

40 – RED BANK BOROUGH

PLANNING TEAM AND PARTICIPATION

Name	Title	Participation
Thomas J. Welsh	OEM Coordinator	Point of Contact, Municipal Workshops #1 and #2
D. Haviland	Deputy OEM Coordinator	Point of Contact, Municipal Workshop #1
Shawna Ebanks	Planning Officer	Reviewed appendix
Mike Rieser	Engineer	Reviewed appendix

COMMUNITY PROFILE

Overview

The Borough of Red Bank is a popular year-round destination with a thriving fine and performing arts district, a vibrant downtown, and an eclectic dining culture. Located along the southern bank of the Navesink River, Red Bank has an area of 1.75 square miles. Several Areas of Red Bank are vulnerable to flooding with 13% of the whole municipality having greater than a 26% chance of being severely affected by flooding over the next 30 years.

Red Bank established its Red Bank Environmental Commission in 1990 to advise the mayor on environmental topics including but, not limited to, open space, parks, energy conservation, storm water management, etc. In 2017 expanded the commission to include a Green Team to help continue collaboration with Borough government.

In 2023 the Red Bank Planning Board applied to the New Jersey Department of Environmental Protection Green Acres Program for over \$1.1 million dollars in improvements to Count Basie Park including bleacher upgrades. NJDEP will announce the list of funded projects in July of 2024.

Land Use, Development, & Growth

In Red Bank, 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 76 percent of the town's total area, while forested land accounted for 2 percent each. From 2015 to 2020, the Borough experienced minimal changes in its land use.

Land Use Type	Total Acres (2015)	Total Acres (2020)	Percent Change
Agriculture	-	-	-
Barren Land	5.6	6.0	7%
Forest	24.8	23.4	-6%
Urban	1051.7	1052.9	>0%
Water	272.7	272.6	>0%
Wetlands	28.0	28.0	>0%

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

Recent Major Development and Infrastructure from 2020 to Present

Several mixed-use and multifamily development projects have been constructed in Red Bank over the past couple of decades. These projects include the Rail at Red Bank which opened in 2023 and the 10-unit multifamily structure called Shrewsbury Manor at Riverside Avenue and Allen Place. Red Bank is home to an established and vibrant performing and visual arts community. In 2021 the Count Basie Center for the Arts completed an expansion to create an arts, entertainment, and education campus spanning a full block along Monmouth Street. Red Bank remains one of the largest

cultural hubs in the County. Other arts organizations located here include the recently expanded Two River Theatre, the Art Alliance of Monmouth County, and the county's official arts agency, Monmouth Arts.

A 212-unit mixed-use facility at 176 Riverside Avenue developed by Saxum Real Estate is under construction, as is a 20-unit mixed-used facility at 170 Monmouth Street called the Standard, a 10-unit multifamily structure at 16-22 West Front Street called Southbank at Navesink, a 10-unit mixed-use building at 96-98 West Front Street called Rivermark, a 40-unit multifamily structure at 19-29 Mechanic Street called One Globe Court, a 14-unit multifamily structure called Azalea Gardens at 36 Harding Road and a 32-unit mixed-use development called Park Valley Monmouth.

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

In January of 2023, the Borough Planning Board adopted a new Master Plan, which states that Red Bank's vision is to "continue to evolve as a diverse, inclusive, and vibrant place for people of all ages and walks of life to call home as well as visit, embracing creativity and innovation while treasuring the elements that make it such a special and attractive community." Red Bank plans to achieve this vision by ensuring the Borough is "Connected," "Balanced," "Equitable" and "Prepared." Recommendations in the Master Plan include preserving residential buffers, improving existing pedestrian infrastructure, providing a diverse range of housing options, and promoting historical tourism.

Recent developments that have been approved by the Borough include a 45-unit mixed-used facility at 121 Monmouth Street, a 33-unit multifamily building called Thrive RB at 273 Shrewsbury Avenue, and a 20-unit mixed-used facility at 72 Bridge Avenue.

