

## 32 – MATAWAN BOROUGH

### PLANNING TEAM AND PARTICIPATION

Name	Title	Participation
Tom Falco	Chief of Police	Point of Contact, Workshops #1 and #2
Richard Michitsch	Deputy OEM Coordinator	Workshop #1
Jessica Berliner	OEM Administrative Assistant	Workshops #1 and #2

### COMMUNITY PROFILE

#### Overview

Situated at the head of the Matawan Creek, the Borough of Matawan has a land area of 2.26 square miles. The Borough appeals to a wide variety of residents due to its wealth of natural resources and extensive transportation network. The Borough is divided into several neighborhoods by its two lakes (Lake Lefferts and Lake Matawan) and two major roadways (New Jersey Routes 79 and 34).

The Aberdeen-Matawan train station is the county's northernmost stop along New Jersey Transit's North Jersey Coastline and serves as a gateway to the Jersey Shore. The State Department of Transportation designated Matawan as a New Jersey Transit Village in 2003, allowing for financing opportunities for transit-oriented development. Matawan has a Safe Routes to School "Silver" rating.

In 2019, the Borough and the County agreed to upgrade the Lake Lefferts Dam and raise Aberdeen Road above flood levels and entered into a cost share agreement for the project in 2021. Right of way acquisition occurred in 2022, and full completion of the project is expected in 2025.

#### Land Use, Development, & Growth

Matawan is a predominantly residential community and home to substantial publicly owned land. From 2015 to 2020, apart from a 3 -acre loss of both barren land and forested land, and a 6 acre increase in urban or developed land, the community underwent minimal change in its land use composition. In 2020, urban or developed land accounted for roughly 84 percent of Borough's total area, while forested land accounted for 11 percent, and water and wetlands together made up 15 percent.

Land Use Type	Total Acres (2015)	Total Acres (2020)	Percent Change
Agriculture	-	-	-
Barren Land	4.8	1.7	-65%
Forest	165.9	162.9	-2%
Urban	1140.5	1146.7	1%
Water	112.6	112.7	>0%
Wetlands	118.6	118.4	>0%

Source: NJDEP Land Use/Land Cover data, 2015-2020

#### Recent Major Development and Infrastructure from 2020 to Present

Taking advantage of its Transit Village designation, the Borough has seen an increased interest in new development. In 2018, construction was completed, and leasing began for The Edge, a mixed-use development located a half mile from downtown. The development consists of 131 luxury apartments with retail on the ground floor. Further supporting downtown revitalization, Chashama, a New York City based non-profit organization that provides space for local artists to work, selected Matawan as the location for its first New Jersey venture. This location features 12 studios and an exhibition space. The space falls within the NJ Inland Design Flood Elevation which is FEMA's 1% annual chance floodplain + 3 feet (NJFloodMapper).

Matawan has been committed to redevelopment in the area around the Aberdeen-Matawan train station. In 2015 the town added to its 2001 Redevelopment Plan with a Transit Station Redevelopment Amendment.

In 2023 Monmouth County awarded conditional approval to the Matawan Junction mixed-use development. The development, on the corner of Main Street and High Street, would bring 100 new dwelling uses and bottom floor retail, just 750 feet from the Aberdeen-Matawan Station.

### **Known or Anticipated Major Development and Infrastructure in the Next Five (5) Years**

The Monmouth County Bayshore Region Strategic Plan (2006) reinforces the borough's prior planning initiatives, including train station area redevelopment, a downtown streetscape program, a capital infrastructure program, and lakefront restoration. In October 2015, the Borough adopted a comprehensive Master Plan, its first since 1965. The 2015 Master Plan focuses on redevelopment, with a special emphasis on Main Street and areas proximate to the train station. The Plan identifies long-term goals to restore its downtown, preserve its historic core, and to redevelop the area surrounding the train station as a transit-oriented village, efforts that will serve to reinforce investments and revitalization in its downtown.

New Jersey Transit officials are planning to create a pedestrian oriented, commuter centric, mixed-use development in the 7-acre parking lot adjacent to the train station between High Street and Main Street. In 2022, Monmouth County and Middlesex County began a Local Concept Development Study to determine appropriate improvements to the Old Bridge-Matawan Road bridge over Lake Lefferts at the border of Matawan and Old Bridge. Matawan continues to take steps toward community revitalization.

Forty-eight residential units and retail space are expected at 160 Main Street. Additional redevelopment is slated for other Main Street properties. None of the developments are in a flood zone. Several other projects are in planning stages. Speedway Route 34 gas station has closed down and the property is for sale.

