

## 29 – MANALAPAN TOWNSHIP

### PLANNING TEAM AND PARTICIPATION

| Name                 | Title                  | Participation                           |
|----------------------|------------------------|---|
| Rick Hogan           | OEM Coordinator        | Point of Contact, Municipal Workshop #1 |
| Brian Boccanfuso, PE | Township Engineer      | Reviewed appendix                       |
| Tara Lovrich         | Township Administrator | Reviewed Document Before Submission     |

### COMMUNITY PROFILE

#### Overview

With its name derived from the Lenni Lenape phrase meaning “land of good bread,” the Township of Manalapan encompasses 30.85 square miles of land area in the western portion of Monmouth County, including over 1,480 acres in preserved farmland. Manalapan is home to notable landmarks that include the headquarters of the Monmouth County Library System, Old Tennent Church, and the Manalapan Recreation Center. The municipality has two major roadways within its boundaries: State Highway 9 and Highway 33. The Rt-9 at Gordon's Corner NJ Transit bus stop is on the northbound side of Rt-9 across from Willow Grove Way. Routes accessible from this location include Bus, 64, 67, 132, and 139.

#### Land Use, Development, & Growth

In Manalapan, 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 52 percent of the town’s total area, while wetlands, forested land, and farmland made up 24 percent, 13 percent and 10 percent respectively. From 2015 to 2020, there was a marginal increase of 61 acres in the Township’s urban or developed land, which was accompanied by a decrease of 36.5 acres in forested land and 18 acres in wetlands.

| Land Use Type | Total Acres (2015) | Total Acres (2020) | Percent Change |
|---------------|--------------------|--------------------|----------------|
| Agriculture   | 2016.4             | 2017.9             | >0%            |
| Barren Land   | 48.6               | 40.4               | -17%           |
| Forest        | 2593.0             | 2556.5             | -1%            |
| Urban         | 10221.1            | 10281.9            | 1%             |
| Water         | 181.8              | 181.8              | >0%            |
| Wetlands      | 4702.2             | 4684.5             | >0%            |

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

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

In December 2021, the Township Committee adopted a redevelopment plan for a 225-acre parcel of land along Route 33 to allow warehouses and indoor recreation centers as permitted uses.

The Township's Reexamination Report acknowledges the loss of open space, woodlands, landmarks, scenic areas, natural habitat areas, and farmland to development. In 2023 Manalapan was awarded \$27,000 under the Monmouth County Municipal Park Improvement Program for Thompson Grove trail improvements.

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

Manalapan Crossing, one of the largest development projects approved in recent memory, was approved by the Township’s Planning Board at the intersection of Highway 33 and Millhurst Road. The project includes 200,000 square feet of retail, restaurant, and office space, 280 age-restricted single-family residential homes, non-age restricted affordable apartments, and an array of site amenities for residents and visitors. Another affordable housing complex named The Place at Manalapan was approved in late 2021 and will provide 102 affordable apartments along Highway 33.

## 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 Manalapan has a total estimated population of 40,639. This population is made up of an estimated 4.5% of residents under age 5 and 17.1% of residents over age 65. The Township experienced moderate growth between the ACS survey periods of 2013-2017 and 2018-2022, with an estimated 1.4% increase in total population. With an aging population making up over seventeen percent of their total community, Manalapan 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.

Manalapan has one block group in its far northeast meeting criteria for potential overburden (OBC) based on community Low Income characteristics. In this same location, a census tract is identified under CEJST criteria, noted as potentially vulnerable due to Workforce Development vulnerabilities. There are no parts of the Township meeting criteria for identification under CDRZ.

| Demographics Summary                                     |        |
|--|--------|
| <b>Total Population (2018-2022 ACS 5-year Estimates)</b> | 40,639 |
| <b>Population Change since 2017</b>                      | 1.4%   |
| <b>Percent of Population Age &lt; 5</b>                  | 4.5%   |
| <b>Percent of Population &gt; 65</b>                     | 17.1%  |

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          |
|---------------------------|---------------------------|--------------|
| <b>Natural Hazards</b>    |                           |              |
| Nor'easter                | Extreme Temperatures      | Lightning    |
| Flood                     | Extreme Wind              |              |
|                           | Hurricane/ Tropical Storm | Drought      |
|                           | Tornado                   | Earthquake   |
|                           | Winter Storm              | Wildfire     |
|                           | Dam Failure               |              |
| <b>Human-made Hazards</b> |                           |              |
|                           | Cyber Attack              | Civil Unrest |

| High | Medium              | Low           |
|------|---------------------|---------------|
|      | Economic Disruption | Power Failure |
|      | Terrorism           | Pandemic      |

