

31 – MARLBORO TOWNSHIP

PLANNING TEAM AND PARTICIPATION

Name	Title	Participation
Bob Miller	OEM Deputy Coordinator	Primary Point of Contact, Municipal Workshop #1, Municipal Workshop #2
Trevor Taylor	Municipal Engineer	Municipal Workshop #1, Municipal Workshop #2
Jonathan Capp	Business Administrator	Update Community Profile
Laura Neumann	Municipal Engineer	Update Community Profile

COMMUNITY PROFILE

Overview

Located in western Monmouth County, the Township of Marlboro has a land area of 30.47 square miles. Marlboro encompasses over 600 acres of preserved farmland and is a primarily single-family residential community with a concentration of commercial development along Route 9 and smaller commercial development along Routes 18 and 79. As transportation infrastructure expanded within the region, e.g., Route 9, residential development increased rapidly, with steady population growth continuing into the 21st century. Marlboro has a Safe Routes to School “First Step” rating.

In 2022, Marlboro, Freehold Township, the County and the State partnered to preserve the 27-acre Van Mater Farm on Route 79. Marlboro’s Agricultural Advisory Committee and the Open Space Committee both meet monthly. With funding from the state, county, and a contribution from the Township's open space fund, 15 more acres were added to the inventory of preserved open space in Marlboro next to an already preserved 34-acre tract between Haven Way and Harrington Terrace. In October 2023 Marlboro adopted a new Farmland Preservation Plan.

Land Use, Development, & Growth

In Marlboro, residential, publicly owned and commercial land together constitute a large portion of its area. As a result, in 2020, urban or developed land accounted for nearly 54 percent of the Township’s total area. In the same year, wetlands, forested land and farmland made up 22 percent, 18 percent and 5 percent respectively of the Township’s total area. From 2015 to 2020, Marlboro lost 86 acres of its barren land, 42 acres of its farmland and 25 acres of its wetlands, while its urban or developed land grew by 2 percent, or 211 acres.

Land Use Type	Total Acres (2015)	Total Acres (2020)	Percent Change
Agriculture	922.0	880.0	-5%
Barren Land	222.8	136.0	-39%
Forest	3640.8	3580.5	-2%
Urban	10345.2	10556.2	2%
Water	70.3	73.7	5%
Wetlands	4282.3	4257.0	-1%

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

Recent Major Development and Infrastructure from 2020 to Present

To meet the Township’s affordable housing obligation, several projects are advancing including the 387-unit Hyde Park project and the 120-unit Greenwich Park project. Both developments will mix affordable and market rate housing. The Parc at Marlboro is a single-family development off of County Route 79 that also features 56 affordable units, made up of one-, two-, and three-bedroom apartments.

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

Marlboro’s Vision Plan and Master Plan Reexamination Report both identify the need for a village center with connections to existing neighborhoods. The Vision Plan, a form-based code, is intended to serve as an outline towards implementing two of the Township’s key concerns: the lack of a community center and the loss of its remaining rural character. During the public visioning process, residents stated this new “Center” should include a mix of commercial and residential uses and become a community meeting area. Residents suggested using existing homes and businesses located within the proposed Village Center as a catalyst for creating a compact, pedestrian-friendly, mixed-use area. The Plan outlines building types, street standards, stormwater management techniques, and design standards for the proposed Center. New, higher density residential development appears to be focused along sections of State Highway 79 in the Morganville section of the Township.

Demographics & Vulnerable Populations

This plan analyzed census-derived data on population trends and population age distributions to help illustrate potential vulnerability within the Township. 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 Township of Marlboro has a total estimated population of 41,480, of which an estimated 4.8% are under age 5, and 15.9% are over age 65. The Township saw a growth in population of an estimated 2.5% in the periods of 2013-2017 and 2018-2022 ACS surveys. With an aging population making up nearly sixteen percent of their total community, Marlboro may focus hazard mitigation efforts on those with robust messaging and engagement for older residents, evacuation plans inclusive of populations with mobility issues, and resilient networks for resource accessibility post-disaster. While modest, a growth trend of 2.5% over the last two five-year survey periods alongside knowledge of upcoming residential and commercial development, could highlight potential community vulnerability to hazards related to shifts of the local built environment.