### **Demographics & Vulnerable Populations**

This plan analyzed census-derived data on population trends and population age distributions to help illustrate potential vulnerability within the borough. A population increase or decrease can illustrate potential hazard vulnerability through development pressures on the built environment, or through physical and social impacts of marked population loss. A community with a large share of population under age five may indicate vulnerabilities in hazard response, resource allocation, and evacuation – FEMA identifies that the pediatric population is disproportionately affected during disasters, and requires special consideration in categories of anatomy and physiology, psychological, and education vulnerabilities (FEMA, 2022, NLM, 2022). Individuals over age 65 are a growing share of the country's population and often represent the greatest share of deaths from extreme weather events and other natural disasters. A larger share of population over 65 may indicate local vulnerabilities to hazard events both before and after a disaster occurs – these populations may have mobility needs, uneven access to resources, and limited social networks that makes pre-disaster engagement challenging (FEMA, 2023).

The Borough of Matawan has a total population estimated at 9,546. This population is estimated to be 7.0% under age 5 and 12.9% over age 65. The Borough experienced population growth in the periods between ACS surveys of 2013-2017 and 2018-2022, with an estimated 7.3% increase. The borough's population age distribution is relatively broad; while a growth of over seven percent in population over two five-year survey periods, in addition to plans for increased development, may highlight potential local vulnerabilities to hazards based on shifts in the built environment and planned density increases.

There are two block groups within the Borough which are identified as potentially vulnerable due to overburden (OBC), both meeting criteria of overburdened *Minority* populations. There are no portions of Matawan which are identified as CDRZ or CEJST communities.

Demographics Summary	
<b>Total Population</b> (2018-2022 ACS 5-year Estimates)	9,546
<b>Population Change since 2017</b>	7.3%
<b>Percent of Population Age &lt; 5</b>	7.0%
<b>Percent of Population &gt; 65</b>	12.9%

Source: 2018-2022 ACS 5-Year Estimates, 2013-2017 ACS 5-Year Estimates

## HAZARD IDENTIFICATION

One of the first steps in developing a risk assessment is for participating municipalities to review and prioritize the hazards that can affect them. This was done based on how often a hazard has occurred, how significant effects have been in the past, the difficulty and cost of recovering from such events. Jurisdictions ranked the list of hazards as either high, medium, low, or no concern. The following include the Borough's hazard ranking. The full risk assessment is located in Section 4.0.

### Hazard Ranking

High	Medium	Low
<b>Natural Hazards</b>		
Dam Failure	Extreme Temperatures	Drought
Flood	Extreme Wind	Earthquake
Nor'easter	Hurricane/Tropical Storm	Lightning
Storm Surge	Tornado	Wildfire
	Winter Storm	
<b>Human-made Hazards</b>		
	Cyber Attack	Civil Unrest
	Economic Disruption	
	Power Failure	
	Terrorism	
	Pandemic	

The Borough ranked Landslide as N/A.

### Hazard Ranking Explanation

Dam failure is ranked as high by Matawan officials because the Borough is home to two high hazard potential dams, meaning their failure or mis-operation would probably cause loss of human life. These dams are Lake Lefferts Dam and Lake Matawan Dam. Both are rated in Poor condition, meaning dam safety deficiencies are recognized under normal operating conditions that may realistically occur. Remedial action is necessary. The term "Poor" may also be used when uncertainties exist as to critical analysis parameters that identify a potential dam safety deficiency. This means investigations and studies are necessary.

Reconstruction of these dams is planned following the raising of Aberdeen Road, a mitigation action from the last plan, which is currently in progress. This project will take around two years to complete and will raise Aberdeen Road by 15 feet. Lake Lefferts Dam will be prioritized, followed by Lake Matawan Dam. Additionally, ravines near Lake Lefferts need to be desilted.

### Significant Hazard Events Since Last Plan Update

There have been no major hazard events since the 2020 storm. Hazard mitigation planning in the town has focused on the two high-hazard potential dams mentioned in the previous section.

### Climate Change Impacts on Extent and Magnitude of Hazards

Climate change is expected to significantly impact the risks and hazards faced by Matawan Borough. As global temperatures rise, the frequency and intensity of extreme weather events such as hurricanes, nor'easters, and heavy rainfall are likely to increase. This will exacerbate flooding risks, particularly in areas already prone to such events, like the

regions adjacent to Gravelly Brook and the low-lying areas within the 1% annual chance flood zone. The increased precipitation and storm surges will put additional strain on the Borough's infrastructure, including the high hazard potential dams at Lake Lefferts and Lake Matawan, which are already in poor condition and require remedial action. The Borough's aging population and vulnerable communities will face heightened risks from extreme temperatures and other climate-related hazards. Older adults and young children are particularly susceptible to the health impacts of heatwaves and severe weather events.