## Hazard Ranking Explanation

Manalapan Township continues to be at a medium threat for terrorism and dam safety. An overview of Manalapan community indicates that there are no commercial or residential infrastructures that would be considered a high threat. The Township's emergency action plan for Manalapan Brook Pond Dam is on file with the Municipal Engineers office and NJ Department of Environmental Protection. Dam safety inspections are regularly conducted by those agencies.

## Significant Hazard Events Since Last Plan Update

No significant hazards have occurred in the last five years; however, Pine Brook continues to cause repetitive flooding within the Township.

## Climate Change Impacts on Extent and Magnitude of Hazards

Climate change is expected to significantly impact the risks and hazards faced by Manalapan Township. As global temperatures rise, the frequency and intensity of extreme weather events such as hurricanes, nor'easters, and extreme temperatures are likely to increase. This will exacerbate existing vulnerabilities, particularly in flood-prone areas. The Township's Special Flood Hazard Area, which already encompasses 8% of its total area, may see more frequent and severe flooding events, leading to greater damage to infrastructure and increased displacement of residents. Additionally, the aging population in Manalapan, with 17.1% of residents over age 65, may face heightened risks during extreme weather events due to mobility issues and limited access to resources. Climate change will likely lead to more prolonged periods of drought and heatwaves, which can strain water resources and increase the risk of wildfires.

## RISK ASSESSMENT

### National Flood Insurance Program (NFIP) statistics

| Manalapan Township                  |                |
|-------------------------------------|----------------|
| Initial FIRM                        | 7/20/1973      |
| Effective FIRM                      | 9/15/1977      |
| Number of Policies In-Force:        | 95             |
| Total Losses:                       | 93             |
| Total Payments:                     | \$1,423,201.68 |
| Number of RL Properties:            | 8              |
| Number of Mitigated RL Properties:  | 0              |
| RL – Total Losses:                  | 20             |
| RL – Total Paid:                    | \$418,669.46   |
| Number of SRL Properties:           | 1              |
| Number of Mitigated SRL Properties: | 0              |
| SRL – Total Losses:                 | 4              |
| SRL – Total Paid:                   | \$190,437.75   |

Source: FEMA Policy and Loss Data, August 2024

## Vulnerability of the Built Environment

The Special Flood Hazard Area (SFHA) in the Township of Manalapan is primarily located adjacent to the many creeks and brooks which pass through town. Approximately 8.0 percent of the total area of Manalapan lies within the 1% annual