In December 2024, developer Denholtz Properties released its plan for the redevelopment of a number of blocks surrounding the Red Bank New Jersey Transit rail station. The plans include two six-story apartment buildings between Monmouth and Chestnut Streets. Each building would have ground-floor retail space and a parking garage for resident and public use. The plans also include a five-story apartment building between Chestnut and Leonard Streets on an area that now includes parking lots, a rail yard and a retention basin. This ground floor would also be retail space with a parking garage at its center. Altogether, there will be no more than 400 apartments with 20% of them being affordable housing. Denholtz Properties is planning for a "station square". Lastly, there are plans for two new public streets, one running from Chestnut Street to Leonard Street and another wending roughly parallel to the train tracks from Monmouth Street to Chestnut Street.

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).

Red Bank Borough has a total estimated population of 12,868. Of Red Bank's residents, nearly 6.0% are estimated to be under age 5, and nearly 21% are over age 65. The Borough saw an estimated 5.3% increase in their population over the periods between 2013-2017 and 2018-2022. With an aging population making up over twenty percent of their total community, Red Bank 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. A population growth of over five percent between two recent survey periods may highlight potential local

vulnerabilities related to shifts in the local built environment (see ongoing mixed-use and residential development plans, above) and a risk of densification with further hazard impacts.

Within the Borough, five block groups are identified as potentially vulnerable due to overburden (OBC); one due to *Low Income* community vulnerabilities, two due to *Low Income and Minority* overburden, two due to *Minority* overburden, and one due to *Low Income, Minority, and Limited English* OBC criteria. There is one census tract identified as potentially vulnerable according to CEJST definitions involving *Housing, Water and Wastewater, and Workforce Development* criteria. There are no areas of the Borough which have been identified under CDRZ definitions.

Demographics Summary	
Total Population (2018-2022 ACS 5-year Estimates)	12,868
Population Change since 2017	5.3%
Percent of Population Age < 5	6.0%
Percent of Population > 65	20.9%

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 for each hazard is located in Section 4.0.

Hazard Ranking

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

Hazard Ranking Explanation

Extreme winds remain a medium level of concern; there is one area where high-wind destruction tends to occur. Nor'easters are a high level of concern; a rain burst came through in January 2022. Straight-line winds affected Red Bank in Spring 2021. Coastal erosion remains a concern in a couple of areas. Landslides have risen from not applicable to a medium level of concern, with two incidents occurring in recent years – one at Tower Hill and one at Williams Street. Power failures have also increased from a low to a medium level of concern due to wind, rain, snow, downed trees, and outdated equipment.

Significant Hazard Events Since Last Plan Update

The primary hazard events since the last plan update have been related to flooding. In June 2024, the Borough experienced flash flooding. In December 2023, a storm caused significant flooding. Water Street, part of Route 35, has flooded multiple times since 2021. Locations that frequently flood with high tides include the parking lot of 100 Chapin Avenue, a nursing home; the primary school at 222 River Street; the marinas on Locust Avenue and by Riverview Medical Center; and Madison Avenue and South Street.

Climate Change Impacts on Extent and Magnitude of Hazards

Climate change is anticipated to significantly affect the risks and hazards faced by the Borough of Red Bank. As global temperatures continue to rise, the frequency and intensity of extreme weather events such as hurricanes, nor'easters, and heavy rainfall are expected to increase. This will exacerbate flooding, particularly in areas already susceptible to such events, such as the Navesink River and its tributaries, which encompass a significant portion of Red Bank. The borough's extensive development within the 1% and 0.2% annual chance flood zones indicates that a considerable portion of its built environment is at heightened risk. Additionally, sea level rise, projected to reach up to 5 feet, will further increase the vulnerability of coastal and low-lying areas, leading to more frequent and severe flooding events.

Furthermore, climate change is expected to result in more intense and prolonged heatwaves, which can strain local infrastructure and pose health risks, especially to vulnerable populations such as the elderly. The increased occurrence of extreme weather events will likely disrupt economic activities and critical services, as exemplified by Hurricane Sandy, which caused significant damage to municipal buildings and infrastructure.

