Village of Matinecock Annex

This document presents the Village of Matinecock's annex to the *Nassau County Multi-Jurisdictional Hazard Mitigation Plan*.

Hazard Mitigation Plan Points of Contact

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

Primary Point of Contact	Alternate Point of Contact
Dr. Kenneth Goodman, Mayor Village of Matinecock 15 Wellington Road Locust Valley, NY 11560 mayorgoodman@matinecockvillage.org 516-671-7790	William H. Simonds, Village Clerk Village of Matinecock P.O. Box 706 Locust Valley, NY 11560 516-676-7790

Profile

The Village of Matinecock covers approximately 2.65 square miles[1] and has a total population of 855 according to the American Community Survey 5-year 2018 Estimates. Some of the demographics of the Village of Matinecock are summarized in Table 1. This information supported the development of mitigation actions that account for the needs of the most vulnerable individuals in the community.

Table 1: Village of Matinecock Demographic Information

Demographic		Demographic	
Below 5 Years Old	2.5%	Black or African American alone	0.0%
Above 65 Years Old	19.7%	American Indian and Alaska Native alone	0.0%
Individuals with Disabilities	Information not provided	Asian alone	1.2%
Persons in Poverty	4.1%	Native Hawaiian and other Pacific Islander alone	0.0%
Renters	18.1%	Two or More Races	0.8%
Without a High School Diploma	2.2%	White alone, not Hispanic or Latino, percent	93.1%
Without Access to Broadband Internet	0.0%	Hispanic or Latino	0.0%

[1] This is inclusive of land area only.

The Village of Matinecock has seen construction of new single family houses in recent years. Matinecock is a residential community with only two commercial properties: one small shopping center and one small service business. In the last five years, there has been an increase in single-family homes. There is currently no development planned in the 100-year floodplain. The jurisdiction does maintain zoning maps and planning teams. By understanding these development trends and how they intersect with hazard-prone areas, this allows for current and future vulnerabilities to be planned for and avoided.

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

Hazard Vulnerability

The hazards that most impacts the Village of Matinecock is **Flooding.**

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

Table 2: Village of Matinecock Hazard Impacts

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

Capability Assessment

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

Legal and Regulatory Capability Assessment

Table 3 lists the assessment of existing legal and regulatory tools for the Village of Matinecock. The Village of Matinecock maintains several key administrative and technical capabilities to support mitigation, including building codes, capital improvement plans, climate action plans, emergency response plans, real estate disclosure requirements, site plan review requirements, stormwater management plans, subdivision ordinances, and zoning ordinances. These capabilities are critical to consider as tools in developing and implementing mitigation strategies. To further enhance their mitigation capabilities, the Village can consider the capabilities in the table below that the Village currently does not have. These additional capabilities would either support creating a legal framework or strategy for implementing a diversity of mitigation actions.

Table 3: Village of Matinecock Existing Legal and Regulatory Capabilities

Regulatory Tool	Yes / No	Citation (*if applicable*)
Access and Functional Needs Plan	No	
Building Code	Yes	New York State Building Code, Village Zoning & Building Codes
Capital Improvement Plan	Yes	
Climate Action Plan	No	
Community Development Plan	No	
Comprehensive Plan / Master Plan	Yes	
Economic Development Plan(s)	No	
Emergency Response Plan(s)	Yes	Contractors or Authorities
Floodplain Management Plan(s)	Yes	National Federal Flood Plain
Growth Management Plan(s)	No	
NFIP Flood Damage Prevention Ordinance(s)	No	
Open Space Plan(s)	No	
Post Disaster Recovery Ordinance(s)	No	
Post Disaster Recovery Plan(s)	No	
Real Estate Disclosure Requirements	No	
Resilience Plan(s)	No	
Site Plan Review Requirement(s)	Yes	Village Planning Board

Regulatory Tool	Yes / No	Citation (*if applicable*)
Small Area Development Plan(s)	No	
Special Purpose Ordinance(s)	No	
Stormwater Management Plan(s)	Yes	Annual Report (prepared annually)
Subdivision Ordinance(s)	Yes	Village Code Section 162
Transportation Plan(s)	No	
Zoning Ordinance(s)	Yes	Village Code Section 195

Administrative and Technical Capability Assessment

Table 4 lists the assessment of existing administrative and technical tools for the Village of Matinecock. The Village of Matinecock's primary administrative and technical capabilities include an emergency managers, engineers, a construction practices personnel, and natural hazards planners. The Village can bolster their capabilities in this category by identifying individuals with expertise in land use and GIS.