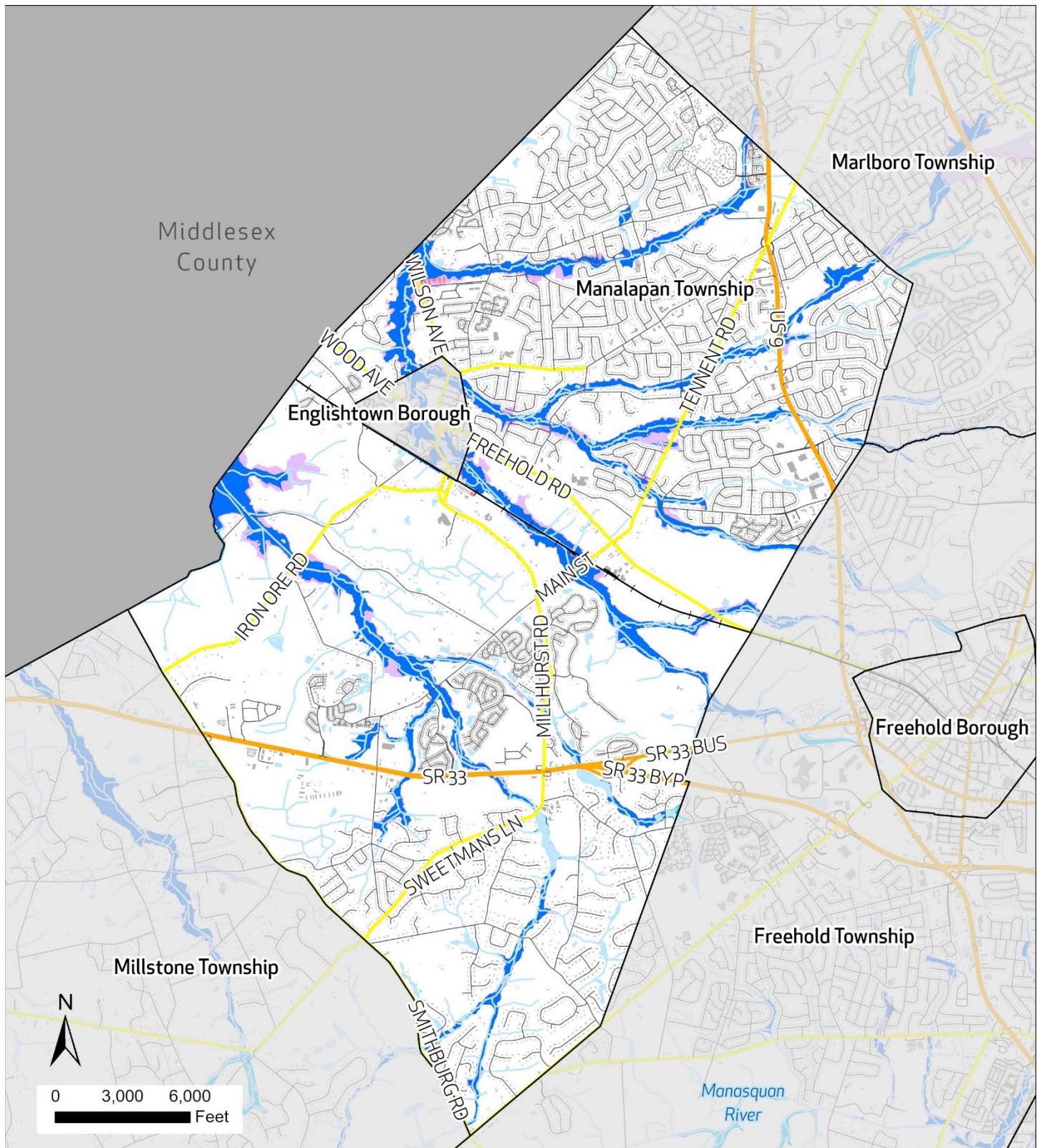
chance flood zone as defined by FEMA. An additional 1.7 percent of the area of the municipality is in the 0.2% annual chance flood zone.

About 75.7 percent of Manalapan is considered developed. Of the developed parcels of the town, 5.4 percent fall within the 1% annual chance flood zone and 0.8 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 | 5.4%                            | 0.8%                              | NA                       |
| Exposed Land Area | 8.0%                            | 1.7%                              | NA                       |

During the planning process, Manalapan 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 65 total facilities. Of these facilities, six are located within the floodplain. All six are Water Systems community lifelines, examples of which include dams and water treatment plants.