There are four block groups within Marlboro which are identified by the State of New Jersey as overburdened (OBC) according to criteria of Minority populations. There are no parts of the Township which are identified under CDRZ or CEJST criteria.

Demographics Summary	
Total Population (2018-2022 ACS 5-year Estimates)	41,480
Population Change since 2017	2.5%
Percent of Population Age < 5	4.8%
Percent of Population > 65	15.9%

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 Township’s hazard ranking. The full risk assessment for each hazard is located in Section 4.0.

Hazard Ranking

High	Medium	Low
Natural Hazards		
Nor’easter	Extreme Temperature	Lightning
Flood	Extreme Wind	Dam Failure
	Hurricane/Tropical Storm	Earthquake
	Winter Storm	Landslide
	Wildfire	Drought
Human-made Hazards		
Power Failure	Cyber Attack	Civil Unrest
	Economic Disruption	
	Terrorism	
	Pandemic	

The Township ranked Coastal Erosion, Storm Surge, and Wave Action N/A.

Hazard Ranking Explanation

Marlboro has experienced significant changes in its hazard risks within the past five years. Most notably, power failure has increased from low to high risk in this plan. This is due in part to the age and management of the infrastructure. The Township now consistently experiences power outages for half the day in a third of the town. Additionally, substations regularly fail, and there is no direct service number for these situations.

Landslides, previously labeled as not applicable, have been moved to low risk. Marlboro Township, though low-lying, experiences runoff and erosion from flooding. Nor’easters remain a high-risk hazard compared to hurricanes, which are considered low risk due to the impact of snow. Given the Township's location, hurricanes cause minimal damage, but nor’easters do.

Significant Hazard Events Since Last Plan Update

There have been no significant hazards resulting in damage in the past five years. The biggest issue has been localized rain events producing three to four inches of rain per hour. The main consequence is that roads flood and need to be blocked off, including Texas Road and Fletcher Drive. This is not a stormwater issue, but a stream quality issue.

Climate Change Impacts on Extent and Magnitude of Hazards

Climate change is expected to significantly impact the risks and hazards faced by Marlboro Township, particularly in terms of flooding, extreme weather events, and temperature fluctuations. As a community with a mix of residential, commercial, and preserved farmland, Marlboro is already vulnerable to various natural hazards. Climate change is likely to exacerbate these risks by increasing the frequency and intensity of extreme weather events, such as heavy rainfall, nor’easters, and tropical storms, leading to more severe and frequent flooding. The Township's location and the presence of numerous creeks and brooks further heighten the risk of flooding, with approximately 4.9% of the total area lying within the 1% annual chance flood zone. Additionally, rising temperatures and prolonged droughts could strain water resources and increase the likelihood of droughts, impacting both the natural environment and the built infrastructure.

The impacts of climate change are not limited to flooding and temperature extremes. Increased heatwaves and prolonged periods of high temperatures can exacerbate the effects of extreme weather events, leading to cascading impacts on the local ecosystem and human health. Vulnerable populations, such as the elderly and young children, may face heightened risks during extreme weather events, necessitating robust emergency response and preparedness plans.

RISK ASSESSMENT

National Flood Insurance Program (NFIP) statistics

Marlboro Township	
Number of Policies In-Force:	104
Total Losses:	92
Total Payments:	\$533,142.20
Number of RL Properties:	7
Number of Mitigated RL Properties:	0
RL – Total Losses:	15
RL – Total Paid:	\$146,347.04
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