## RISK ASSESSMENT

### National Flood Insurance Program (NFIP) statistics

Matawan Borough	
Initial FIRM Date	9/30/81
Effective FIRM Date	6/20/2018
Number of Policies In-Force:	0
Total Losses:	0
Total Payments:	\$0
Number of RL Properties:	7
Number of Mitigated RL Properties:	0
RL – Total Losses:	0
RL – Total Paid:	\$0
Number of SRL Properties:	0
Number of Mitigated SRL Properties:	0
SRL – Total Losses:	0
SRL – Total Paid:	\$0

Source: FEMA Policy and Loss Data, August 2024

### Vulnerability of the Built Environment

The Special Flood Hazard Area (SFHA) in the Borough of Matawan is primarily located adjacent to the mainstream Gravelly Brook. Approximately 13.8 percent of the total area of Matawan lies within the 1% annual chance flood zone as defined by FEMA. An additional 0.2 percent of the area of the municipality is in the 0.2% annual chance flood zone.

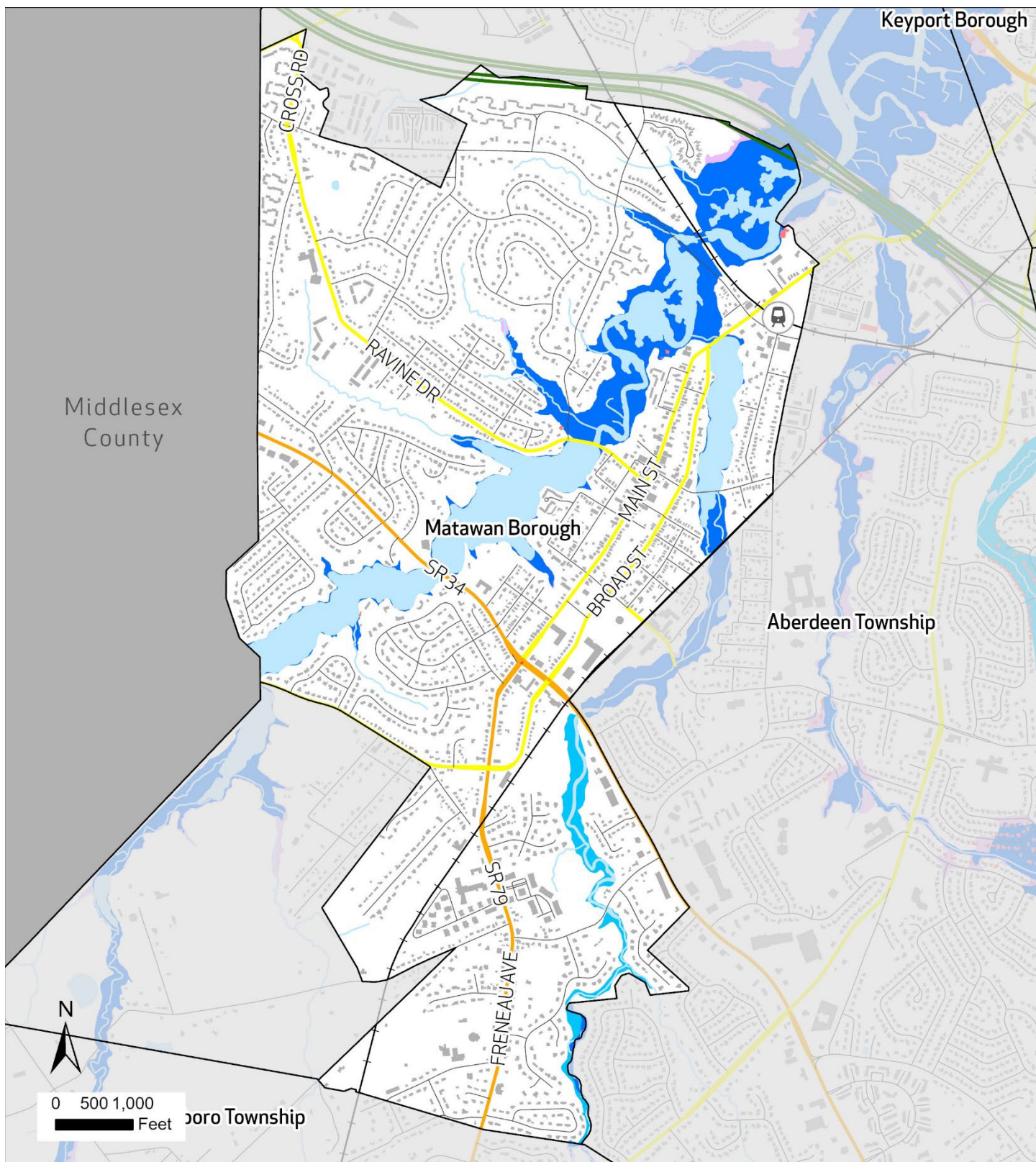
About 81.3 percent of Matawan is considered developed. Of the developed parcels of the town, 6.8 percent fall within the 1% annual chance flood zone and none are within the 0.2% annual chance flood zone. This illustrates that development in the municipality has generally occurred in areas that are less prone to flooding.

