDUS  
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SUSAN B. BOLAND

Deputy Corporation Counsel  
CHRISTIAN P. BROWNE

Treasurer  
MARISA A. SILVIO

### **Flood Insurance Maps**

Additional flood data for a property, such as its FIRM (Flood Insurance Rate Map) zone and base flood elevation (BFE), may be obtained in the Building Department. The Building Department can also give you information on prior flooding, the actual depth of the BFE, and the location of Repetitive Loss Areas. There is no fee for any of this information. You can access more information, including looking up the GIS (Geographical Information System) on FEMA's website: [www.fema.gov/geographic-information-systems-data.gov](http://www.fema.gov/geographic-information-systems-data.gov).

### **Retrofitting and Flood Proofing**

You can protect your property by retrofitting, flood proofing and installing backflow devices on water lines and septic systems. Some measures include raising water heaters, furnaces, electrical panels and outlets above flood elevations. Re-grading your property or creating a small flood wall or earthen berm may help keep water away. This type of work would require a permit. Keep valuable items in the upper levels of the property or move them to the upper levels during a flood warning. The Building Inspector can visit your property and make recommendations regarding flood mitigation measures. Please contact the Building Department at 516-431-0600 to find out about financial assistance options.

### **What you can do to help**

The Village strives to protect the grasses and other plants that grow along its shoreline of its various beaches and channels. This vegetation provides the natural and beneficial function of providing protection against erosion and improving water quality.

Please make sure to register for SWIFT 911 on the Village's website (<http://villageofislandpark.com/>). SWIFT 911 is an alert system that will contact residents in the event of a flood warning or other emergency. The Village receives flood warnings from the Nassau County Office of Emergency Management and the National Weather Service. Flood warnings from these agencies will be passed along to residents via SWIFT 911.

The Village of Island Park requires a permit for all development and alterations. For all substantial improvements to a property in a floodplain, flood protection measures must be incorporated into the initial plan. The Village has also implemented a drainage maintenance program to check drains throughout the Village to determine their effectiveness. Dumping in drains is strictly prohibited. Report any clogged or damaged drains to the Department of Public Works.

Mayor  
MICHAEL G. MCGINTY

Deputy Mayor  
JOSEPH M. ANNARELLA

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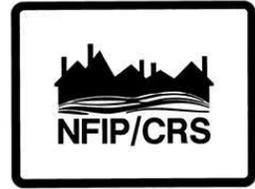
Deputy Corporation Counsel  
CHRISTIAN P. BROWNE

Treasurer  
MARISA A. SILVIO

Our environment thrives on a delicate balance between people, property, and nature. By following the requirements and recommendations outlined in this letter, you can help keep Island Park prepared for floods that may occur in the future.



# Flooding Questionnaire



Village of Island Park

## Repetitive Loss Area Analysis (RLAA)

Dear Resident:

**The Village is applying to be a member of the Federal Emergency Management Agency's (FEMA's) Community Rating System (CRS) program.** Incentives for participation include flood insurance premium discounts for residents with flood insurance. As part of this program, the Village is preparing a Repetitive Loss Area Analysis (RLAA).

The purpose of an RLAA is to generate mitigation solutions for individual streets or areas, in contrast to a hazard mitigation or floodplain management plan, which examines community-wide flooding problems and solutions. The Building Department and/or Walden Engineering (Village Engineer) will be inspecting the exterior of each building in the RLAA. **We will be looking at the type and condition of your foundation, local drainage patterns and whether mechanical equipment is elevated.** Once the analysis is complete, a copy of the report can be obtained from Doug Groth, Floodplain Manager. He may be reached at 516-431-0600 for a digital or hard copy. The document will also be available on the Village website, <http://villageofislandpark.com>.

**It would greatly assist the planning effort if we had information on flooding issues that you have experienced while residing in the Village.** This information will only be used for internal planning purposes and **will not be distributed.** Please mail this questionnaire back to the Village Building Department at 127 Long Beach Road, Island Park, NY 11558 **within 7 days.**

Property Address: \_\_\_\_\_

Contact Information: (Name) \_\_\_\_\_ (Phone) \_\_\_\_\_

Company Name: (If Applicable) \_\_\_\_\_

1) Has your building/home or property ever been flooded? ( ) Yes ( ) No

If "yes", please complete this entire questionnaire.

If "no", please complete questions 6 – 9.

2) In what years (or on what dates) did it flood? \_\_\_\_\_

3) Where did you get water and how deep did it get?

( ) In basement (if applicable): \_\_\_\_\_ feet deep

( ) In crawl space (if applicable): \_\_\_\_\_ feet deep

( ) Over first finished floor: \_\_\_\_\_ feet deep

( ) On land only: \_\_\_\_\_ feet deep

( ) Water kept out of building by sandbagging, sewer valve, other measure.