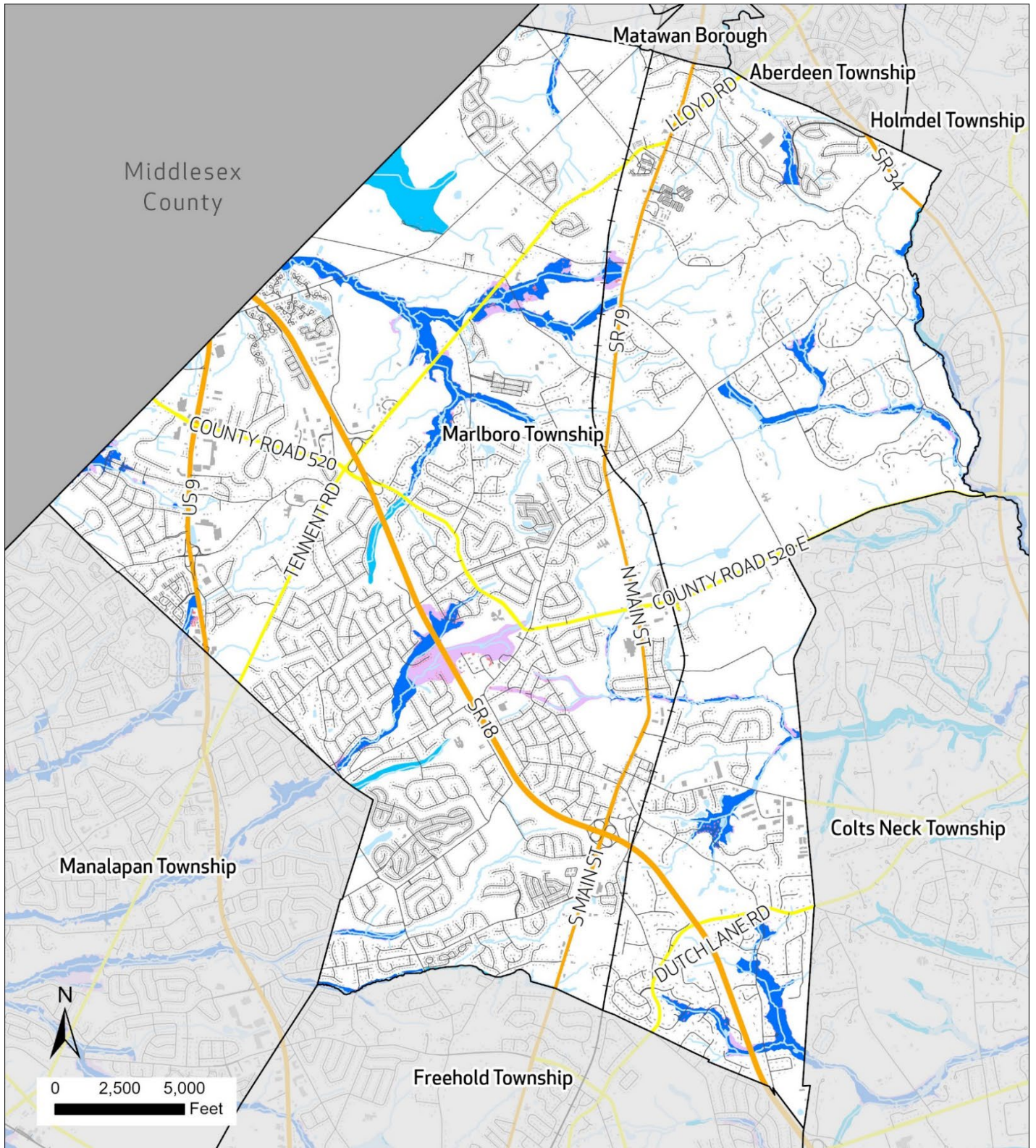
The Special Flood Hazard Area (SFHA) in the Township of Marlboro is primarily located adjacent to the many creeks and brooks which pass through town. Approximately 4.9 percent of the total area of Marlboro lies within the 1% annual chance flood zone as defined by FEMA. An additional 1.2 percent of the area of the municipality is in the 0.2% annual chance flood zone.

About 73.1 percent of Marlboro is considered developed. Of the developed parcels of the town, 4.2 percent fall within the 1% annual chance flood zone and 0.9 percent are within the 0.2% annual chance flood zone. This illustrates that the developed area of the municipality is generally in line with overall flood risk.

	Percentage in the 1% Floodplain	Percentage in the 0.2% Floodplain	5 feet of Sea Level Rise
Developed Parcels	4.4%	0.9%	NA
Exposed Land Area	4.9%	1.2%	NA

During the planning process, Marlboro 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 40 total facilities. Of these facilities, none are within the floodplain.