RISK ASSESSMENT

National Flood Insurance Program (NFIP) statistics

Red Bank Borough	
Initial FIRM Date	5/19/81
Effective FIRM Date	6/15/2022
Number of Policies In-Force:	41
Total Losses:	35
Total Payments:	\$4,861,798.32
Number of RL Properties:	3
Number of Mitigated RL Properties:	0
RL – Total Losses:	8
RL – Total Paid:	\$1,487,368.59
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

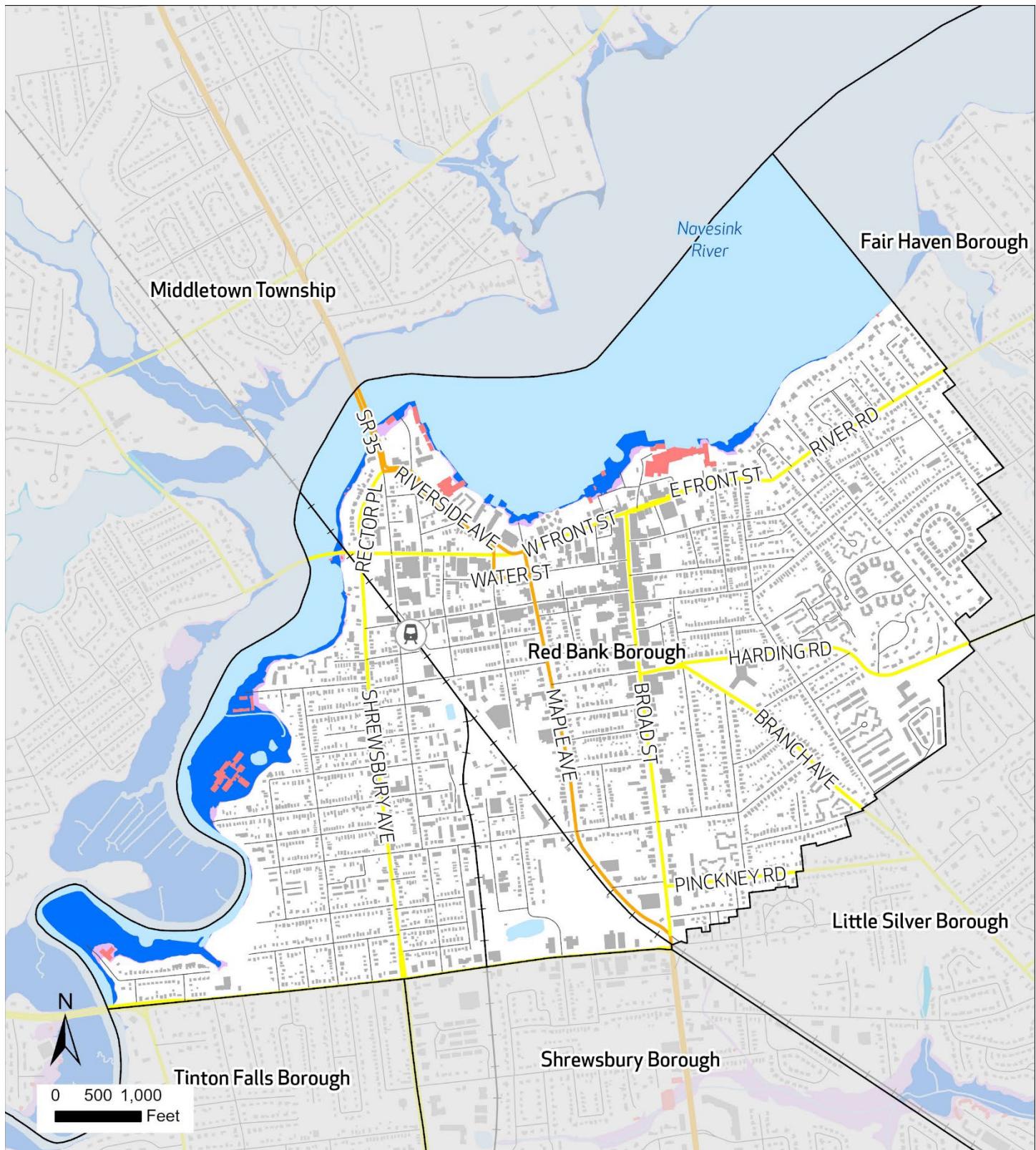
The Special Flood Hazard Area (SFHA) in the Borough of Red Bank is primarily located adjacent to the main waterbody of the borough, the Navesink River. Approximately 5.1 percent of the total land area of Red Bank lies within the 1% annual chance flood zone as defined by FEMA. An additional 0.6 percent of the area of the municipality is in the 0.2% annual chance flood zone.