**Please Return To:**

Village of Island Park Building Department  
127 Long Beach Road, Island Park, NY 11558

- 4) What do you feel was the cause of your flooding? Check all affecting your building.
- Storm sewer backup
  - Sanitary sewer backup
  - Standing water next to house
  - Sump pump failure/power failure
  - Saturated ground/leaks in basement walls
  - Sea surge or wave action
  - Other: \_\_\_\_\_

- 5) Have you installed any flood protection measures on your property?
- Sump pump
  - Backup power system/generator
  - Sewer backup valve
  - Elevated critical utilities
  - Waterproofed walls
  - Moved things out of basement or crawlspace
  - Regraded property to keep water away from building/home/property

6) When did you move into or occupy the home/building? \_\_\_\_\_

- 7) What type of foundation does your building have?
- Slab on Grade
  - Crawlspace
  - Basement

- 8) Do you have flood insurance?
- Yes
  - No

- 9) Do you want information on protecting your building from flooding?
- Yes
  - No

If yes, please include your name and full mailing address.

Please include any additional comments, photos (place name and address on each so they can be returned if requested), relevant correspondence, or any other documents that you believe may aid our efforts.

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**APPENDIX D**  
**ADDITIONAL OUTREACH MATERIALS**

## VILLAGE OF ISLAND PARK FLOOD PROTECTION INFORMATION

A large portion of the Village is subject to periodic flooding caused by surges in Hog Island Channel, and the various other channels accessory to the Atlantic Ocean. The Village of Island Park is part of the Outer Barrier of Long Island. It is bordered on the West by Island Park Channel, a man-made canal. The southerly border is Reynolds Channel, and bordered by the rails of the Long Island Rail Road to the East and North. In recent years, Hurricane Sandy (2012) produced the highest water elevations (10.89 ft) and widespread financial damage in the Village. Even though your property may not have been flooded recently, living in or near a flood zone means the risk of damage due to flooding is always present and you should take precautions. Someday, surge levels could affect your property and you should be prepared for the same.

### FLOOD INSURANCE RATE MAP ZONE DETERMINATIONS AND VILLAGE FLOOD SERVICES

As a public service, the Building Department's Construction Official will provide you with the following information upon request:

1. Whether your property is in a special flood hazard area as shown on the current flood insurance rate map (FIRM) on file.
2. Additional flood insurance data for a site, such as the specific flood zone, history of flooding, location of wetlands/environmentally sensitive areas and the base flood elevation depth if shown on the FIRM.
3. The Village has a handout on flood insurance purchase requirements that can help people who may need a mortgage or loan for a property in the special flood hazard area.
4. FEMA elevation certificates for many buildings are available at the Building Department. A list is on the Village website: <http://villageofislandpark.com/>. There is no charge for any of these services and financial assistance information is available.

### FLOOD INSURANCE

It is strongly recommended that building owners in the Village's Special Flood Hazard Areas (AE and VE) maintain flood insurance coverage. Please be aware that your normal homeowner insurance policy will not cover losses due to flooding. Note that you have a 26% chance of experiencing a flood during the life of a 30-year mortgage. Don't wait until it is too late as there is a 30-day waiting period before coverage goes into effect. Approximately 95% of the homes in Island Park are located in the Flood Hazard area. Flood Insurance is available to all property owners and renters, not just for those located in flood zones. Because the Village of Island Park participates in the National Flood Insurance Program (NFIP), you can purchase a separate flood insurance policy. This flood insurance is backed by the federal government and is available to everyone. Carrying such a policy, even if you're not in a flood zone, is prudent because hurricanes and Nor'easters occur relatively often in our area. The Village has a handout on flood insurance requirements that may help people who are applying for a mortgage on a property that is in a flood hazard area. If you would like to make an inquiry, please contact the Building Department at 516-431-0600, between the hours of 9 AM and 4:30 PM, Monday-Friday. If you do not have an agent or your agent does not write flood insurance policies, the NFIP has a toll-free number 1-888-379-9531 or visit the following website, [www.floodsmart.gov](http://www.floodsmart.gov).

### FLOOD SAFETY

Handouts on flood safety measures and procedures are available at Island Park Village Hall and the Island Park Public Library. All residents should remember the following in the event of a flood.

1. Do not walk through flowing water during a flood. Currents can be deceptive and move faster than anticipated. A mere 6 inches of fast moving flood water can knock over an adult.

2. Do not drive through flooded areas. Flood water can lead to vehicle damage, personal injury and even death in severe instances. It takes just 12 inches of rushing water to carry away a small car, while two feet of rushing water can carry away most vehicles. Turn around, don't drown.
3. Stay away from power lines and electrical wires. The number two killer regarding floods is electrocution. Electrical current can travel through water. Call 911 immediately to report a fallen or otherwise unsafe power line. If powerlines are touching your car, do not exit the vehicle unless in immediate danger.
4. Have your utilities turned off. If you know a flood is coming, you should shut off the gas and electricity and move valuable contents upstairs. This includes any such contents which are currently in a garage which also may be subject to flooding. It is wise to keep a detailed check list of things to do which would easily be available during and prior to emergency weather conditions. Some appliances such as television sets, keep electrical charges even after they have been unplugged. Don't use appliances or motors that have gotten wet unless they have been dried and certified as usable. You should also be alert for gas leaks. Use a flashlight to inspect for damage immediately after a flood. Don't smoke or use candles or other open flame unless you know the gas has been turned off in the area in question and said area is vented properly.
5. During severe flood events, Village officials may decide that evacuation is necessary. Please follow all advisories and warnings in case of evacuation.