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



## Flood Risk

### Manalapan Township

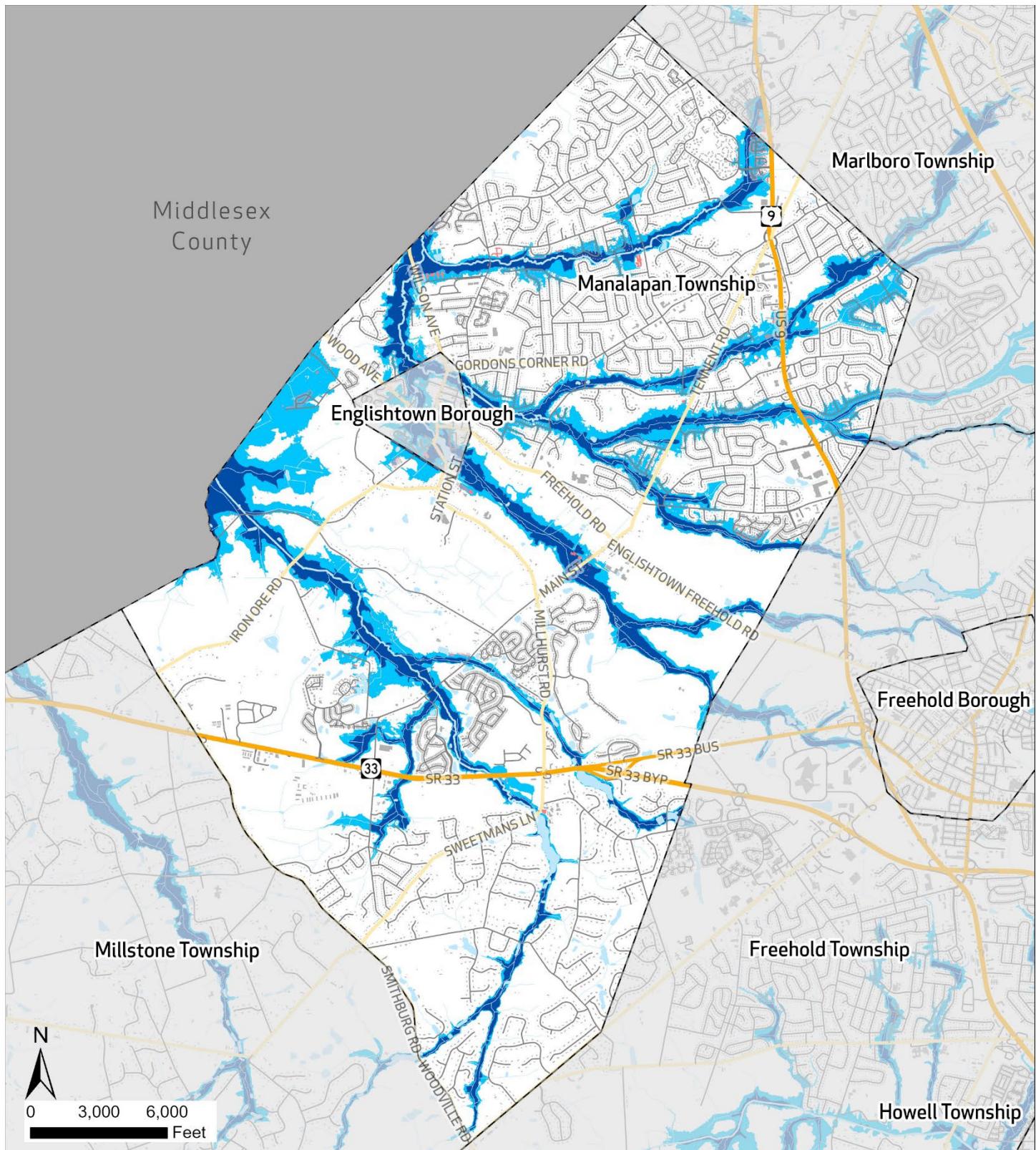
**FEMA Flood Zone**

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

- State Hwy
- 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

### Manalapan Township

**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  
— State Hwy  
— Railroad

Municipal Boundaries  
— Water  
 Building Footprints  
— Building Footprints within IDFE

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



**Wildland Urban Interface (WUI) Classification**  
Asbury Park City

- High or Medium Density Housing
- Low or Very Low Density Housing
- No Housing
- State Routes
- County Routes
- Local Roads
- Rail Lines
- NJ Transit Rail Station

- Municipal Boundaries
- Building Footprint
- Water

Source: USFS, NJDEP, NJOIT, NJTransit

## CAPABILITY ASSESSMENT

### Planning & Regulatory Capabilities

Manalapan 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   |    | 2009                |   |
| Capital Improvement Plan  |     | X  |                     |   |
| Local Emergency Operations Plan/Continuity of Operations Plan               |     | X  |                     |   |
| Floodplain Development Ordinance  | X   |    | 7/2022              | Controls development in the floodplain  |
| Floodplain Management Plan  |     | X  |                     |   |
| Stormwater Management Ordinance   | X   |    | 7/2024              | Ensures that stormwater runoff and other stormwater impacts of development are managed consistent with state regulations and other applicable standards |
| Stormwater Management Plan  | X   |    | 7/2008              | Improve water quality and reduce the risk of flooding   |
| Watershed Management Plan   |     | X  |                     |   |
| 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  |                     |   |
| Other ordinance and regulation that mitigate the impacts of natural hazards |     | X  |                     |   |

### Administrative and Technical Capabilities

Manalapan Township has the following Administrative and Technical capabilities:

| Position   | Yes | No | Explanation       |
|--|-----|----|-------------------|
| Floodplain Administrator   | X   |    | Township Engineer |
| Grant Writer   |     | X  |                   |
| 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