	Number in the 1% Floodplain	Number in the 0.2% Floodplain	Number within 5 feet of Sea Level Rise
Community Lifelines and Critical Facilities	-	-	NA



Flood Risk Marlboro Township

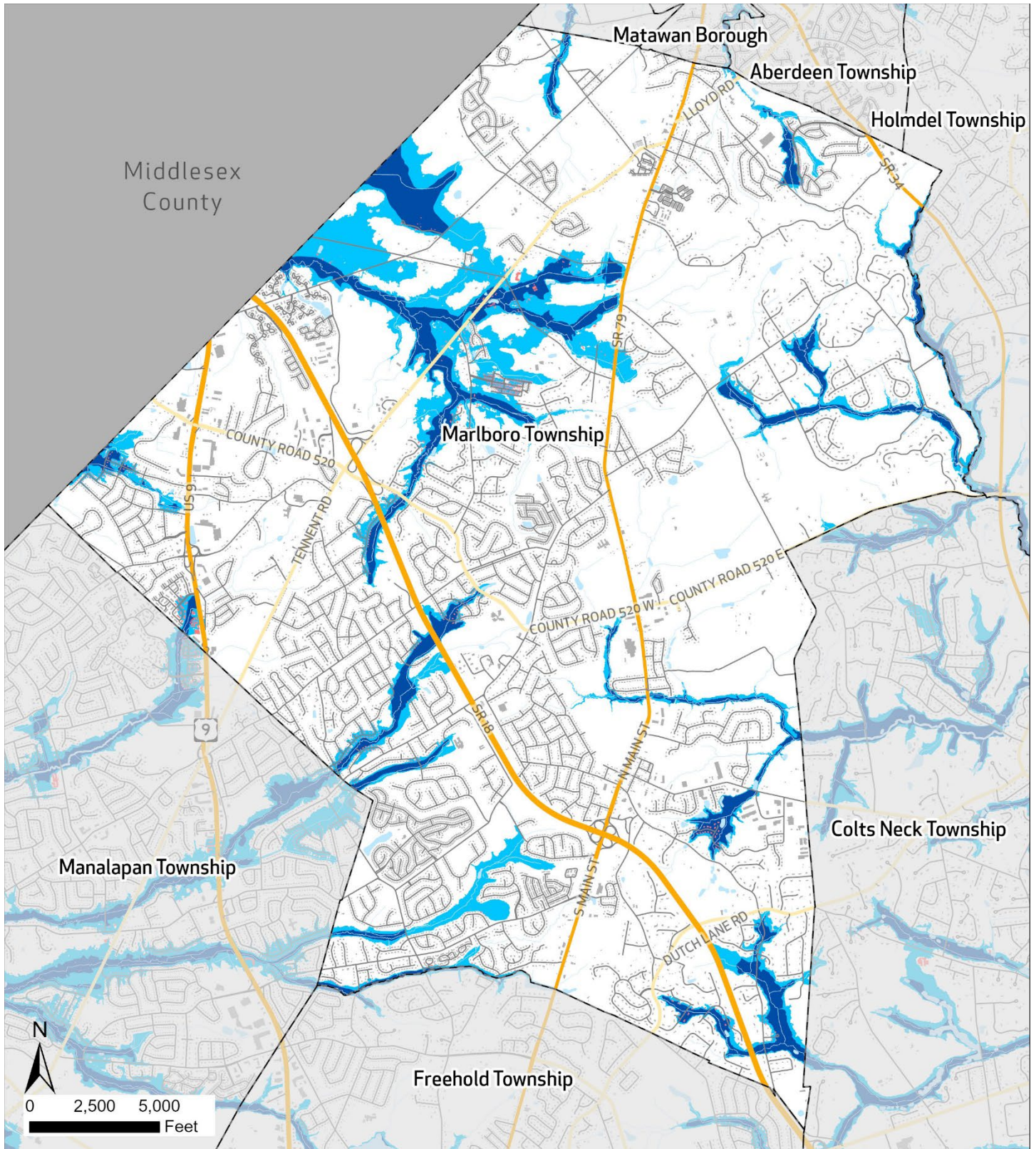
FEMA Flood Zone

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

- State Hwy
- Interstate Highways
- State Routes
- County Routes
- Local Roads
- Rail Lines

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

Source: FEMA NJDEP, NJOIT, NJTransit



NJ Inland Design Flood Elevation Marlboro Township

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

State Hwy

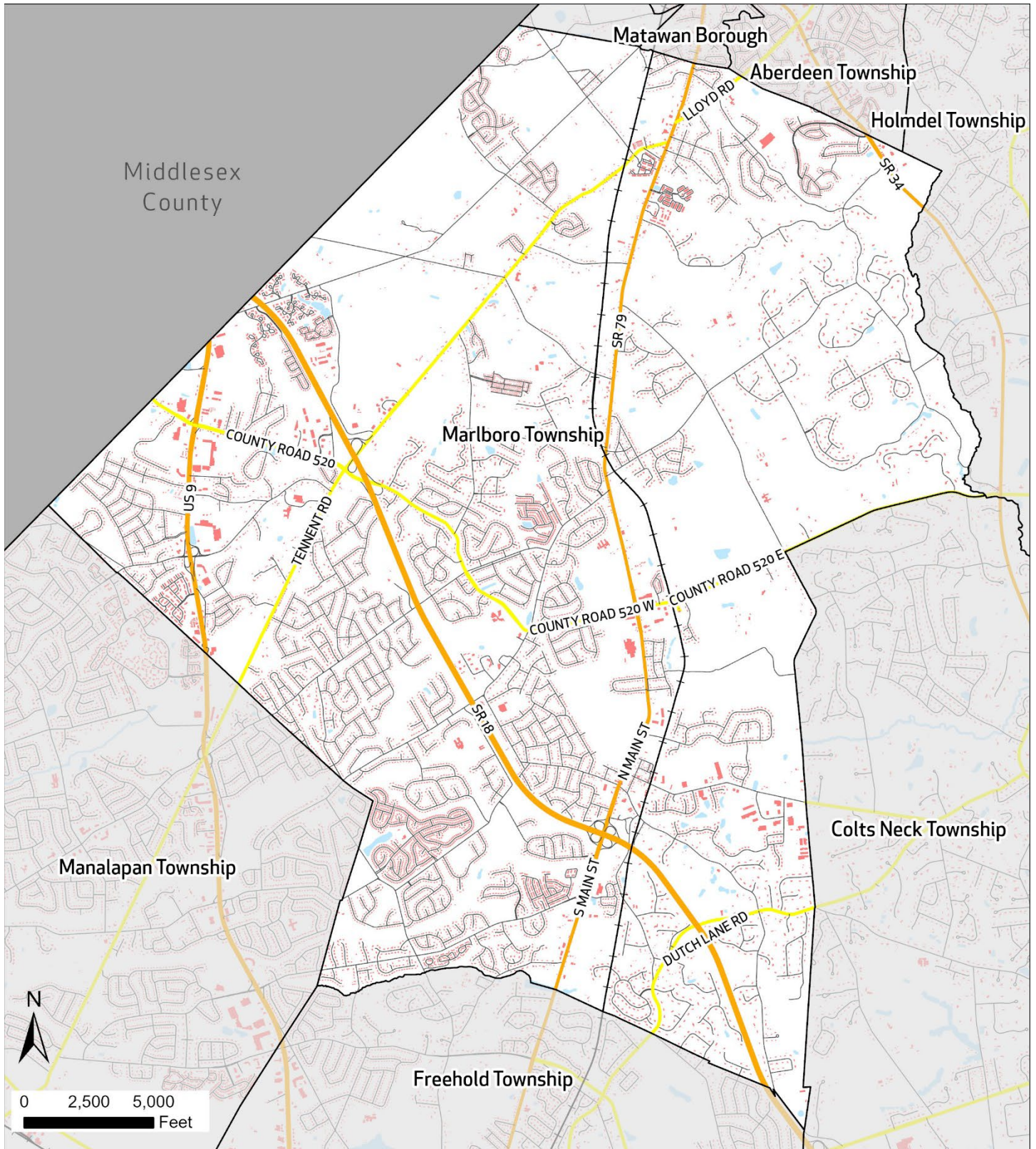
Municipal Boundaries

Water

Building Footprints

Building Footprints within IDFE

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



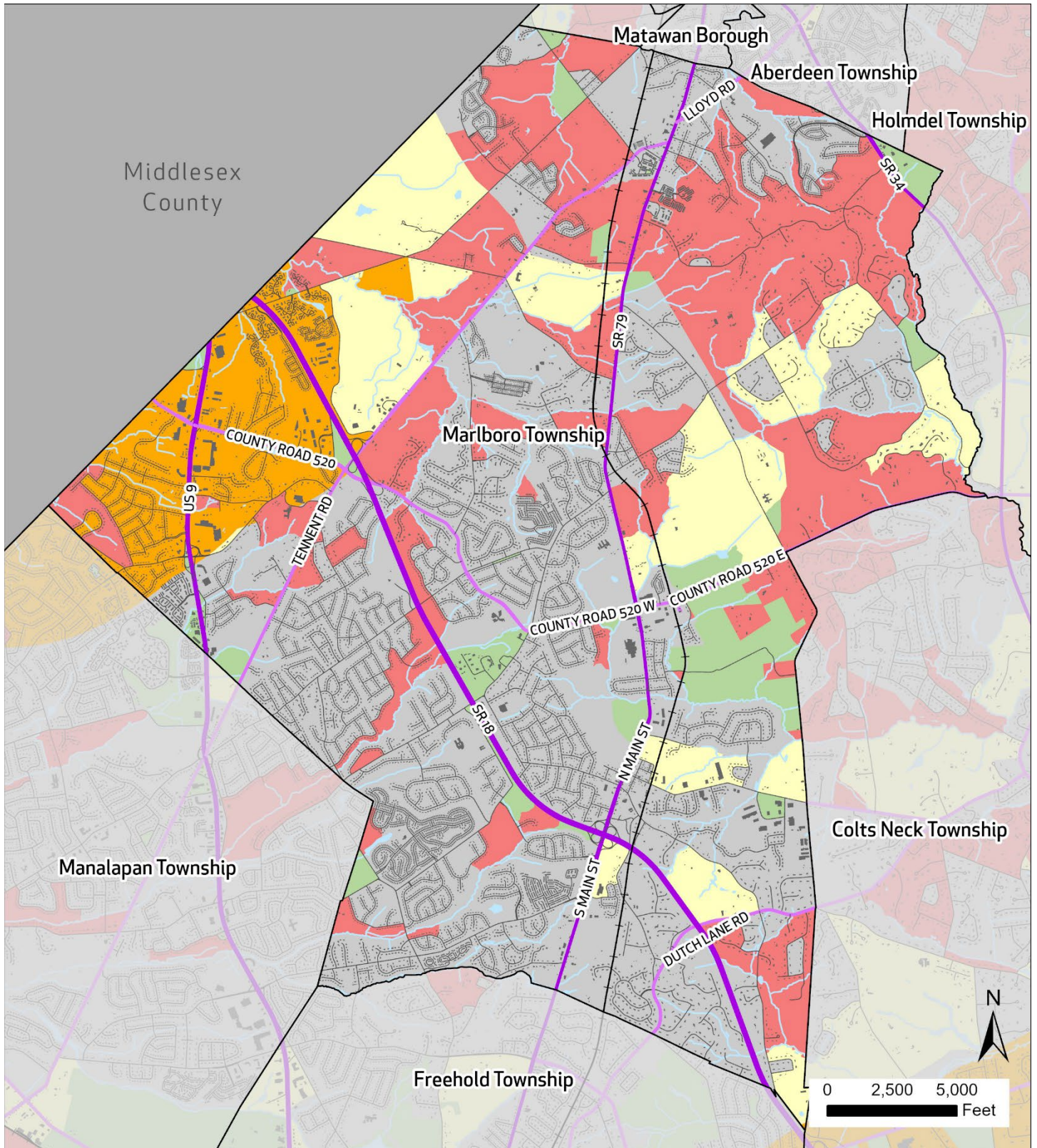
**Permanent Inundation
Under Sea Level Rise
(SLR) Scenarios**
Marlboro Township

- Area Inundated Under 2 Feet SLR
- Area Inundated Under 3 Feet SLR
- Area Inundated Under 5 Feet SLR

- Interstate Highways
- State Routes
- County Routes
- Local Roads
- Rail Lines

- Municipal Boundaries
- Building Footprint
- Water

Source: NOAA, NJDEP, NJOIT, NJTransit



**Wildland Urban
Interface (WUI)
Classification**
Marlboro Township

- | | | |
|------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| Interface | State Hwy | Municipal Boundaries |
| Intermix | Interstate Highways | Building Footprint |
| High or Medium Density Housing | State Routes | Water |
| Low or Very Low Density Housing | County Routes | |
| No Housing | Local Roads | |
| | Rail Lines | |

Source: USFS, NJDEP, NJOIT, NJTransit

CAPABILITY ASSESSMENT

Planning & Regulatory Capabilities

Marlboro Township 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		1997 with a 2019 Master Plan Re-Examination Report, 2010 Marlboro Community Vision Plan, and 2023 Farmland Preservation Plan	
Capital Improvement Plan	X		Current plan submitted for review with approval expected in April. Capital Plans are updated and approved annually	All Township Departments maintain a Capital Improvement Plan to build resiliency within the Township and redundancy in its operation to enable response capabilities.
Local Emergency Operations Plan/Continuity of Operations Plan	X		Local Emergency Management Council meets quarterly. Emergency Operations Plan approved in 2024	LEMC regularly reviews threats and hazards within the Township with emphasis on protective measures and possible actions to alleviate the risks.
Floodplain Development Ordinance	X		6/16/2022	
Floodplain Management Plan		X		
Stormwater Management Ordinance	X		6/20/2024	
Stormwater Management Plan	X		3/2006	
Watershed Management Plan		X		
Sheltering Plan		X		No formal plan but is discussed in the Municipal Emergency Operations Plan
Evacuation Plan		X		No formal plan but is discussed in the Municipal Emergency Operations Plan
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			2019 Master Plan Re-Examination Report, 2010 Marlboro Community Vision Plan
Community Wildfire Protection Plan		X		
Climate Adaptation Plan		X		
Other Plans that discusses hazard mitigation		X		
Other ordinance and regulation that mitigate the impacts of natural hazards	X			2023 Farmland Preservation Plan

Administrative and Technical Capabilities

Marlboro Township has the following Administrative and Technical capabilities:

Position	Yes	No	Explanation
Floodplain Administrator	X		Construction Official with support from Engineering
Grant Writer		X	
Staff trained to support mitigation		X	

Position	Yes	No	Explanation
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

Marlboro Township has the following Education and Outreach capabilities:

Education & Outreach Capability	Yes	No	Explanation
Communicate natural and human-based hazards to the public	X		The Township regularly communicates with the residents through social media, email, public signage and reverse-911 calls regarding severe weather events, local hazards or incidents and any incident that impacts the community.
StormReady		X	
Firewise USA		X	
Severe Weather Awareness Week		X	
Community Rating System (CRS)		X	

Financial Capabilities

Within the last five years, Marlboro Township 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		2015 – Installation of a generator at Recreation Center; 2024 – Streambank Stabilization on Nolan Road
Non-FEMA Federal Funding Programs	X		2019 – PDMC funding for streambank stabilization on Pleasant Valley Road
Other FEMA resources		X	
NJ Infrastructure Bank	X		Funding was used for the construction of a new water treatment plant, the replacement of another treatment plant, for the replacement of one water pipe that was the subject of repeated pipe breaks and for the installation of 800 feet of new water main.
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: Bronze

MITIGATION STRATEGY

Marlboro Township strives to improve its resilience through the use of the latest technologies, means, methods and scientific data available. The Township will continue to review and evaluate existing or emerging conditions and work with Federal, State, County and other Local agencies to develop mitigation strategies based on the hazards and threats identified. These strategies are supported through a dynamic 6 year capital plan that is used to prioritize, recommend and direct local resources towards addressing stormwater and stream corridor issues brought about by extreme rainfall events and shifting climate conditions, as well as providing system redundancy in response to disruptions to power and IT infrastructure.

Completed or Removed Actions

Action	Name	Description	Hazards Addressed	Priority	Responsible Party	Potential Funding	Cost Estimate	Time-line	Action Status	Notes
-	-	-	-	-	-	-	-	-	-	The Township has no actions that are complete or withdrawn since the last plan update.

New and Ongoing Actions

Action	Name	Description	Hazards Addressed	Priority	Responsible Party	Potential Funding	Cost Estimate	Time-line	Action Status	Notes
Action 31-1	Provide Awareness and Readiness Information on Hazards and Preparedness	Distribute timely awareness and readiness information regarding seasonal atmospheric hazards and personal preparedness and readiness guidelines.	Extreme Temperatures, Flood, Drought, Extreme Wind, Lightening, Nor'easter, Hurricane and Tropical Storm, Wildfire, Winter Storm, Tornado	High	Administration and Office of Emergency Management	Township budget	\$15,000	5+ years	Ongoing	Continuous. The Township is always finding new ways to publish information through their IT office.
Action 31-2	Provide Public Information on Emergencies	Use all forms of print and social media to provide advanced warning and notification of impending severe weather events and all incidents jeopardizing public safety (including but not limited to Reverse 911, Twitter, and Facebook accounts to provide alert	Extreme Temperatures, Drought, Nor'easter, Hurricane and Tropical Storm, Wildfire, Winter Storm	High	Administration and Office of Emergency Management	Township budget	\$10,000	5+ years	Ongoing	Continuous. The Township is always finding new ways to publish information through their IT office.

Action	Name	Description	Hazards Addressed	Priority	Responsible Party	Potential Funding	Cost Estimate	Time-line	Action Status	Notes
Action 31-3	Purchase and Install Generator at Tennent Rd. Municipal building and Water Treatment Plant and Pump Station	Installation of a generator at the Tennent Road Water Treatment Plant and Pump Station.	All Hazards, Power Failure	Medium	Engineering	FEMA HMA	\$750,000	1 year	Ongoing	Ongoing. Conversations of replacing due to age. In 1970 a generator was put in at about 1,000 KW units.
Action 31-4	Acquire, elevate, or relocate buildings and infrastructure in flood prone areas, with a focus on Repetitive Loss (RL) and Severe Repetitive Loss (SRL) properties	Work with property owners on grants available to mitigate Repetitive Loss properties. There are seven RL properties that still need mitigation.	Flood, Wave Action, Nor'easter, Hurricane and Tropical Storm, Storm Surge, Winter Storm	High	Construction Official	FEMA HMA	TBD on properties	5 + years	Ongoing	Continuous. There was one structure that the engineer was working to elevate and/or acquire.
Action 31-5	Desnag and Clean Stream Corridors within the Township	Desnagging and cleaning four streams the Township.	Flood, Hurricane and Tropical Storm	High	Township	Municipal budget	\$150,000	5 + years	Ongoing	Ongoing. Part of the tributary starts in Marlboro. This would be a desnagging and desilting. There have been talks with Trenton.
Action 31-6	Construct Flood Measure (e.g. floodwalls or small berms) along Deep Run	Use minor structural projects that are smaller and more localized (e.g., floodwalls or small berms) along Deep Run.	Flood, Hurricane and Tropical Storm	High	Township Engineering	FEMA HMA		3 years	Ongoing	
Action 31-7	Roadway improvements to mitigate roadway erosion.	Use of steel sheeting, gabion baskets rip-rap, and erosion control blankets to stabilize embankments and reduce the likelihood of roadway erosion or failure. Include drainage structures and piping where necessary to collect and discharge stormwater. Install guiderail in accordance with NJDOT guidelines	Flood, Hurricane and Tropical Storm, Nor'easter	High	Township Engineering, Monmouth County if on a county roadway	FEMA HMA, Municipal or County budget	\$2.7M	3+ years	New	