## **FLOODPROOFING**

There are several different ways to protect a building from flood damage. One way is to keep water away by regrading your lot or building with a small flood wall or earthen berm. Another approach is to make your walls waterproof and place water tight closures over the doorways. This method is not recommended for houses with basements or if water levels will be over two (2) feet deep. A third approach is to raise the house above flood levels. The above measures are referred to as flood proofing or retro-fitting. There are also steps which can be taken to protect against high wind/wave velocity such as installing strong shutters and reinforced garage doors. Financial assistance may be available for certain flood mitigation activities.

Important Note: Most alterations to your building or land require a permit from the Building Department. Please check with the Construction Official prior to implementing any of the above procedures to determine what permits may be necessary. Additionally, qualified/certified staff members will provide advice and assistance on how to retrofit or modify a building to protect it from flood damage. Please contact the Building Department for more information on floodproofing.

## **WHAT YOU CAN DO TO HELP**

The Village strives to protect the grasses and other plants that grow along its shoreline of its various beaches and channels. This vegetation provides the natural and beneficial function of protecting against erosion and improving water quality. Please make sure to register for SWIFT 911 on the Village's website (<http://villageofislandpark.com/>). SWIFT 911 is an alert system that will contact residents in the event of a flood warning or other emergency. The Village receives flood warnings from the Nassau County Office of Emergency Management and the National Weather Service. Flood warnings from these agencies will be passed along to residents via SWIFT 911.

The Village of Island Park requires a permit for all development and alterations. For all substantial improvements to a property in a floodplain, flood protection measures must be incorporated into the initial plan. The Village has also implemented a drainage maintenance program to check drains throughout the Village to determine their effectiveness. Dumping in drains is strictly prohibited. Report any clogged or damaged drains to the Department of Public Works.

Our environment thrives on a delicate balance between people, property, and nature. By following the requirements and recommendations outlined in this letter, you can help keep Island Park prepared for floods that may occur in the future.

#### **SPECIALS WARNINGS FOR CHILDREN**

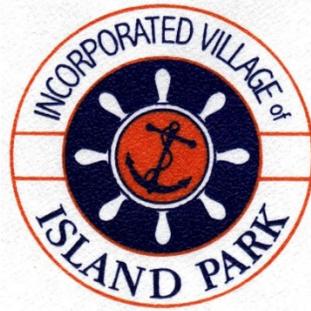
Parents or guardians should remind children that:

1. They should never walk through flood water as you never know how deep it might be.
2. They should never drink or touch flood water as it may be contaminated.
3. They should stay away from all utilities, including downed wires, as they can be extremely dangerous.
4. They should let a parent or guardian know if they hear a flood watch or warning.

Mayor  
MICHAEL G. MCGINTY

Deputy Mayor  
JOSEPH M. ANNARELLA

Trustees  
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SUSAN B. BOLAND

Deputy Corporation Counsel  
CHRISTIAN P. BROWNE

Treasurer  
MARISA A. SILVIO

January 20, 2020

## IMPORTANT INFORMATION REGARDING FLOOD INSURANCE

Subject: Flood Insurance Rate Map Information – FIRM

As a public service, the Village of Island Park will provide you with the following information upon request:

- Whether a property is in or out of a Special Flood Hazard Area (SFHA) as show on the current Flood Insurance Rate Map (FIRM) of the Village
- Additional flood insurance data for the site, such as the FIRM zone and the base flood elevation depth, if shown on the FIRM
- A hand-out on the flood insurance purchase requirement that can help people who need a mortgage or loan for a property in the SFHA
- Copies of Elevation Certificates for recent construction

If you would like to make an inquiry, please tell us the street address, and if available, the section-block-lot(s) numbers. We are open from 9 AM to 4:30 PM Monday through Friday. You can call us at 516-431-0600, or drop by Village Hall. There is no charge for this service.

Very truly yours,

Village of Island Park  
Building Department

NAME	ADDRESS	TOWN	ST	ZIP
<b>Inc. Village of Island Park</b>	<b>Insurance Company List</b>			
Hastava Insurance Agency	161 Long Beach Road	Island Park	NY	11558
Mackoul Risk Solutions	25 Nassau Lane	Island Park	NY	11558
All State Insurance	511 Long Beach Blvd	Long Beach	NY	11561
Meyerson-Roth DCAP Ins.	30b W Park Ave	Long Beach	NY	11561

NAME	ADDRESS	TOWN	ST	ZIP
<b>Inc. Village of Island Park</b>	<b>Realtor List</b>			
Hastava Realty	161 Long Beach Road	Island Park	NY	11558
Century 21 Scully Realty	94 Long Beach Road	Island Park	NY	11558
Erik Reilly South Shore	233a Long Beach Road	Island Park	NY	11558
Rebate Realty Group	131 Waterford Road	Island Park	NY	11558