Table 4: Village of Matinecock Existing Staff / Personnel Resource

Staff / Personnel Resource	Yes / No	Details
Emergency Manager(s)	No	
Engineer(s) trained in construction practices related to buildings/infrastructure	Yes	Roger L. Cocchi, P.E., D&B Engineers & Architects
Engineer(s) with an understanding of natural and/or human caused hazards	Yes	No
Engineer(s) with knowledge of land development and land management practices	Yes	Roger L. Cocchi, P.E., D&B Engineers & Architects
Grant Writers	No	
Personnel skilled or trained in Geographic Information Systems	No	
Personnel trained in construction practices related to buildings/infrastructure	Yes	Karl Bicknese, Building Inspector
Planner(s) with an understanding of natural hazards	No	
Planner(s) with knowledge of land development and land management practices	No	
Scientist(s) familiar with natural hazards	No	
Surveyors	No	

Fiscal Capability Assessment

Table 5 lists the assessment of existing fiscal tools for the Village of Matinecock. Funding is often the biggest barrier when implementing mitigation programs. The Village identified no fiscal capabilities to support mitigation. Village of Matinecock should consider explore additional fiscal capabilities in order to gain access to additional funding for mitigation.

Table 5: Village of Matinecock Existing Fiscal Capabilities

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

Community Classification Assessment

Table 6 lists the assessment of existing community classifications for the Village of Matinecock. Exploring gaining one or more community classifications will guide the Village's mitigation programs and support capacity building.

Table 6: Village of Matinecock Community Classifications

Classification	Yes/No (or Status)
Building Code Effectiveness Grading Schedule (BCEGS)	No
Public Protection Classification Program	No
Community Rating System (CRS)	No
Other Classifications	No

National Flood Insurance Program Summary

This section provides a summary of the floodplain management capabilities for Village of Matinecock and how the jurisdiction is meeting the requirements of the National Flood Insurance Program (NFIP). No properties in the jurisdiction have been substantially damaged as a result of

recent flood events. However, areas in the Village along Thorne Lane and Kaintuck Lane drainage way are prone to flooding.

The Village's floodplain manager is Karl Bicknese, the Village Building Inspector. Additional funding could support the employment of a Certified Floodplain Manager in the future. Building permit review training will support the floodplain management program. The Village administers the NFIP through visual inspections of property performed by the Village Engineer. Public and private roadway flooding are missing from the existing flood maps for the Village. There are currently no RiskMAP projects ongoing in this jurisdiction.

The Village of Matinecock is in good standing with the NFIP. Based on documentation received from NYSDEC, a compliance audit (e.g., Community Assistance Visit or Community Assistance Contacts) has not been conducted for the municipality but the village will determine if one is needed in the future and schedule it. There are no NFIP compliance violations that need to be addressed in this jurisdiction.

To mitigate future losses, the Village has commenced with Village flood studies. Flood Damage Prevention Ordinance for the Village of Matinecock meets minimum requirements. The ordinance was last amended Freshwater Wetlands - Village Code Chapter 71.

Mitigation Strategy

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

Previous Mitigation Actions

This jurisdiction did not participate in the previous mitigation plan.

Proposed Mitigation Actions

Project Number	VMK_1	VMK_2
Project Name	Beaver Brook Drainage Improvements	Thorne Lane Drainage Improvements
Goal being met	1, 5	1, 2
Hazards to be mitigated	Streambank flooding as well as the erosion of both the streambed and its banks	Stormwater Roadway Flooding
Description of the Problem	Based upon a significantly larger quantity of stormwater runoff reaching Beaver Brook due to the installation of the proposed drainage piping system along Thorne Lane, from the intersection of Thorne Lane and Wolver Hollow Road down to the old estate roadway at the headwaters of Beaver Brook, the carrying capacity of the existing stream will be exceeded and erosion will occur. Based upon a 100-year storm, the peak rate of stormwater discharge into the headwaters of Beaver Brook is 402 CFS with a total volume of runoff for the entire storm of approximately 2.2 million cubic feet. A 500-year storm will have a peak discharge rate of 559 CFS with a total runoff volume of approximately 3.2 million cubic feet of water. The 100-year and 500-year stormwater discharge rates are equivalent to the flow rates of a small river and, as such, have considerable potential to cause a significant amount of erosion along the stream, washing all of the eroded material down into the pond system below	The existing Nassau County drainage system that is located immediately upstream of Thorne Lane, collects and discharges stormwater runoff from approximately 2,300 acres into Thorne Lane. The stormwater exiting the County's drainage piping system flows into an open ditch that runs a short distance before ending alongside the edge of Thorne Lane. The channeling of stormwater runoff from the extremely large tributary area, down to the edge of Thorne Lane, magnifies the impact of the storm event occurring exponentially, i.e., a 10-year rainfall impacts Thorne Lane nearly on the same level as a 100-year event. Water flowing out of the ditch travels approximately 1,400 feet along Thorne Lane to its terminus where it then runs down a private driveway and across another property before nearly reaching Beaver Brook, approximately 1,200' from Thorne Lane. During exceptionally heavy rains the water running along Thorne Lane covers the entire width of the pavement and extends into adjacent properties along both sides of the road. The flooding of road and the depth of the water makes it difficult, and at times impossible, for some of the residents along Thorne Lane to get in or out of their properties. Based upon a 100-year storm, the peak rate of stormwater discharge into Thorne Lane is 380 CFS with a total volume of runoff for the entire storm of approximately 2 million cubic feet. A 500-year storm will have a peak discharge rate of 559 CFS with a total runoff volume of approximately 3 million cubic feet of water. The 100-year and 500-year stormwater discharge rates are equivalent to the flow rates of a small river and, as such, have considerable potential to do significant damage should a storm of either magnitude occur.