About 93.8 percent of Red Bank is considered developed. Of the developed parcels of the town, 3.3 percent fall within the 1% annual chance flood zone and 0.6 percent are within the 0.2% annual chance flood zone. This illustrates that development in the municipality has generally occurred in line with overall flood risk.

	Percentage in the 1% Floodplain	Percentage in the 0.2% Floodplain	Five Feet Sea Level Rise
Developed Parcels	3.3%	0.6%	4.7%
Exposed Land Area	5.1%	0.6%	4.0%

During the planning process, Red Bank 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 24 total facilities. Of these facilities, two are within the floodplain. The facilities are categorized under the Safety and Security community lifeline type. Examples of Safety and Security lifelines include police stations and other government services.

Community Lifeline Type	Number in the 1% Floodplain	Number in the 0.2% Floodplain	Number within 5 feet of Sea Level Rise
Safety and Security	2	-	-



Flood Risk

Red Bank Borough

FEMA Flood Zone

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

State Routes

County Routes

Local Roads

Rail Lines

NJ Transit Rail Station

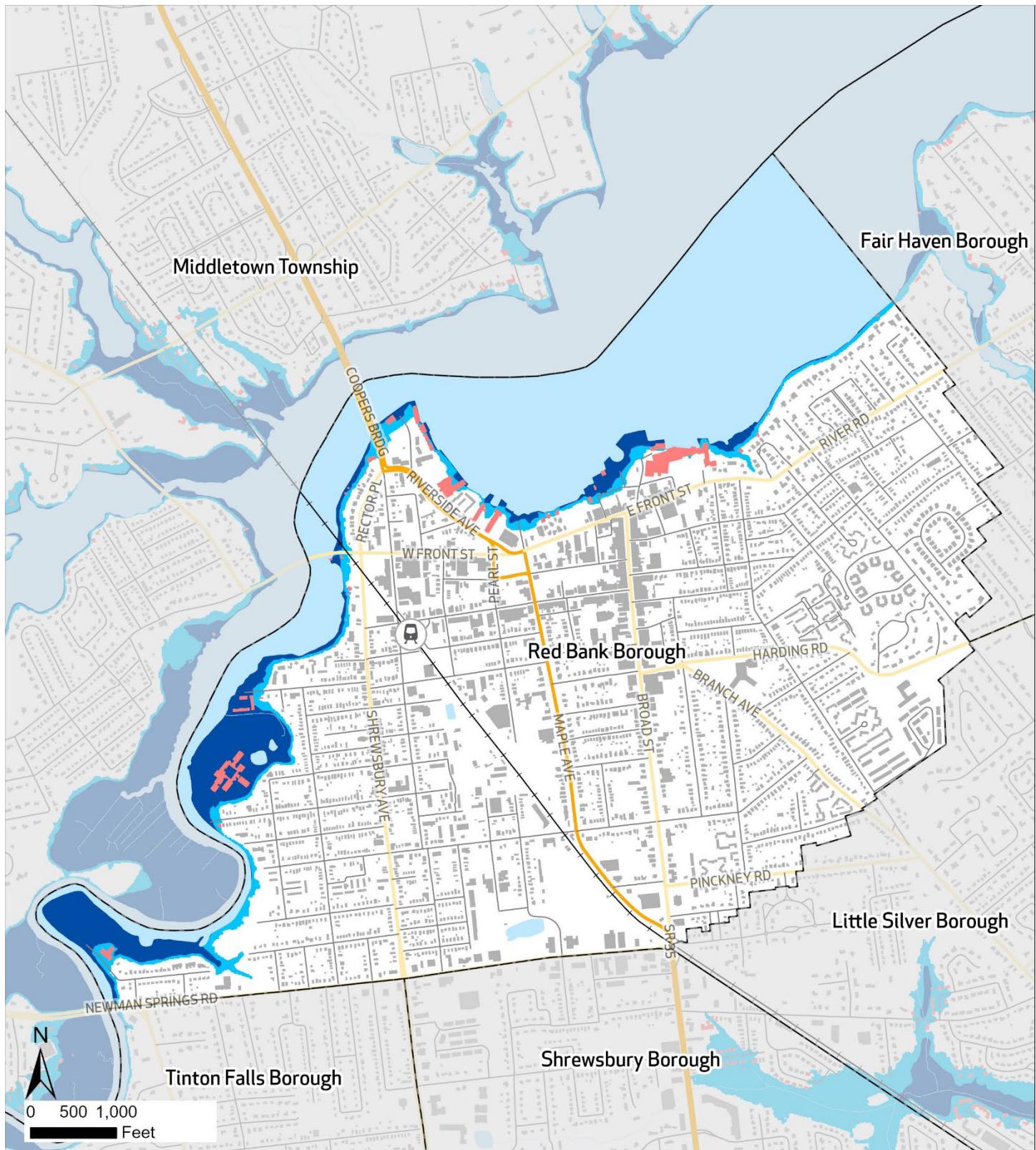
Municipal Boundaries

Building Footprints

Building Footprints within Floodplain

Water

Source: FEMA NJDEP, NJOIT, NJTransit



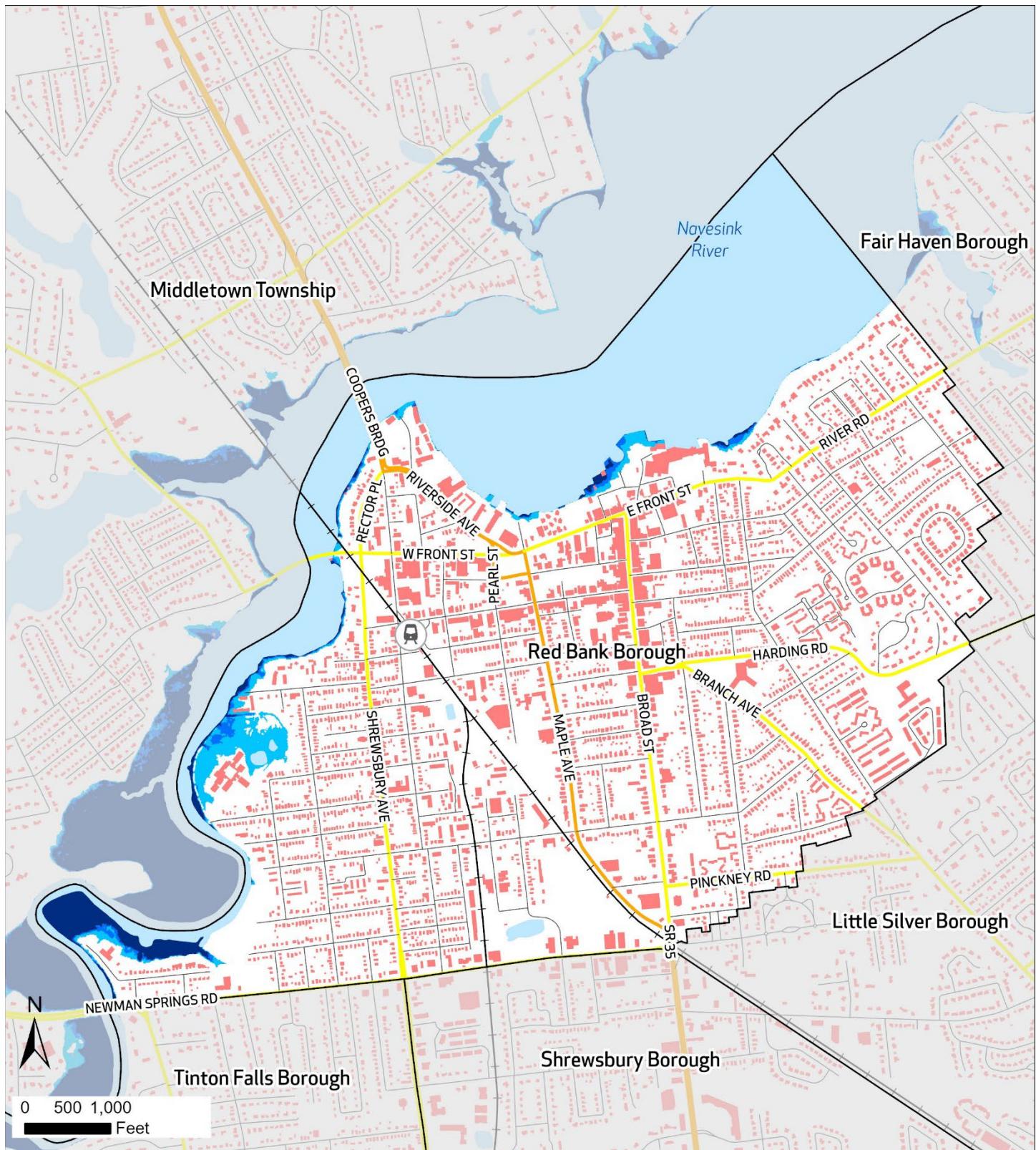
NJ Inland Design Flood Elevation Red Bank Borough