NAME	ADDRESS	TOWN	ST	ZIP
<b>Inc. Village of Island Park</b>	<b>Bank List</b>			
Chase	212 Long Beach Road	Island Park	NY	11558
TD Bank	550 Long Beach Blvd	Long Beach	NY	11561
Citibank	129 E Park Ave	Long Beach	NY	11561
Bank of America	52 E Park Ave	Long Beach	NY	11561
Apple Bank	280 E Park Ave	Long Beach	NY	11561

## Our Community's Flood Hazard What Prospective Property Owners Should Know

**Our Situation:** A large portion of the Village is subject to periodic flooding caused by surges in Hog Island Channel, and the various other channels accessory to the Atlantic Ocean. In recent years, Hurricane Sandy (2012) produced the highest water surface elevations and damage in the Village. If you are looking at buying a property, it is a good idea to check out the possible flood hazard before you buy.

- ✓ **Know Your Local Floodplain Management Regulations.** The Village regulates construction and development in identified floodplains to ensure buildings are protected from flood damage. Filling and similar projects are prohibited in certain areas. Houses that are considered substantially damaged (i.e., more than 50% of its market value) by fire, flood or other causes must be elevated to above the flood level when they are repaired.
- ✓ **Flood Protection.** A building can be protected from most flood hazards, sometimes at relatively low cost. New building and additions can be elevated above the flood levels. Existing buildings can be protected from shallow floodwaters with some simple retrofitting measures. Contact our Building Department for more detailed information.



Village of Island Park

Ask Before You Buy:  
Know Your Flood Risk!

Contact the Village Building Dept at:

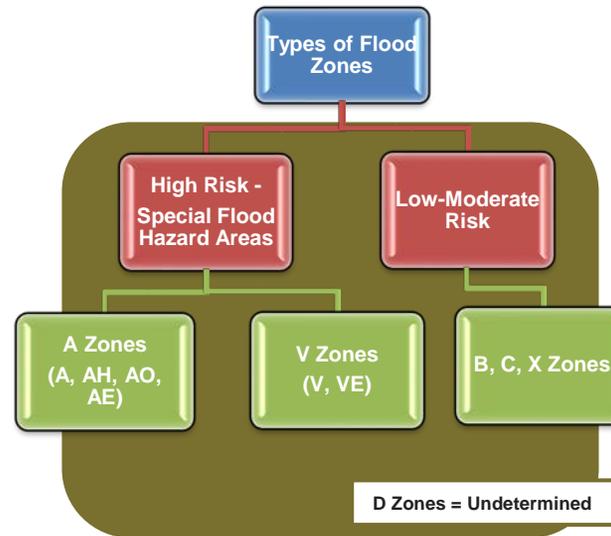
516-431-0600

[www.villageofislandpark.com](http://www.villageofislandpark.com)

## For Your Protection Know Your Flood Risk

- ❖ Looking for a new home? Have you checked out whether it has ever flooded or had a drainage problem? Even a shallow flood that is only a few inches deep in your house could cause thousands of dollars in damage, and loss of irreplaceable keepsakes. Deeper floods mean you will have to relocate until repairs are made.
- ❖ The Federal Emergency Management Agency (FEMA) has prepared Flood Insurance Rate Maps (FIRMs) that show Special Flood Hazard Areas (SFHAs). If your property is in a Special Flood Hazard Area, it is five times more likely to experience a flood versus a fire, so flood insurance is advisable.
- ❖ If you need a mortgage that is regulated or insured by the Federal government (e.g., VA, FDIC, Farm Credit, OCC, FHA/HUD, OTS, SBA, NCUA), you will have to buy a flood insurance policy if the building is in a Special Flood Hazard Area.
- ❖ New York state law requires sellers or their agents to disclose knowledge of any natural hazards on their property, including flooding, so start your research by asking the seller and the agent. They may honestly say they don't know of any flooding, but that does not mean it is not located in a Special Flood Hazard Area.

## Flood Insurance Rate Maps <http://msc.fema.gov>



## Other Resources What You Should Know

- ❖ You can check on Special Flood Hazard Areas in your neighborhood by looking at the Flood Insurance Rate Maps at FEMA's Map Service Center: <http://msc.fema.gov>.
- ❖ Most city and county government building or planning departments have the FEMA maps, too. Contact the Village of Bayville Building Department for more information on special land use, building, or floodplain management regulations that apply.

**FEMA Map Service Center**

Product Catalog | Map Search | Quick Order | Digital Post Office | Help

**Product Search by...**

Address  Map Panel ID

1) Select a Product:  
Public Flood Map

2) Enter an Address:  
Street:   
City:   
State:  Zip:

Search by Street Address

**New to the FEMA Map Service Center?**

- Homeowners/Renters
- Real Estate/Flood Determination Agents
- Insurance Agents
- Engineers/Surveyors
- Federal/Exempt Customers

**What are you looking for?**

- Flood Maps
- FIRMs
- FIRMs Databases
- FIRMs Viewer
- Documents, Publications & Forms

**More information**

- How do I find the flood map for my area?
- What is a FIRMette?