Project Number	VMK_1	VMK_2
Description of the Solution	To improve approximately 3,100' of this natural drainage way in order to connect and then tie into the existing Nassau County drainage system at Upper Francis Pond that is located along Oyster Bay Road. This improvement will enable the stream to have the conveyance capacity needed to handle the additional stormwater flows draining down from Thorne Lane while also providing the proper protection against the erosion of the streambed and its banks.	To construct a new drainage piping system from the southerly end of the County's existing drainage system, at the intersection of Thorne Lane and Wolver Hollow Road, down to and through the private properties at the northerly end of the Throne Lane. The proposed drainage system would also include the installation of a culvert beneath an old estate road that currently prevents the stormwater flows that run down Thorne Lane from draining into Beaver Brook that is located within Cushman Woods Preserve, owned by The Nature Conservancy.
Critical Facility	No	No
EHP Issues	Erosion and sediment being washed down into Upper Francis Pond and then into the Nassau County stream and pond system further downstream.	Erosion and sediment being washed down into Beaver Brook and the downstream receiving waters.
Estimated Timeline	6 months	8 months
Lead Agency	Village of Matinecock	Village of Matinecock
Estimated Costs	$935,000	$1,500,000
Estimated Benefits	The project will improve conditions along Beaver Brook to accommodate the increase in stormwater flows and protect it from erosion. Projected to prevent a loss of $200,0000	The project will enable property owners along Thorne Lane safe access to and from their homes and restore some of the nature flow of water to Beaver Brook. Projected to prevent a loss of $3,000,000
Potential Funding Sources	NYS Environmental Facilities Corp Grant Program, BRIDGE NY Funding Program, EPA Funding & Grant Programs, and FEMA	NYS Environmental Facilities Corp Grant Program, BRIDGE NY Funding Program, EPA Funding & Grant Programs, and FEMA

Mitigation Action Worksheets

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

Nassau County Multi-Jurisdictional Hazard Mitigation Plan

Name of Jurisdiction: Inc. Village of Matinecock

NYS DHSES Action Worksheet	
Project Name:	Thorne Lane Drainage Improvements
Project Number:	Leave Blank
Risk / Vulnerability	
Hazard of Concern:	Stormwater roadway flooding
Description of the Problem:	The existing Nassau County drainage system that is located immediately upstream of Thorne Lane, collects and discharges stormwater runoff from approximately 2,300 acres into Thorne Lane. The stormwater exiting the County's drainage piping system flows into an open ditch that runs a short distance before ending alongside the edge of Thorne Lane. The channeling of stormwater runoff from the extremely large tributary area, down to the edge of Thorne Lane, magnifies the impact of the storm event occurring exponentially, i.e., a 10-year rainfall impacts Thorne Lane nearly on the same level as a 100-year event. Water flowing out of the ditch travels approximately 1,400 feet along Thorne Lane to its terminus where it then runs down a private driveway and across another property before nearly reaching Beaver Brook, approximately 1,200' from Thorne Lane. During exceptionally heavy rains the water running along Thorne Lane covers the entire width of the pavement and extends into adjacent properties along both sides of the road. The flooding of road and the depth of the water makes it difficult, and at times impossible, for some of the residents along Thorne Lane to get in or out of their properties. Based upon a 100-year storm, the peak rate of stormwater discharge into Thorne Lane is 380 CFS with a total volume of runoff for the entire storm of approximately 2 million cubic feet. A 500-year storm will have a peak discharge rate of 559 CFS with a total runoff volume of approximately 3 million cubic feet of water. The 100-year and 500-year stormwater discharge rates are equivalent to the flow rates of a small river and, as such, have considerable potential to do significant damage should a storm of either magnitude occur.
Action or Project Intended for Implementation	
Description of the Solution:	To construct a new drainage piping system from the southerly end of the County's existing drainage system, at the intersection of Thorne Lane and Wolver Hollow Road, down to and through the private properties at the northerly end of the Throne Lane. The proposed drainage system would also include the installation of a culvert beneath an old estate road that currently prevents the stormwater flows that run down Thorne Lane from draining into Beaver Brook that is located within Cushman Woods Preserve, owned by The Nature Conservancy.

Is this project related to a Critical Facility?	Yes			No	X	

(If yes, this project must intend to protect to the 500-year flood event or the actual worst damage scenario, whichever is greater.)

Level of Protection:	All major rainfall events	Estimated Benefits (losses avoided):	The project will enable property owners along Thorne Lane safe access to and from their homes and restore some of the nature flow of water to Beaver Brook.
Useful Life:	50 to 100 years		
Estimated Cost:	$1,500,000 Construction Costs. [Excludes engineering, legal and any property related costs.		

Plan for Implementation			
Prioritization:	Leave Blank	Desired Timeframe for Implementation:	Within 1 year
Estimated Time Required for Project Implementation:	8 months	Potential Funding Sources:	NYS Environmental Facilities Corp Grant Program, BRIDGE NY Funding Program, EPA Funding & Grant Programs, and FEMA
Responsible Organization:	Village of Matinecock	Local Planning Mechanisms to be Used in Implementation, if any:	

Three Alternatives Considered (including No Action)			
Alternatives:	*Action*	*Estimated Cost*	*Evaluation*
	No Action	$0	Continued flooding of road
	Install 2,500 - 10' diameter x 20' deep Dry Wells	$18,000,000	Insufficient land area to support their installation
	Breakup project into phases	$2,500,000	Flooding will continue to severely impact a portion of the road where drainage improvements have not be done.

Progress Report (for plan maintenance)	
Date of Status Report:	
Report of Progress:	Completed engineering investigation and reports Initial report prepared Nov/Dec 2014 and follow up prepared March 2019.
Update Evaluation of the Problem and/or Solution:	None of the alternative solutions are feasible. Construction of the proposed piping system along the length of the road and down through the private properties can be completed within the area of the roadway and limited impacts to 2 properties at the system's downstream end. From a cost standpoint, this is the cheapest solution to pursue.

Nassau County Multi-Jurisdictional Hazard Mitigation Plan

Name of Jurisdiction: Inc. Village of Matinecock

NYS DHSES Action Worksheet			
Project Name:	Beaver Brook Drainage Improvements		
Project Number:	Leave Blank		
Risk / Vulnerability			
Hazard of Concern:	Streambank flooding as well as the erosion of both the streambed and its banks.		
Description of the Problem:	Based upon a significantly larger quantity of stormwater runoff reaching Beaver Brook due to the installation of the proposed drainage piping system along Thorne Lane, from the intersection of Thorne Lane and Wolver Hollow Road down to the old estate roadway at the headwaters of Beaver Brook, the carrying capacity of the existing stream will be exceeded and erosion will occur. Based upon a 100-year storm, the peak rate of stormwater discharge into the headwaters of Beaver Brook is 402 CFS with a total volume of runoff for the entire storm of approximately 2.2 million cubic feet. A 500-year storm will have a peak discharge rate of 559 CFS with a total runoff volume of approximately 3.2 million cubic feet of water. The 100-year and 500-year stormwater discharge rates are equivalent to the flow rates of a small river and, as such, have considerable potential to cause a significant amount of erosion along the stream, washing all of the eroded material down into the pond system below.		
Action or Project Intended for Implementation			
Description of the Solution:	To improve approximately 3,100' of this natural drainage way in order to connect and then tie into the existing Nassau County drainage system at Upper Francis Pond that is located along Oyster Bay Road. This improvement will enable the stream to have the conveyance capacity needed to handle the additional stormwater flows draining down from Thorne Lane while also providing the proper protection against the erosion of the streambed and its banks.		
Is this project related to a Critical Facility?	Yes		No X
(If yes, this project must intend to protect to the 500-year flood event or the actual worst damage scenario, whichever is greater.)			
Level of Protection:	All major rainfall events	Estimated Benefits (losses avoided):	The project will improve conditions along Beaver Brook to accommodate the increase in stormwater flows and protect it from erosion.
Useful Life:	50 to 100 years		
Estimated Cost:	$935,000 Construction Costs. [Excludes engineering, legal, and any property related costs.		
Plan for Implementation			
Prioritization:	Leave Blank	Desired Timeframe for Implementation:	Within 1 year
Estimated Time Required for Project Implementation:	6 months	Potential Funding Sources:	NYS Environmental Facilities Corp Grant Program, BRIDGE NY Funding Program, EPA Funding & Grant Programs, and FEMA
Responsible Organization:	Village of Matinecock	Local Planning Mechanisms to be Used in Implementation, if any:	
Three Alternatives Considered (including No Action)			
Alternatives:	*Action*	*Estimated Cost*	*Evaluation*
	No Action	$0	Continued erosion of the stream.
	None are proposed		
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:	Completed visual examination of both the streambed and bank conditions.		

Update Evaluation of the Problem and/or Solution:	No alternatives were considered to be practical since without protecting the entire length of the stream from further erosion, and also the additional upstream stormwater runoff, the conveyance of the eroded materials into the downstream ponds was not deemed to be environmentally acceptable.

Nassau County Multi-Jurisdictional Hazard Mitigation Plan

Name of Jurisdiction: Inc. Village of Matinecock

NYS DHSES Action Worksheet			
Project Name:	Beaver Brook Drainage Improvements		
Project Number:	Leave Blank		
Risk / Vulnerability			
Hazard of Concern:	Streambank flooding as well as the erosion of both the streambed and its banks.		
Description of the Problem:	Based upon a significantly larger quantity of stormwater runoff reaching Beaver Brook due to the installation of the proposed drainage piping system along Thorne Lane, from the intersection of Thorne Lane and Wolver Hollow Road down to the old estate roadway at the headwaters of Beaver Brook, the carrying capacity of the existing stream will be exceeded and erosion will occur. Based upon a 100-year storm, the peak rate of stormwater discharge into the headwaters of Beaver Brook is 402 CFS with a total volume of runoff for the entire storm of approximately 2.2 million cubic feet. A 500-year storm will have a peak discharge rate of 559 CFS with a total runoff volume of approximately 3.2 million cubic feet of water. The 100-year and 500-year stormwater discharge rates are equivalent to the flow rates of a small river and, as such, have considerable potential to cause a significant amount of erosion along the stream, washing all of the eroded material down into the pond system below.		
Action or Project Intended for Implementation			
Description of the Solution:	To improve approximately 3,100' of this natural drainage way in order to connect and then tie into the existing Nassau County drainage system at Upper Francis Pond that is located along Oyster Bay Road. This improvement will enable the stream to have the conveyance capacity needed to handle the additional stormwater flows draining down from Thorne Lane while also providing the proper protection against the erosion of the streambed and its banks.		
Is this project related to a Critical Facility?	Yes		No X
(If yes, this project must intend to protect to the 500-year flood event or the actual worst damage scenario, whichever is greater.)			
Level of Protection:	All major rainfall events	Estimated Benefits (losses avoided):	The project will improve conditions along Beaver Brook to accommodate the increase in stormwater flows and protect it from erosion.
Useful Life:	50 to 100 years		
Estimated Cost:	$935,000 Construction Costs. [Excludes engineering, legal, and any property related costs.		
Plan for Implementation			
Prioritization:	Leave Blank	Desired Timeframe for Implementation:	Within 1 year
Estimated Time Required for Project Implementation:	6 months	Potential Funding Sources:	NYS Environmental Facilities Corp Grant Program, BRIDGE NY Funding Program, EPA Funding & Grant Programs, and FEMA
Responsible Organization:	Village of Matinecock	Local Planning Mechanisms to be Used in Implementation, if any:	
Three Alternatives Considered (including No Action)			
Alternatives:	*Action*	*Estimated Cost*	*Evaluation*
	No Action	$0	Continued erosion of the stream.
	None are proposed		
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:	Completed visual examination of both the streambed and bank conditions.		

Update Evaluation of the Problem and/or Solution:	No alternatives were considered to be practical since without protecting the entire length of the stream from further erosion, and also the additional upstream stormwater runoff, the conveyance of the eroded materials into the downstream ponds was not deemed to be environmentally acceptable.