Manalapan 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 has a Emergency Management Council & Annex Sub-Committee with links to emergency checklists. |
| StormReady  |     | X  |   |
| Firewise USA  |     | X  |   |
| Severe Weather Awareness Week                             |     | X  |   |
| Community Rating System (CRS)                             |     | X  |   |

## Financial Capabilities

Within the last five years, Manalapan 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  |             |
| 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:

## MITIGATION STRATEGY

### Overview and Progress Since Last Plan Update

Following Manalapan Township's last plan update, municipal staff has continued its focus on the Special Flood Hazard Areas, which are primarily adjacent to brooks, creeks & other waterbodies. The Township's mitigation strategies to reduce the impact of potential flooding conditions are as follows: a) inspection of streams, brooks, other waterbodies and storm water outfalls to identify obstructions and confirm flow; b) removal of obstructions when permitted by state guidelines; c) examination and maintenance of municipal detention and retention basins to control storm water runoff as originally designed; d) enforcement of its floodplain management and storm water management ordinances to ensure compliance with corresponding county, state and federal regulations, thereby reducing flood risk and adverse downstream impacts; and e) cooperation and communication with the NJDEP relative to compliance with its land use regulations, including but not limited to the Freshwater Wetlands Protection Act Rules and the Flood Hazard Area Control Act.

### Completed or Removed Actions

| Action | Name  | Description  | Hazards Addressed                               | Pri-<br>ority | Responsible Party                   | Potential Funding | Cost Estimate                              | Time-line | Action Status | Notes   |
|--------|---|--|---|---------------|-------------------------------------|-------------------|--|-----------|---------------|---|
| 29-01  | Acquire Flood-prone Properties Along Birmingham Drive | Purchase properties along Birmingham Drive for the purposes of removing the structures which are located in Pine Brook Floodplain. | Flood, Nor'easter, Hurricane and Tropical Storm | High          | Township Administrator and Engineer | FEMA HMA          | State Blue Acres Program<br>No cost to Twp | 1 year    | Completed     | Completed; preexisting flood-prone dwellings on acquired properties have been demolished. |

### New and Ongoing Actions

| Action | Name   | Description   | Hazards Addressed | Pri-<br>ority | Responsible Party                 | Potential Funding        | Cost Estimate | Time-line | Action Status | Notes |
|--------|--|---|-------------------|---------------|-----------------------------------|--------------------------|---------------|-----------|---------------|-------|
| 29-02  | Active Shooter Training and Shelters   | Implement an active shooter training at schools and municipal offices and create a shelter for children and staff to take refuge in a moment of crisis. | Terrorism         | Mediu<br>m    | Police Chief                      | Homeland Security grants | Staff time    | 2 years   | Ongoing       |       |
| 29-03  | Target Harden Critical Facilities by Installing Surveillance Cameras, an Access Control System, Security Gates, and/or Bulletproof Glass | Purchase security gates, bulletproof glass, security cameras, and Access Control Systems to target harden against terrorist attack.                     | Terrorism         | Mediu<br>m    | Police Chief and Local Businesses | Homeland Security grants | TBD           | 2 years   | Ongoing       |       |

| Action | Name  | Description   | Hazards Addressed                               | Pri-<br>ority | Responsible Party            | Potential Funding  | Cost Estimate       | Time-line | Action Status | Notes  |
|--------|---|---|---|---------------|------------------------------|--|---------------------|-----------|---------------|--|
| 29-04  | Acquire, elevate, or relocate buildings and infrastructure in flood prone areas, with a focus on Repetitive Loss (RL) and Severe Repetitive Loss (SRL) properties | Coordinate with residents to mitigate RL/SRL properties through structure elevation, demolition to open space, or other type of mitigation. | Flood, Nor'easter, Hurricane and Tropical Storm | High          | Township and Property Owners | FEMA HMA   | TBD on the property | 5 + years | Ongoing       |  |
| 29-05  | Repair, Remove, or Rehabilitate the Millhurst Lake Dam  | Repair, remove, or rehabilitate the Millhurst Lake Dam along the Manalapan Brook.   | Dam Failure                                     | High          | Manalapan Township           | Municipal budget, NJDEP Bureau of Dam Safety and Flood Control | TBD                 | 3 years   | Ongoing       | Emergency Action Plan prepared in 2016 to mitigate dam failure for Millhurst Lake Dam. |