**Log On**

User ID (email address)

Password

**Announcements**

Historic maps are now available for the entire United States.

Historic Flood Maps are digital raster images of Flood Hazard Boundary Maps (FHBM) and Flood Insurance Rate Maps (FIRMs) that are no longer the most recently issued version.



**APPENDIX E**  
**RESPONSES TO QUESTIONNAIRE**  
**(\*\*FOR INTERNAL USE ONLY - PROTECTED BY THE PRIVACY ACT OF 1974\*\*)**

**APPENDIX F**  
**SUMMARY OF RLAA FIELD INSPECTIONS**  
**(\*\*FOR INTERNAL USE ONLY - PROTECTED BY THE PRIVACY ACT OF 1974\*\*)**

**APPENDIX G**  
**DRAINAGE SYSTEM MAINTENANCE AND INSPECTION SOP**

## **INCORPORATED VILLAGE OF ISLAND PARK**

### **DRAINAGE SYSTEM MAINTENANCE STANDARD OPERATING PROCEDURE**

#### **Objective**

This Standard Operating Procedure (SOP) specifies responsibilities and procedures for inspecting and cleaning the drainage system within the Incorporated Village of Island Park. The existing Island Park drainage system network includes approximately 59,000 feet of roadways/walkways with over 45,600 feet of piping (ranging in diameter from 2 to 48 inches), 361 catch basin inlets, and 146 drainage manhole junctions.

#### **Responsibilities**

- The Village Department of Public Works (DPW) is responsible for the maintenance and administration of this SOP. The DPW is responsible for drainage system inspection and maintenance at all Village-owner properties within the Incorporated Village limits.
- Within the Village of Island Park, Nassau County owns and maintains the road and drainage system infrastructure on Long Beach Road, Island Parkway, and Warwick Road, including the outfalls at the end of Island Parkway and Warwick Road. The Village owns and maintains the roads and drainage assets on the remainder of the roadways and performs maintenance and cleaning on the Nassau County roadways when necessary based on observed conditions. All work on County property is coordinated with the Nassau County DPW.
- The Village of Island Park Code Enforcement team enforces the Village regulations regarding illicit discharges to the municipal separate storm sewer system (MS4). Any illicit discharges (any discharges that are not comprised solely of stormwater) observed or reports are investigated and eliminated as appropriate according to the authority provided by Village Local Law 5 of the year 2007 which prohibits illicit discharges to the storm sewer system. In addition, under Local Law 6 of 2016, the Village established penalties up to \$10,000 for MS4 violations. Local Law 10 of 2016 established contractor cement truck wash down rules. Code Enforcement serves notices and/or violations to contractors and private property owners when Code violations are observed.

- Private property owners are responsible for managing stormwater drainage on their property. The Village is not responsible for the maintenance of drainage systems on private property.

## **Jurisdiction**

This SOP covers the Village's stormwater drainage system shown on the drainage system map presented as Attachment 1.

## **Identification of Problems**

- The Village focuses its drainage system inspections and maintenance activities on the areas of the Village which are subject to frequent flooding. See Attachment B for details on the frequently flooded areas requiring the most attention in the Village's drainage system maintenance program.
- The DPW conducts comprehensive inspections of the storm drains/catch basins twice a year. One inspection is performed in the spring before the rainy season and the other is performed in the fall. These inspections help direct the Village's drainage system maintenance activities and assignment of resources. Attachment C presents the drainage system inspection log forms.
- All complaints submitted to Village Hall (from residents, business owners, workers, visitors, etc.) related to drainage system performance and other stormwater issues throughout the Village are recorded by Village Hall staff and evaluated by DPW. Actions taken in response to such complaints are recorded by the Village.

## **Maintenance**

- Diligent maintenance of the Village's drainage system infrastructure is vital to ensure the long-term effectiveness of the system.
- Note that the entire drainage system was jetted to remove accumulated sediment and debris in 2016.
- An annual maintenance program is implemented for the upkeep, and repair when needed, of the drainage system components to maximize its effectiveness. Open spaces, parking lots and roadways are monitored for trash and cleaned regularly.

- The drainage system is cleaned on a regular basis to prevent the accumulation of sediment and debris which can reduce system capacity. Street sweepers and manual cleaning methods are used to clean the drainage structures. Street sweeping keeps the street surfaces clean. Catch basins are also cleaned to remove sediment and debris that has flowed into these structures and accumulated in drainage piping.
- Bulkheads and tide valves are also inspected periodically for evidence of degradation over time so appropriate corrective actions can be taken to address these items and maintain effective system performance.
- The Village maintains records of DPW activities, including drainage system inspections and maintenance work.