FEMA Flood Zone
 Current Base Flood Elevation (1%)
NJ Inland Design Flood Elevation
 FEMA BFE (1%) plus 3 Feet

— State Routes
 County Routes
— Local Roads
— Railroad
 NJ Transit Rail Station

— Municipal Boundaries
 Water
 Department of Defense Land
 Building Footprints
 Building Footprints within IDFE

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



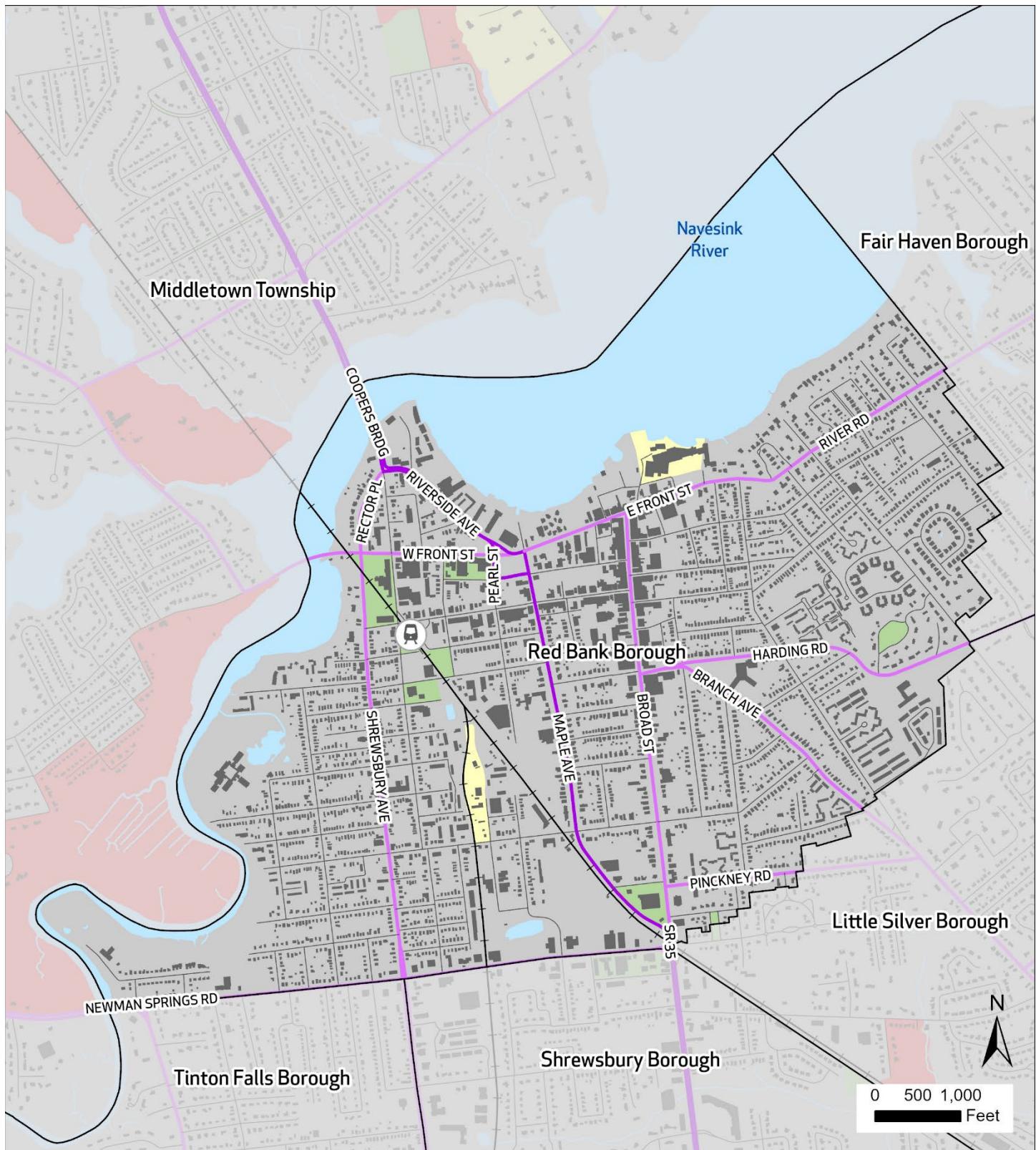
Permanent Inundation Under Sea Level Rise (SLR) Scenarios

Red Bank Borough

- 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
- NJ Transit Rail Station

- Municipal Boundaries
- Building Footprint
- Water

Source: NOAA, NJDEP, NJOIT, NJTransit



Wildland Urban Interface (WUI) Classification	Intermix	State Routes	Municipal Boundaries
Red Bank Borough	High or Medium Density Housing	County Routes	Building Footprint
	Low or Very Low Density Housing	Local Roads	Water
	No Housing	Rail Lines	
		NJTransit Rail Station	

Source: USFS, NJDEP, NJOIT, NJTransit

CAPABILITY ASSESSMENT

Planning & Regulatory Capabilities

Red Bank 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		2023	
Capital Improvement Plan	X		1/11/2024	Budgets funding for capital improvements that
Local Emergency Operations Plan/Continuity of Operations Plan	X			
Floodplain Development Ordinance	X		6/8/2022	Promotes the public health, safety and general welfare and to minimize public and private losses due to flood conditions in specific flood hazard areas through the establishment of comprehensive regulations for management of flood hazard areas
Floodplain Management Plan		X		
Stormwater Management Ordinance	X		7/11/2024	
Stormwater Management Plan			6/4/2007	Outlines the Borough's approach to address the impacts from stormwater issues associated with future development, redevelopment and land use changes.
Watershed Management Plan	X			Watershed Improvement Plan – Phase I to be adopted by 1/1/26
Sheltering Plan	X			
Evacuation Plan	X			
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			
Community Wildfire Protection Plan	X			
Climate Adaptation Plan	X			
Other Plans that discusses hazard mitigation	X			Red Bank Marine Park Plan (2019) Areas in Need of Rehabilitation Map Impervious Cover Reduction Action Plan for Red Bank (2017) Tree Management Plan (2016-2020) NJ FRAMES
Other ordinance and regulation that mitigate the impacts of natural hazards	X			Tree Removal Ordinance (2024)

Administrative and Technical Capabilities

Red Bank Borough has the following Administrative and Technical capabilities:

Position	Yes	No	Explanation
Floodplain Administrator	X		
Grant Writer	X		Millennium Strategies
Staff trained to support mitigation		X	
Existing mutual aid or technical assistance agreements to support hazard mitigation projects		X	
Non-governmental organizations/other partners		X	

Position	Yes	No	Explanation
that work with the municipality on mitigation projects			
Organizations that work with socially vulnerable or underserved populations	X		

Education and Outreach Capabilities

Red Bank Borough has the following Education and Outreach capabilities:

Education & Outreach Capability	Yes	No	Explanation
Communicate natural and human-based hazards to the public	X		The Borough website has a Hazard Mitigation Planning and Emergency Management webpage with Register Ready information and several forms for residents.
StormReady	X		
Firewise USA	X		
Severe Weather Awareness Week	X		
Community Rating System (CRS)	X		

Financial Capabilities

Within the last five years, Red Bank 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: Silver

MITIGATION STRATEGY

Overview and Progress Since Last Plan Update

The Borough of Red Bank is going through multiple development projects regarding residential and commercial construction. Critical infrastructure including Borough facilities are being addressed by the Engineer as these projects are proposed and approved. Over the next 5 years Red Bank anticipates the area at marine park will be transformed into a space on the river that is pedestrian and more family useable once the parking is removed from that area. Grading and hardscape will further address any flood prone areas. The Borough of Red Bank is looking forward to completing a plan for the use of the Senior Center at 90 Shrewsbury Ave. as a temporary shelter if needed.

Completed or Removed Actions

Action	Name	Description	Hazards Addressed	Priority	Responsible Party	Potential Funding	Cost Estimate	Time-line	Action Status	Notes
No actions were completed 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
40-1	Acquire, elevate, or relocate buildings and infrastructure in flood prone areas, with a focus on Repetitive Loss (RL) and Severe Repetitive Loss (SRL) properties	At the discretion of facility owners, encourage mitigation activities for at-risk properties, specifically Repetitive Loss (RL) and Severe Repetitive Loss (SRL) properties, including: (a) removal of existing structures from flood hazard areas; (b) elevate	Flood, Nor'easter, Hurricane and Tropical Storm, Storm Surge	High	The borough needs to identify the position title of a party responsible for moving forward with this activity.	FEMA HMA	TBD	5 + years	Ongoing	
40-2	Implement Stormwater Management Maintenance Plan	Perform regular sediment and debris clearance to help ensure that the system is kept unimpaired and therefore functioning properly.	Flood, Nor'easter, Hurricane and Tropical Storm	Medium	DPW	Municipal budget	\$150,000	1 year	Ongoing	
40-3	Evaluate Water and Sewer Infrastructure and Make Improvements as Needed	Maintain inadequate and decomposing materials and increase capacity where applicable.	Flood, Nor'easter, Hurricane and Tropical Storm	Medium	DPW	Municipal budget	\$10M	1 year	Ongoing	

Action	Name	Description	Hazards Addressed	Priority	Responsible Party	Potential Funding	Cost Estimate	Time-line	Action Status	Notes
40-4	Coordinate with Red Bank Primary School on Flood Mitigation Strategies	Work with the Board of Education on coming up with a plan to addressing the flooding issues. Examples of mitigation can include flood proofing or elevations.	All Hazards	Medium	Board of Education, Borough	Municipal budget	Staff time	2 years	Ongoing	There is ongoing coordination but not regarding flood mitigation.
40-5	Coordinate with Chapin Hill Nursing Home on Mitigation Strategies to Address Flooding, including partnering with the Salvation Army	Coordinate with the Chapin Hill Nursing Home (100 Chapin Ave.) to mitigate the facility's flooding issue. During Hurricane Irene, the Borough coordinated with the Nursing Home and the Salvation Army to partner together for evacuations and shelters.	Flood, Wave Action, Nor'easter, Hurricane and Tropical Storm, Storm Surge	Medium	Hackensack Meridian Health, Borough	Municipal budget	Staff time	5 + years	Ongoing	There is a formal agreement between Chapin Hill and the Salvation Army on recovery.
40-6	Implement Impervious Cover Reduction Action Plan	Implement green infrastructure practices listed in Rutgers' Impervious Cover Reduction Action Plan for Red Bank (2017).	Flood, Nor'easter, Hurricane and Tropical Storm, Storm Surge, Winter Storm	Medium	Borough of Red Bank	Municipal budget	TBD	5 + years	Ongoing	Recently, a development with green infrastructures was approved.
40-7	Establish a Tree Trimming Program and Create a Wind Shield Survey	Through the Borough's existing Shade Tree Committee, establish a tree trimming program and create a Wind Shield Survey for public inventory.	Extreme Wind, Lightening, Nor'easter, Hurricane and Tropical Storm, Wildfire, Tornado	Medium	Shade Tree Committee, Borough Administrator, DPW	Municipal budget	Staff time	5 + years	Ongoing	A tree trimming program was established, and a new tree trimming truck was acquired. On an ongoing basis, a survey of the borough is done to see what might need trimmed soon.
40-8	Construct Flood Measure (e.g. floodwalls or bulkhead) along the Navesink River	Construct Flood Measure (e.g., floodwalls or bulkhead) along the Navesink River, which causes repetitive flooding to critical facilities.	Flood, Lightening, Nor'easter, Hurricane and Tropical Storm, Storm Surge	High	Borough	FEMA HMA	TBD	3 years	Ongoing	Marino Park

Action	Name	Description	Hazards Addressed	Priority	Responsible Party	Potential Funding	Cost Estimate	Time-line	Action Status	Notes
40-9	Rebuild/Reconfigure DPW site to mitigate flooding from train tracks.	The current DPW Garage is currently at the treatment plant, which floods 2-3 times a year from stormwater runoff (from railroad tracks). If there is funding available, the Borough needs to floodproof and rebuild the DPW site.	Flood	Medium	Borough of Red Bank	Borough budget, FEMA HMA if elevation is involved.	\$5M	5 years	New 2026	