	Percentage in the 1% Floodplain	Percentage in the 0.2% Floodplain	5 feet of Sea Level Rise
Developed Parcels	6.8%	NA	0.2%
Exposed Land Area	13.8%	0.2%	2.2%

During the planning process, Matawan identified critical facilities which function as community lifelines. These facilities provide the most fundamental services in the community that, when stabilized, enable all other aspects of society to function. The municipality identified 16 total facilities. Of these facilities, two are within the floodplain. Both are categorized as Water Systems community lifelines. Examples of Water Systems lifelines include dams and pump stations.

Community Lifeline Type	Number in the 1% Floodplain	Number in the 0.2% Floodplain	Number within 5 feet of Sea Level Rise
Water Systems	2	-	-





# **Flood Risk** Matawan Borough

## **FEMA Flood Zone**

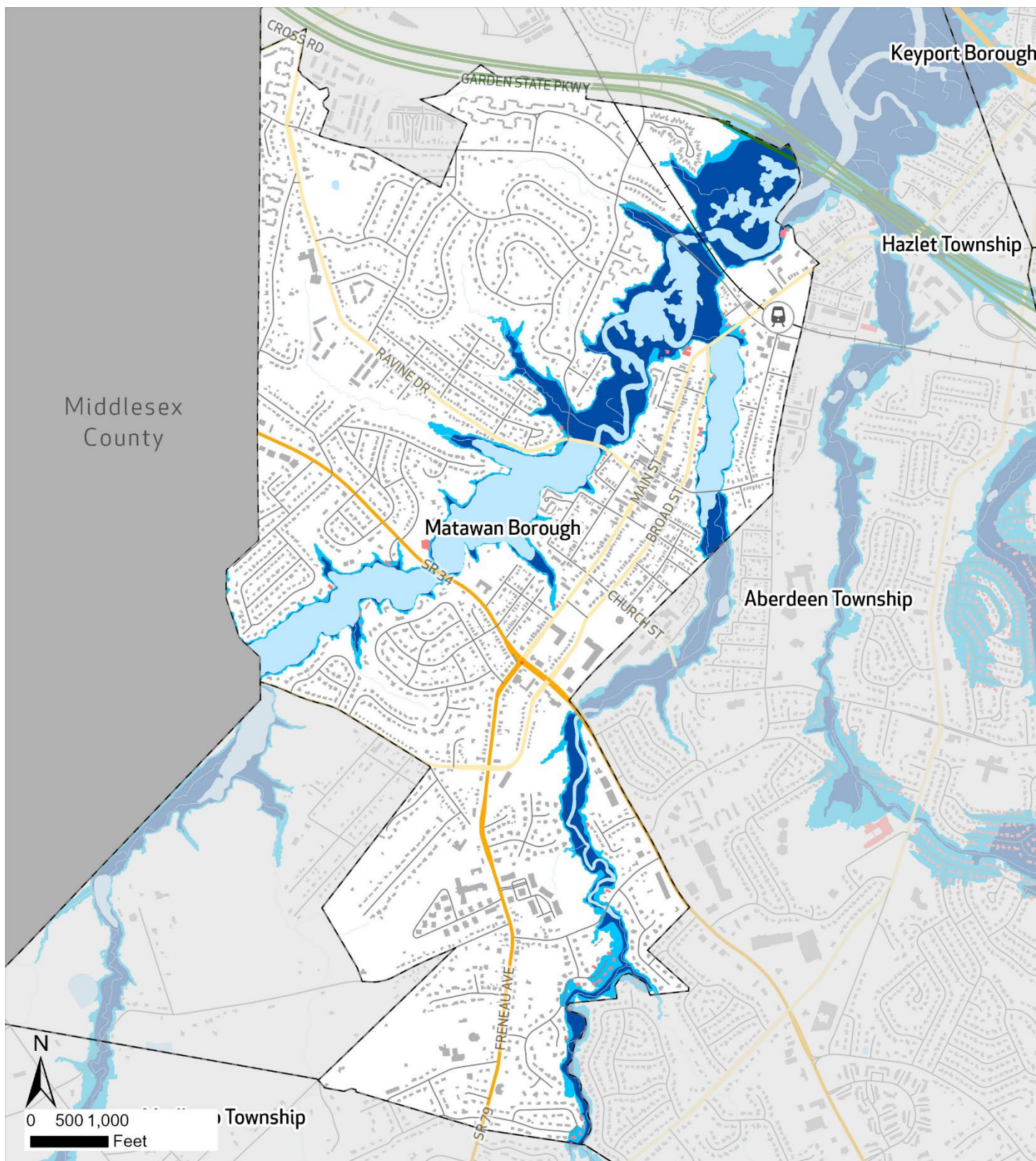
- 0.2% Annual Chance
- A (1%)
- AE (1%)

- Garden State Parkway
- Interstate Highways
- State Routes
- County Routes
- Local Roads
- Rail Lines
- NJ Transit Rail Station

- Municipal Boundaries
- Building Footprints
- Building Footprints within Floodplain
- Water

Source: FEMA NJDEP, NJOIT, NJTransit





# **NJ Inland Design Flood Elevation Matawan Borough**

## **FEMA Flood Zone**

Current Base Flood  
Elevation (1%)

## **NJ Inland Design Flood Elevation**

FEMA BFE (1%) plus 3  
Feet

Interstate Highways

State Routes

County Routes

Local Roads

Garden State Parkway

Railroad

NJ Transit Rail Station

Municipal Boundaries

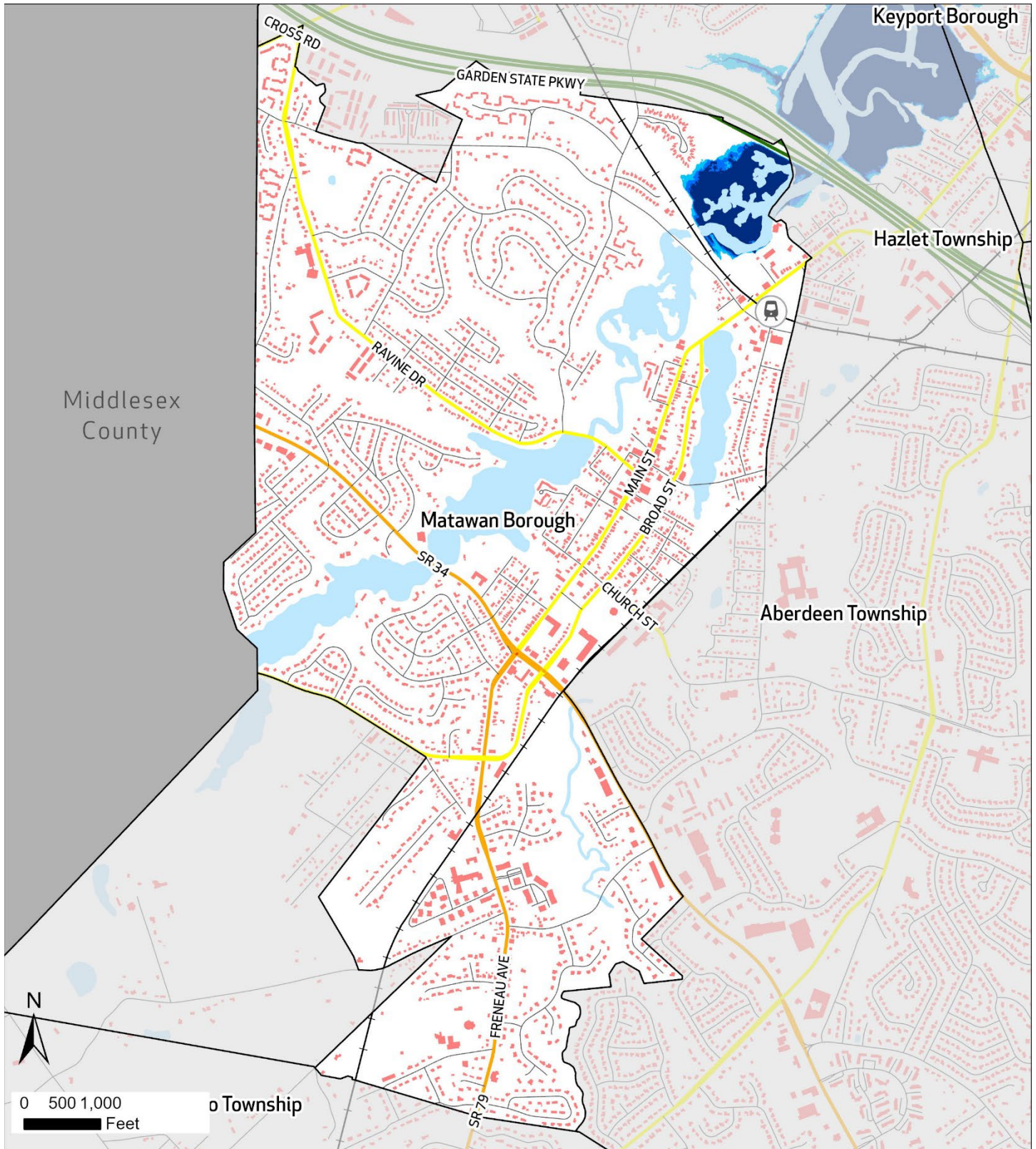
Water

Building Footprints

Building Footprints within  
IDFE

Source: FEMA, Rutgers University, NJDEP, NJOIT, NJTransit



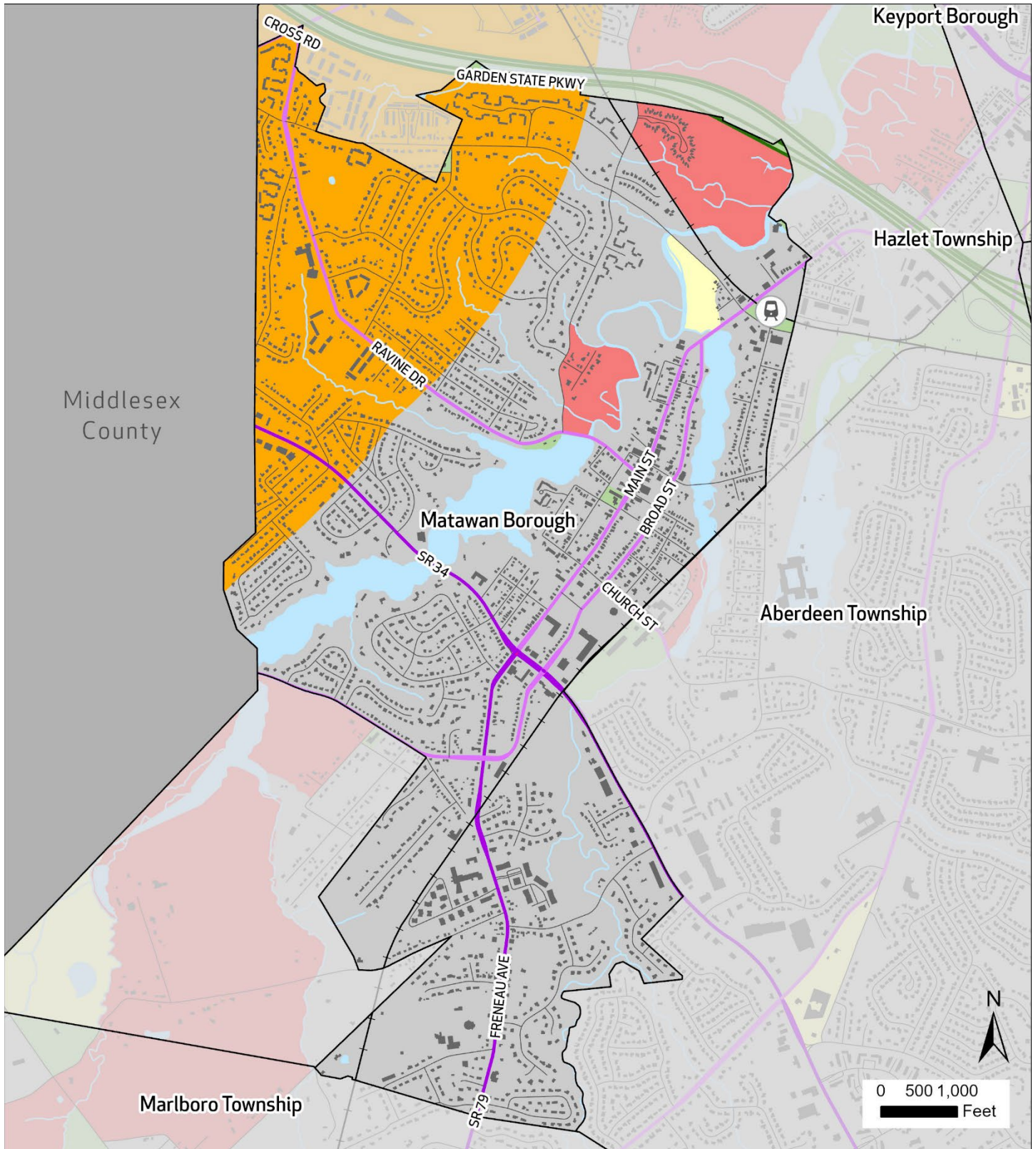


**Permanent Inundation  
Under Sea Level Rise  
(SLR) Scenarios**  
Matawan Borough

- |                                   |                         |                        |
|-----------------------------------|-------------------------|------------------------|
| ■ Area Inundated Under 2 Feet SLR | — Garden State Parkway  | ▭ Municipal Boundaries |
| ■ Area Inundated Under 3 Feet SLR | — Interstate Highways   | ■ Building Footprint   |
| ■ Area Inundated Under 5 Feet SLR | — State Routes          | ■ Water                |
|                                   | — County Routes         |                        |
|                                   | — Local Roads           |                        |
|                                   | — Rail Lines            |                        |
|                                   | NJ Transit Rail Station |                        |

Source: NOAA, NJDEP, NJOIT, NJTransit





**Wildland Urban  
Interface (WUI)  
Classification**  
Matawan Borough

- |   |  |  |
|---|--|--|
| <span style="color: orange;">■</span> Interface                       | <span style="color: green;">—</span> Garden State Parkway  | <span style="border: 1px solid black;"> </span> Municipal Boundaries   |
| <span style="color: red;">■</span> Intermix                           | <span style="color: magenta;">—</span> Interstate Highways | <span style="background-color: grey; width: 10px; height: 10px; display: inline-block;"></span> Building Footprint |
| <span style="color: grey;">■</span> High or Medium Density Housing    | <span style="color: blue;">—</span> State Routes           | <span style="color: lightblue;">■</span> Water   |
| <span style="color: yellow;">■</span> Low or Very Low Density Housing | <span style="color: purple;">—</span> County Routes        |  |
| <span style="color: green;">■</span> No Housing                       | <span style="color: grey;">—</span> Local Roads            |  |
|   | <span style="color: black;">+</span> Rail Lines            |  |
- NJ Transit Rail Station

Source: USFS, NJDEP, NJOIT, NJTransit



## CAPABILITY ASSESSMENT

### Planning & Regulatory Capabilities

Matawan Borough has the following additional Planning & Regulatory capabilities:

Plan and Regulation	Yes	No	Date of last update	How does this capability support hazard mitigation?
Master Plan	x		2016	The Borough of Matawan's Municipal Master Plan does not contain a vulnerability assessment.
Capital Improvement Plan	x		2025	
Local Emergency Operations Plan/Continuity of Operations Plan	x		2025	
Floodplain Development Ordinance	x		1998	
Floodplain Management Plan	x		1998	
Stormwater Management Ordinance	x		1998	
Stormwater Management Plan	x		1998	
Watershed Management Plan				
Sheltering Plan	x		2025	
Evacuation Plan	x		2025	
Substantial Damage/Improved Structures Response		x		
Repetitive Loss Plan		x		
Disaster Debris Management Plan		x		
Tracking elevation certificates and/or Letter of Map Change		x		
Post-Disaster Recovery Plan		x		
Current/recent redevelopment plans or studies	X			In 2015 the town added to its 2001 Redevelopment Plan with a Transit Station Redevelopment Amendment.
Community Wildfire Protection Plan		x		
Climate Adaptation Plan				
Other Plans that discusses hazard mitigation		x		
Other ordinance and regulation that mitigate the impacts of natural hazards		x		

### Administrative and Technical Capabilities

Matawan Borough has the following Administrative and Technical capabilities:

Position	Yes	No	Explanation
Floodplain Administrator		x	
Grant Writer	x		The Aubrey Group
Staff trained to support mitigation		x	
Existing mutual aid or technical assistance agreements to support hazard mitigation projects	x		
Non-governmental organizations/other partners that work with the municipality on mitigation projects		x	
Organizations that work with socially vulnerable or underserved populations	x		

## Education and Outreach Capabilities

Matawan Borough has the following Education and Outreach capabilities:

Education & Outreach Capability	Yes	No	Explanation
Communicate natural and human-based hazards to the public		x	
StormReady	x		Monmouth County
Firewise USA		x	
Severe Weather Awareness Week		x	
Community Rating System (CRS)		x	

## Financial Capabilities

Within the last five years, Matawan Borough has used the following financial capabilities to implement hazard mitigation activities:

Financial Capability	Yes	No	Explanation
FEMA BRIC		x	
FEMA FMA		x	
FEMA Public Assistance	x		
FEMA HMGP	x		
Non-FEMA Federal Funding Programs		x	
Other FEMA resources		x	
NJ Infrastructure Bank		x	
Other state municipal assistance or grant programs	x		
Evaluation process on the prioritization of risk reduction projects against other local activities		x	
Other ongoing efforts to build additional financial capabilities		x	

## Additional Capability Assessment Information:

- Sustainable Jersey Participation Status: Registered



## MITIGATION STRATEGY

### Overview and Progress Since Last Plan Update

The Borough of Matawan is a mostly residential community that actively works to implement proactive policy and improvements aimed at increasing Matawan's resilience to damage from natural disasters and adaptation to future climate concerns. Since 2021, the Borough has provided auxiliary power to the Matawan Municipal Community Center and has relocated its Police Headquarters to join Borough Hall and the Office of Emergency Management's Operations Center all under one roof. It has also begun a project to raise Aberdeen Rd. (scheduled completion of July 2025), a necessary improvement prior to replacing existing high hazard dams. These projects promote a flourishing community and further support the municipality's resiliency goals. Moving forward, the Borough of Matawan will remain forward thinking and prioritize the replacement of both Lake Lefferts (scheduled start date of October 2025) and Lake Matawan dams, in addition to other projects regarding the cleaning out of outfall pipes located within the numerous ravines throughout the Borough and the upgrading of critical facility generators (Sewer pumping stations) in addition to coordinating with state and local agencies on the best ways to achieve resiliency within the community.

### Completed or Removed Actions

Action	Name	Description	Hazards Addressed	Priority	Responsible Party	Potential Funding	Cost Estimate	Time-line	Action Status	Notes
Action 32-1	Provide Auxiliary Power to the Matawan Municipal Community Center/Borough Hall	Provide auxiliary power to the Matawan Municipal Community Center-Borough Hall (201 Broad Street), to allow for continuity of government operations and public access to the Municipal Complex during a sustained loss of power. Having auxiliary power would also facilitate the use of the complex as a temporary shelter or warming/charging station during a declared state of emergency.	Extreme Temperatures, Flood, Extreme Wind, Lightening, Nor'easter, Hurricane and Tropical Storm, Storm Surge	N/A	Borough Engineer, Office of Emergency Management	Bonded funding, State, County, federal grant	\$150,000	N/A	Completed	Police HQ has been moved to the Municipal Community Center - Borough Hall.

### New and Ongoing Actions

Action	Name	Description	Hazards Addressed	Priority	Responsible Party	Potential Funding	Cost Estimate	Time-line	Action Status	Notes
Action 32-2	Replace Lake Lefferts Dam	Replace existing Lake Lefferts dam to include realigning of Ravine Dt. To comply with current DOT standards.	Dam Failure, Flood, Coastal Erosion, Nor'easter, Hurricane and Tropical Storm	High	Matawan Borough	State, County and Federal Grants,	\$8M	1 year	Ongoing	Lake Lefferts is scheduled for full rehab with construction beginning in Fall of 25 (DEP).

Action	Name	Description	Hazards Addressed	Priority	Responsible Party	Potential Funding	Cost Estimate	Time-line	Action Status	Notes
						Bonded funds				
Action 32-3	Replace Lake Matawan Dam	Coordinate with NJDEP to replace existing Lake Matawan dam to include replacement of the Main Street Lake Matawan/Matawan Creek Bridge and adjoining roadway.	Dam Failure, Flood, Nor'easter, Hurricane and Tropical Storm	High	Matawan Borough and Monmouth County	Lake Matawan is eligible for High-Hazard Potential Dam Grant Program.	\$8m	5+ years	Not Started	Construction has not started.
Action 32-4	Elevate Aberdeen Rd	Elevate Aberdeen Rd above the Matawan Creek and BFE.	Flood, Nor'easter, Hurricane and Tropical Storm, Storm Surge	High	Matawan Borough and Monmouth County Engineers in conjunction	FEMA HMA, DOT & MC Engineering	\$7.1M	1 year	Ongoing	Started in 2023-24. Construction is ongoing. Expected completion is July 2025.
Action 32-5	Purchase a Jet Vac Ravine Cleaning and Clean Outfall Pipes	Clean outfall pipes and ravines that are clogged (need list from engineer on which outfalls and ravines need cleaning). Additionally, purchase a jet vac (est. \$700,000) for DPW to clean the pipes and ravines from debris.	Flood, Nor'easter, Hurricane and Tropical Storm	High	Borough DPW	Municipal budget	\$1.5M	1 year	Not Started	Project has not started yet.
Action 32-6	Upgrade Generators at Critical Facilities	Upgrade generators at Police HQ, Somerset Place Sewer Life Station, Victoria Court Sewer Pump Station, and DPW building.	All Hazards	Low	Borough Administration	FEMA HMA	\$200,000	1 year	Ongoing	Police HQ have been moved to the Municipal Community Center - Borough Hall.
Action 32-7	Target Harden Critical Facilities by installing Service Cameras, an Access Control	The Water Treatment Plan needs more security in the form of an upgraded camera system and concrete barriers.	Terrorism	Medium	Borough Administration, DPW	Homeland Security Grants	TBD	1 year	Ongoing	Borough Hall cameras and key card access completed.



Action	Name	Description	Hazards Addressed	Priority	Responsible Party	Potential Funding	Cost Estimate	Time-line	Action Status	Notes
	System, and/or Bulletproof Glass	Borough Hall could be more secure with bulletproof glass, an access card system, and an enhanced camera system.								
32-8	Develop a Tree Trimming Program	Create a shared service agreement for tree trimming program with the county or a consultant.	Flood, Nor'easter, Hurricane and Tropical Storm, Winter Storm	Medium	DPW	Municipal Budget	TBD	2 years	Ongoing	Some work has been completed.
32-9	Acquire, elevate, or relocate buildings and infrastructure in flood prone areas, with a focus on Repetitive Loss (RL), and Severe Repetitive Loss (SRL) properties.	There is currently no RL or SRL properties in the borough; however, the Borough recognizes that the floodplain changes over time and the risk is always present. If in the next five years properties become RL/SRL, the Borough will coordinate with residents to mitigate properties through structure elevation, demolition to open space, or another type of mitigation.	Flood, Nor'easter, Hurricane and Tropical Storm	High	Borough and Property Owners	FEMA HMA	TBD	5+ years	Ongoing	