ATTACHMENT A

VILLAGE OF ISLAND PARK DRAINAGE SYSTEM MAP



Notes: - Aerial photos obtained from the USGS National Map Viewer.

Creation Date: 3/5/16	Draw Date: 3/27/17
Author: GMR	Job No: 15F00115
FOP: Z:\SPC01-5 - Drainage Study\GIS Data\Area Maps\TDF\Island Park Drainage Structures Map.dwg	
Map: Z:\SPC01-5 - Drainage Study\GIS Data\Island Park Drainage Map 2016.mxd	


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### Incorporated Village of Island Park

Island Park, New York

### Drainage Infrastructure Map

#### Legend

-  Outfalls
-  Catch Basin
-  Manhole
-  Drainage Pipes
-  Village Boundary

Figure 8: Island Park Drainage System Map

ATTACHMENT B

VILLAGE OF ISLAND PARK AREAS EXPERIENCING FREQUENT FLOODING

The following areas of the Village (refer to the attached figure for locations) experience flooding on a regular basis (i.e., at moon tides with no rain, with over 1.5 inches of rainfall regardless of tides, and with over one inch of rain at moon tide) as detailed below. The added impacts are presented in italics.

- ***SITE A - Pershing Pl, Sherborne Pl*** – Every occurrence of heavy rain, combined with moon tide – new or full – creates localized flooding and the impacts are felt for several days. There are 2 events per day, correlating with each high tide.
  - Impacts approx. 25 homes – spans the adjacent streets
  - Resident Vehicles – undercarriages subject to rusting
  - 2 DPW staff members required to undertake floodwater removal using a truck and pump for twice a day for the duration of the flooding. Generally, an entire 8-hour shift will be occupied by the 2 staff members on this task, for up to 2 days per flood event.
  - Lost productivity elsewhere.
  - *Complete road flooding and stagnant water, lasting for days which requires pumping to remove*
  - *Curb flooding*
  - *Driveway flooding*
  - *Damage to cars*
  - *Time delays*
  - *Difficulty in leaving their property, especially for young, elderly or less mobile residents.*
  - *Barricades and safety cones required*
  
- ***SITE B - Corner of Nassau Lane & Marina Road*** – Impacts 150 ft north and south of Marina Rd along Nassau Lane. During moon tide 3-6 inches of street flooding will occur. 2 DPW staff members required to monitor and erect barricades in some instances.
  - *Road flooding centered around catch basins and sag points, spreads from there depending on volumes and tidal cycle*
  - *Nassau Lane is a busy through-road*
  - *Barricades and safety cones required to maintain public safety*
  - *Flood/ tidal water splashes onto parked cars, properties off road*
  - *Damages cars*
  - *Creates safety concerns with lane/ road closures*
  - *Time delays*

- **SITE C - Corner of Lorraine Road and Nassau Lane** – 20 ft north and south of Lorraine Road along Nassau Lane. During moon tide 3-6 inches of street flooding will occur. 2 DPW staff members required to monitor and erect barricades in some instances.
  - *Nassau Lane is a busy through road*
  - *Road flooding centered around catch basins and sag points, spreads from there depending on volumes and tidal cycle*
  - *Barricades and safety cones required to maintain public safety*
  - *Flood/ tidal water splashes onto parked cars, properties off road*
  - *Damages cars*
  - *Creates safety concerns with lane/ road closures*
  - *Time delays*
  
- **SITE D - Long Beach Road at Intersection of LIRR (southern end)** – Road floods during moon tides and rain which requires a minimum of 2 DPW staff members to create road closures. The train tracks cannot be crossed during this time. Requires minimum of one truck, barricades and other dedicated equipment. Traffic into Island Park has to be diverted. This causes a loss of business due to decreased patronage.
  - *Long Beach Rd/ LIRR intersection is a busy commercial/ transport center.*
  - *Road flooding covers curbs and gutters, and large portions of road*
  - *Barricades and safety cones required to maintain public safety*
  - *Flood/ tidal water splashes onto parked cars, properties off road, pedestrians, LIRR patrons*
  - *Damages cars*
  - *Creates safety concerns with lane/ road closures*
  - *Time delays*
  - *Reduces commercial interest in entire Village*
  - *Diverting traffic increases road safety concerns and road delays*
  
- **SITE E - Warwick Road, Radcliffe Road, Deal Rd** – All these streets surrounding the school flood during storm events. This requires the resources of 4 DPW staff members, 2 DPW trucks/ plus a Fire truck with chauffer and attendant. Additional day care, lost wages and stress are incurred by residents.
  - *Area of largest impacts to highest number of residents are at this location*
  - *Fire Department and Office of Emergency Management required to assist School employees and DPW staff to safely escort children to and from school*
  - *Barricades and safety cones required to maintain public safety*
  - *Road closures can occur*
  - *Flood/ tidal water covers roads to and over curb height, splashing onto parked cars, properties off road, and parents and children entering and leaving school*

- *Damages cars*
  - *Creates safety concerns with lane/ road closures, especially with school children*
  - *Time delays*
  - *Diverting traffic increases road safety concerns and road delays*
  - *Loss of time to children's education*
- ***SITE F - Suffolk Road from Warwick Rd to Julian Place*** - During moon tides (no storm event required) between 3-6 inches of water is on road. Tidal water rises out of catch basins on streets. This impacts residents' trying to leave their houses, causes salt damage to the underside of cars. Requires dedicated time by DPW staff members to monitor and assist residents.
    - *Road flooding centered around catch basins and sag points, spreads from there depending on volumes and tidal cycle*
    - *Barricades and safety cones required to maintain public safety*
    - *Flood/ tidal water splashes onto parked cars, properties off road*
    - *Damages cars*
    - *Creates safety concerns with lane/ road closures*
    - *Time delays*
- ***SITES G, H & I - Parma Road, Ostend Rd, Newport Rd*** - Along the middle length of the roads (approximately 150 ft on each road) storm events will create floodwaters which do not drain for a minimum of the tide cycle. Affects residents causing time delays and damage to cars and property.
    - *Barricades and safety cones required to maintain public safety*
    - *Flood/ tidal water splashes onto parked cars, properties off road*
    - *Damages cars*
    - *Creates safety concerns with lane/ road closures*
    - *Time delays*
    - *Floodwaters wash onto properties*
- ***SITE J - Masone Beach, Beach Walk, Waterford Road***- Erosion has also affected Masone Beach, where a loss of sand has also occurred. Wave action has increased which promotes further erosion.

The increased wave action impacts the properties and residents of apartments (25 apartments) and houses on Beach Walk and Waterford Road. Increased wave action results in damage to the exterior of properties along the waterfront. There are at least a dozen homes affected in this manner.

Protected wetland area on the water edge of properties on Waterford Road have seen increased wave action, erosion and damage to areas of plants.

- *Loss of amenity*
  - *Decrease of stable environment for flora and fauna*
  - *Effects on local protected areas of waterways, increasing sand movement and deposition of sand elsewhere*
  - *Unsustainable path to long term structural damage for nearby properties*
  - *Reduction of visitors to beach area, reducing income for Village*
  - *Decrease in local property values*
- 
- ***SITE K - DPW Yard surrounds*** - Flooding occurs around the corner of Waterford Road and Nassau Lane during storm events. High tides exacerbate the flooding. This occurs in front of a playground, which means this cannot be used for periods of time.
    - *Decreases the enjoyment of local families when children cannot play in park*
    - *Creates difficulty for DPW staff leaving yard*
    - *Creates difficulty for local residents.*
    - *Barricades and safety cones required to maintain public safety*
    - *Flood/ tidal water splashes onto parked cars, properties off road*
    - *Damages cars*
    - *Creates safety concerns with lane/ road closures*
    - *Time delays*
- 
- ***Long Beach Road Businesses*** - Da Vinci's, Scully Century 21 Real Estate, Island Park Diner in the area of old Village Hall and the LIRR station – during storm events flood waters on Long Beach Road goes under doors of the businesses. Cars travelling through the floodwater exacerbate the problem, creating a wake/waves into the businesses (Century 21 has resorted to installing a No Wake Zone sign to attempt to change drivers' behavior in the location).
    - *Wash from road floodwaters covering curbs in front of businesses*
    - *Wash from road floodwaters entering businesses doors*
    - *Damage to carpets and items on floor*
    - *Lost business hours- patrons will skip business if they cannot safely enter*
    - *Clean-up time and costs*



Notes:

- Aerial photos obtained from the USGS National Map Viewer.
- Surface elevation data derived from Nassau County's basemap data upon request.

Creation Date: 2/22/2017	Print Date: 2/23/2017
Author: SNR	Job No: ISPK0115
PDF: Z:\ISPK0115 - Drainage Study\GIS Data\Area Maps PDFs\Island Park Village Map.pdf	
Map: Z:\ISPK0115 - Drainage Study\GIS Data\Island Park Village Map.mxd	


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**Incorporated Village of Island Park**  
 Island Park, New York  
 Village Area Map

**Legend**

-  Streets
-  Village Boundary

ATTACHMENT C

VILLAGE OF ISLAND PARK DRAINAGE SYSTEM INSPECTION LOG FORMS

## Village of Island Park Drainage System Inspection Report

Details				
<b>Site / Location ID</b>				
<b>Type</b>	<input type="checkbox"/> Stream <input type="checkbox"/> Ditch (Manmade) <input type="checkbox"/> Outfall <input type="checkbox"/> Detention Basin <input type="checkbox"/> Other _____			
<b>Date of Inspection</b>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 60%;"></td> <td style="width: 20%; text-align: center;"><b>Time</b></td> <td style="width: 20%;"></td> </tr> </table>		<b>Time</b>	
	<b>Time</b>			
<b>Inspector's Name(s)</b>				
<b>Inspector's Title(s)</b>				
<b>Conditions</b>	<input type="checkbox"/> Clear <input type="checkbox"/> Cloudy <input type="checkbox"/> Rain <input type="checkbox"/> Snow <input type="checkbox"/> High Wind			
<b>Type of Inspection:</b>				
<input type="checkbox"/> Regular <input type="checkbox"/> Complaint <input type="checkbox"/> During storm event <input type="checkbox"/> Post-storm event				
Condition Information				
<b>Overall Condition</b>	<input type="checkbox"/> Satisfactory – Expected to fulfill intended function. <input type="checkbox"/> Fair – Expected to fulfill intended function, but <b>maintenance</b> or other actions are recommended. <input type="checkbox"/> Poor – May not fulfill intended function; maintenance, repairs, or other actions are necessary. <input type="checkbox"/> Unknown – Not visible, not accessible, not inspected, or unable to determine the condition.			
<b>Notes</b>	<input type="checkbox"/> Damage / Vandalism <input type="checkbox"/> Clogged / Obstruction <input type="checkbox"/> Deterioration <input type="checkbox"/> Erosion <input type="checkbox"/> Other _____			

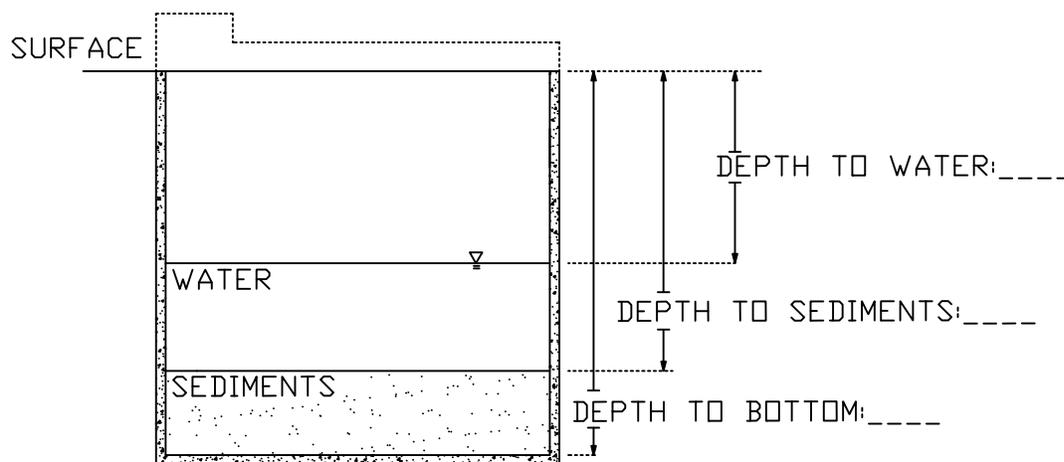
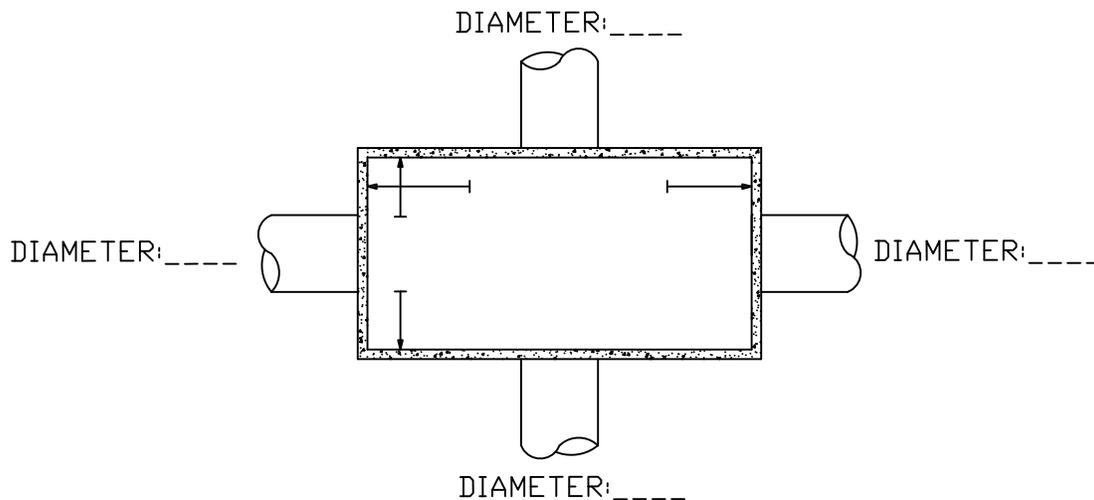
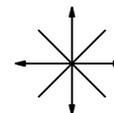
DATE: \_\_\_\_\_

INDICATE NORTH

INSPECTOR: \_\_\_\_\_

CATCH BASIN ID: \_\_\_\_\_

STREET NAME: \_\_\_\_\_



NOTES: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

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DRAWING TITLE:

Catch Basin Inspection Form

JOB NO: ISPK108

DATE:

CAD FILE NAME: Z:\Island Park Jobs\IPK\ISPK108.5 - NCDPW Stormwater\Catch basin information form.dwg

DRAWING NO: