



## Appendix 9: Borough of Metuchen

The Borough of Metuchen participated in the 2015 Middlesex County Hazard Mitigation Plan (HMP) update. This appendix includes the locally-specific information about the Borough. The following sections detail the planning process and participants; the current population, building stock, and land development trends; hazards that specific to the Borough and corresponding risk assessments; the Borough’s mitigation strategy, and a local capability assessment.

### 1. Plan Development

After the County submitted its Planning Grant Funding application on 2/10/2014, the OEM Coordinator signed an “Intent to Participate” letter and became the point of contact for the HMP update. There was turnover in staff during this plan update. The Borough formed the Local Planning Committee, as listed below. The local planning committee worked to gather the necessary information to support the plan update, worked with the plan consultant through e-mail and interviews, and reviewed all drafts of the plan.

**Table 9-1: Borough of Metuchen Local Planning Committee Members**

Name	Title	Organization
Ron Donnan	Fire Chief/OEM Coordinator	Borough of Metuchen
Gene Mullen	Deputy Coordinator	Borough of Metuchen
Jennifer Maier	Business Administrator	Borough of Metuchen



## 2. Community Profile

### 2.1 Physical Location

The Borough of Metuchen has a total area of 2.77 square miles and is located in the north-central region of Middlesex County, New Jersey. It is surrounded on all sides by Edison Township. Primary transportation routes include Route 27 and County Route 531, and I-287 runs east-west along Metuchen's southern border. New Jersey Transit provides bus service, and the Metuchen Train Station is served by NJ Transit's Northeast Corridor Line.

#### 2.1.1 Hydrography and Hydrology

The Borough of Metuchen is distributed among three drainage areas. In the northwest, the Borough drains to the Bound Brook. There are a few small headwater tributaries of the Bound Brook that originate within the Borough. The Southeastern area of the Borough drains down to the Mill Brook in Edison Township. A small stretch of the Mill Brook crosses into Metuchen. In the northeastern corner, the Borough drains into the South Branch of the Rahway subwatershed. There are no mapped tributaries within the Borough in this area.

### 2.2 History and Governance

The Borough of Metuchen was formally incorporated on March 20, 1900, from what is now Edison Township. The Borough is governed under the Borough form of government, and has an elected Mayor and six Council members. The Mayor is elected directly to a four-year term of office. Town Council members are elected to serve three-year terms on a staggered basis, with two seats coming up for election every year. The Borough Council holds monthly meetings open to the public where it discusses legislation under consideration.

### 2.3 Demographics

#### 2.3.1 Population Trends

According to the U.S. Census Bureau, the population in 2010 was 13,574.<sup>1</sup> This is a 5.7% increase from 2000. The Borough of Metuchen has a population density of 4,910.4 persons per square mile. It is the 9th densest municipality within the County. A summary of major population and household characteristics may be found in the following tables.

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<sup>1</sup> U.S. Bureau of the Census. American Fact Finder "Metuchen Borough, NJ". <http://factfinder.census.gov/>. Retrieved 9/8/15.



**Table 9-2: Borough of Metuchen Population Summary Estimates (2010 Census)<sup>2</sup>**

Population	Quantity	Percent of Municipal Population
Total Population	13,574	100
Median Age	41.1	N/A
17 years and under	3,282	24.2
65 years and over		13.8
<b>Race</b>		
White	10,577	77.9
Black/African-American	662	4.9
Native American/Alaskan Native	10	0.1
Asian	1,759	13.0
Native Hawaiian/Pacific Islander	3	0.0
Other Race (unspecified)	189	1.4
Two or More Races	374	2.8
Hispanic or Latino	935	6.9

Population statistics may further reveal potential vulnerabilities in the community. The following table details the distribution of two groups included in vulnerable population analyses (children and the elderly) according to household description. Residents living alone, particularly the elderly, may have fewer coping mechanisms and resource than those in household groups, therefore may constitute a demographic that could require assistance in mitigating their vulnerability.

**Table 9-3: Borough of Metuchen Household Characteristics Summary Estimates (2010 Census)<sup>3</sup>**

Households	Quantity	Percent of Total
Total Households	5,243	100
Family Households (related)	3,744	7.4
Family Households w children under 18	1,762	33.6
Non-Family Households (unrelated)	1,499	28.6
Non-Family Households, living alone	1,254	23.9
Non-Family Households, living alone Male over 65 years	117	2.2
Non-Family Households, living alone Female over 65 years	402	7.7

### 2.3.2 Vulnerable Populations

Vulnerable populations include those groups that may require special assistance, considerations, accommodation or other needs during emergency events to facilitate their effective and safe compliance with emergency instructions. This includes, but is not limited to, those individuals needing mobility assistance (strollers, wheelchairs, etc.), those with financial needs (cannot afford hotel rooms, food, necessities, during evacuation periods, etc.), those requiring translation or interpretation services

<sup>2</sup> Ibid. 1,879

<sup>3</sup> Ibid.



to understand emergency information (non-English-speaking populations, Deaf and hard of hearing), persons considered legal minors, those persons with cognitive impairments, persons with specialized medical needs (electric dependent equipment, refrigerated medications, use of Personal Assistants for routine and basic care, medical transportation needs, etc.), and populations with social disadvantages other needs that may require unique considerations during emergency events.

Identifiable vulnerable populations in Metuchen include (but may not be limited to) the following:

**Table 9-4: Borough of Metuchen Vulnerable Population Estimates (2010)**

Population Type	Population Estimate (2010 Census) <sup>4</sup>
Under 5 years of age	869
Under 18 years of age	3,282
Over 65 years of age	3,282
Limited English Proficiency (LEP)	695 (equals 5.4% of population over 5 years old)
Institutionalized	0
Living in Group Quarters	1

In addition to these statistics, approximately 3.5% of the population lives below the poverty line. The mean household income is \$126,383, with the per capita income at approximately \$49,239 (2013 estimates).<sup>5</sup>

## 2.4 Land Use and Development

The Borough is a developed community with over 90 of its land area classified as urban by NJDEP. There is a central commercial district in town. The remaining parcels are largely dedicated to residential uses. Approximately 87 percent of the assessed parcels in town are classified as residential. Although there have not been drastic land use/land cover changes since 2002, the Borough continues to grow and develop due to its convenient access to major highways and NJ Transit rail lines.

**Table 9-5: Borough of Metuchen Land Cover Summary**

Land Cover Class	Percent of Total Land <sup>6</sup>	2002 (acres)	2007 (acres)	2012 (acres)	Percent Change <sup>7</sup>
Agriculture	0	0	0	0	0
Barren Land	0.00%	5.84	10.71	-	-100.00%
Forest	5.74%	152.55	127.69	104.34	-31.60%
Urban	90.94%	1592.91	1618.04	1652.48	3.74%
Water	0.18%	1.44	3.22	3.23	124.58%
Wetlands	3.14%	64.31	57.40	57.00	-11.37%

<sup>4</sup> Ibid.

<sup>5</sup> U.S. Bureau of the Census. American Fact Finder "Metuchen Borough, NJ". <http://factfinder.census.gov/>. Retrieved 9/8/15.

<sup>6</sup> Percent based on acres of land in 2012

<sup>7</sup> Change is calculated between 2002 and 2012



### 2.4.1 Open Space

The Borough of Metuchen has approximately 75 acres of preserved open space, with about 15 percent of this land located within the Special Flood Hazard Area. This means about 13 percent of the floodplain in the Borough is already preserved.

### 2.4.2 Buildings and Development

The Borough of Metuchen is an older residential community with a compact downtown and a mixture of single-family units and apartments in surrounding neighborhoods. Nearly 80 percent of the homes were built before 1979. The Town has experienced some redevelopment activity in the past ten years. About 10 percent of the residential units were built after 2000.

**Table 9-6: Borough of Metuchen Housing Statistics**

Housing Characteristics	Estimate
Total Occupied Housing Units	5,208
Percent Owner-occupied	77.8%
Percent Renter-occupied	22.2%
Percent built after 2000	9.4%
Percent built before 1979	79.8%

### 2.4.3 Recent and Expected Development

Project Name	Type	Number of Structures	Locations	Known Hazards	Description/Status
The District at Metuchen	Retail	2 – 60,000 sq ft	Middlesex & Central Ave	None	In design
Woodmont Metro	Mixed Use	273 units/11,500 sq ft	Pearl & New Sts	None	Under construction



## 2.5 Critical Facilities and Infrastructure

### 2.5.1 Essential Facilities

The Borough owns and operates Borough Hall, a Public Library, a Senior Recreation Center, and DPW facility. The Fire Company in the Borough is volunteer-based and has one Firehouse. The Firehouse does not experience flooding in the building, but the facility is older and the Borough is looking to relocate the Firehouse to a new facility. The site has not been determined yet. There is also a First Aid Squad building that experienced localized flooding from high rain event. The Borough does not consider this to be an area of repetitive flood concern. The OEM Director is working with municipal and other community facilities to ensure power duplication and comfort station capacity in essential facilities, schools, and churches.

### 2.5.2 Transportation

The Borough of Metuchen sits on the Northeast Corridor Rail line, with a passenger station in the center of town. Route 1 runs adjacent to the Borough to the east, while Route 27 cuts north to south through the Borough. The southern border of the Borough is defined by Route 287, which connects the Town to other major roadways within the County.

### 2.5.3 Critical Utilities and Infrastructure

The Borough is serviced by PSE&G for electricity and Elizabethtown for natural gas. Middlesex Water Company services the Borough with water. The Borough reports that service for all critical utilities is generally reliable. The Borough is responsible for the maintenance of the sewer infrastructure, which is older and prone to infiltration and inflow issues. Additionally, the Borough's pump station is older and several pumps are currently being evaluated for replacement. The pump station is not vulnerable to flooding.



### 3. Hazard Identification and Risk Assessment

This section describes the natural hazards and risks that can affect the Borough of Metuchen Like all the other municipalities in Middlesex County, Metuchen is potentially subject to the effects of all the hazards that are considered in this mitigation plan. However, only a few of these hazards have significant impacts that are unique to the community. The remaining hazards are discussed in detail in the County part of this mitigation plan. FEMA mitigation planning guidance requires that County mitigation plans include a risk assessment section that “assess[es] each jurisdiction’s risks where there vary from the risks facing the entire planning area” (44CFR 201.6 (c) (2) (iii)). Because the Middlesex County HMP update includes separate appendices for each municipality, this requirement is met in the appendices, while risks that affect the entire County uniformly are discussed in the County part of the HMP.

#### 3.1 Background and Hazard Rankings

One of the first steps in developing jurisdictional appendices was 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. Municipalities ranked the list of hazards as high, medium, low, or no concern.

Table 9-7 shows community hazard rankings. To the extent possible, the level of discussion and detail about specific hazards in this section are based on these rankings. However, in many cases there is insufficient hazard information available at the level of the jurisdiction to allow detailed discussion or risk estimates. For some hazards there is limited jurisdiction-level tabular data included in the County portion of the HMP, and users should refer to those subsections for more detail. The hazards marked with asterisks in the table above are included in this appendix; the others are included in the County portion of this HMP, but not discussed in detail here.

**Table 9-7**  
**Borough of Metuchen**  
**Hazard Identification and Prioritization**

<b>Hazard</b>	<b>Priority</b>
Coastal Erosion	-
Dam/Levee Failure	-
Drought	L
Earthquakes	L
Extremely High Temps	L
Extremely Low Temps	L
Floods	L
Hurricanes/Tropical Storms	M
Nor’easters	L
Power Outages	L/M
Severe Weather	L
Hazardous Substances	H
Wildfire	L
Winter Storm	L/M

The Borough does not have unique risk compared to the other areas of the County for most natural hazards. Snow removal is difficult due to the capacity of the Public Works Department and localized flooding will make roads impassable during high rain events. The Borough considers Hazardous Substances to be a high hazard because of the passage of Bakken Crude through the Borough. There are no fixed-sites for hazardous materials



## 3.2 Flood Hazard

### 3.2.1 Type, Location, and Extent

The Borough of Metuchen is located in north-central Middlesex County, and is entirely surrounded by Edison Township. There are no significant sources of flooding in this jurisdiction. As shown in subsections below, there are a few minor areas of floodplain associated with the Dismal Swamp Preserve and a channelized portion of the Middlesex Greenway, but these appear well outside any developed areas.

One of the best resources for determining flood risk in a jurisdiction is Flood Insurance Rate Maps (FIRMs), which are produced by FEMA. The FIRM is the official map of a community on which FEMA has delineated both the special flood hazard areas (1% annual chance of flooding) and the risk premium zones applicable to the jurisdiction. At the time the Middlesex County HMP was being updated, the effective FIRM for the Borough of Metuchen is dated July 6, 2010. While the effective FIRM is the approved map and is used for regulatory purposes, the Middlesex County hazard mitigation plan update was developed in 2015, and the best available flood mapping at that time was the FEMA revised Preliminary Flood Map (released on January 30, 2015). This map is shown below in Figure 9-1. Nearly all the floodplain in the community is related to the Dismal Swamp Preserve, and although there are a few developed areas within the 500-year floodplain, there is very little development in the 100-year floodplain.

As shown in Table 9-8 below, Metuchen is small geographically, and only very minor areas comprise floodplain.

**Table 9-8**  
**Floodplain and Parcel Data for the Borough of Metuchen**  
(Source: FEMA Region II, Coastal Analysis and Mapping, Preliminary FIRM, January 2015)

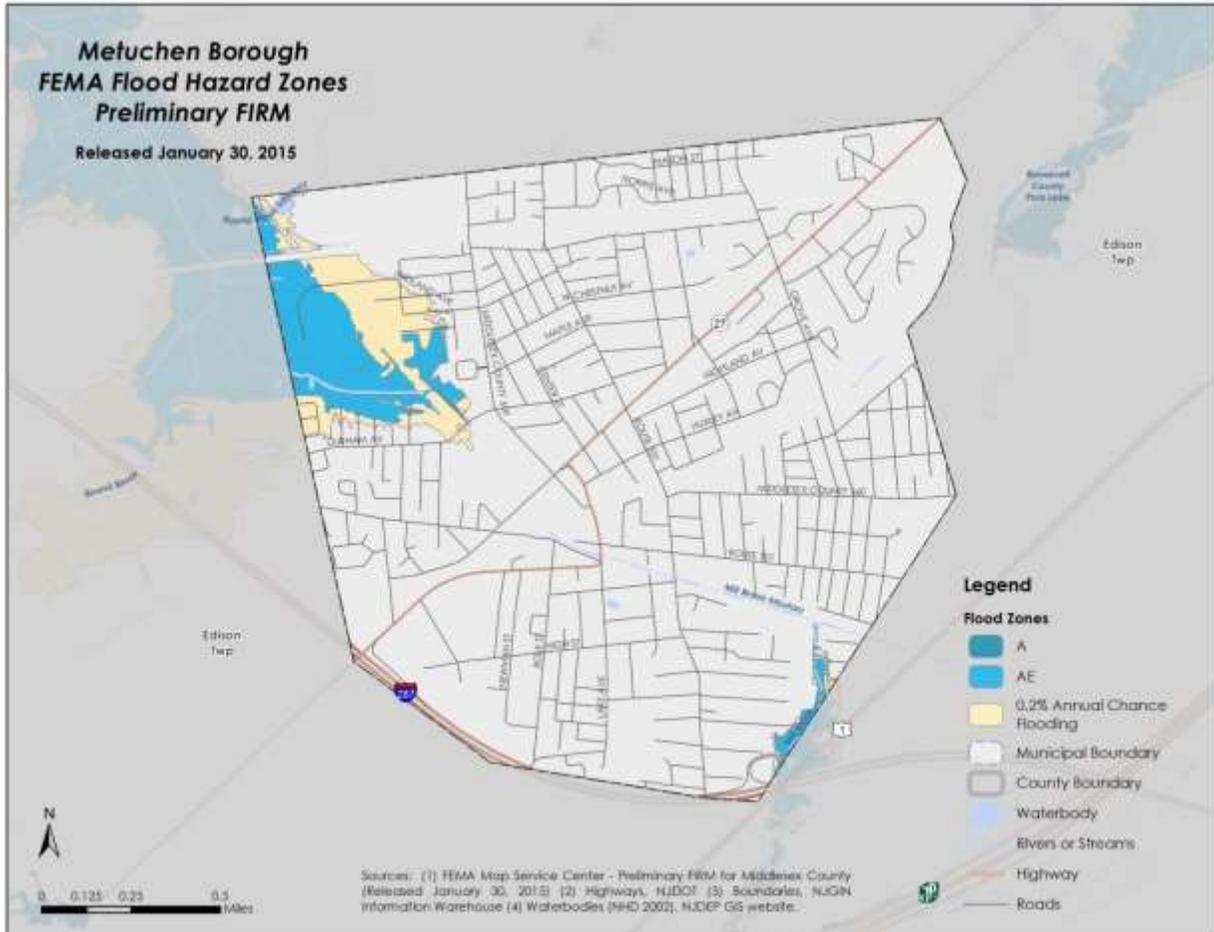
Data Type	Value
Jurisdiction area in square miles	2.83
Square miles within 100-year floodplain	0.13
Jurisdiction area within 100-year floodplain	4.46%
Number of parcels in jurisdiction	7,823
Number of parcels with centroids within 100-year floodplain	72
Parcels with centroids within 100-year floodplain	0.92%

[Note: the table refers to centroids, which are the geographic center of a parcel. This is a better indicator of flood exposure than simple intersection with the floodplain, although it does not necessarily mean that any structures or infrastructure are within the boundaries of the Special Flood Hazard Area].

Current FEMA guidance uses the term *extent* as analogous to potential severity. The extent of the flood hazard in Metuchen is not significant, likely no more than one or two feet of flooding in low areas during severe events.



**Figure 9-1**  
**Metuchen portion of FEMA Revised Preliminary Flood Insurance Rate Map**  
(Source: FEMA Region II, Coastal Analysis and Mapping, Preliminary FIRM, January 2015)





### 3.2.2 Previous Occurrences and the Probability of Future Floods

Most of the flooding in this jurisdiction appears to be minor ponding and/or sheet flow related to heavy rains. This may be exacerbated by relatively low terrain on the western end of Metuchen near Dismal Swamp, but there is little or no development there. Analysis of flood insurance claims and maps suggests that the probability of future floods will be about the same as it has been in the past.

**Table 9-9  
NFIP Policies and Claims**

<b>Number of Parcels:</b>	
Metuchen:	7,823
Middlesex County:	283,276
<b>Number of Policies In-Force:</b>	
Metuchen:	53
Middlesex County:	4,489
<b>Number of Claims:</b>	
Metuchen:	8
Middlesex County:	3,478
<b>Total Paid Claims</b>	
Metuchen:	\$45,346
Middlesex County:	\$109,727,837

### 3.2.3 Flood Impacts and Vulnerabilities to Flooding

The impacts from past floods in this jurisdiction have not been significant, with only a few relatively minor insurance claims. Tropical Storm Irene produced a few NFIP claims in this community, but these were also relatively minor compared to many other areas of the County. There appear to be few flood vulnerabilities in Metuchen.

### 3.2.4 National Flood Insurance Program and Repetitive Loss Properties

To provide a sense of the flood risk in a community it is also beneficial to summarize the policies in force and claims statistics from the National Flood Insurance Program (NFIP).

There is a discussion of the NFIP in the County section of this hazard mitigation plan. The Borough of Metuchen has been a member of the NFIP since 1979.

FEMA NFIP statistics indicate that as of February 2015, federal flood insurance policies were in-force on 53 properties in South River. Between 1978 and 2015, there have been a total of eight NFIP insurance claims in the Borough, with a total claims value of \$45,346.<sup>8</sup> Table 9-9 compares the number of policies in-force and paid claims in the jurisdiction. The table shows that Metuchen comprises less than one percent of the NFIP policies in-force in Middlesex County. The average NFIP claim in Metuchen (\$5,668) is far less than the overall County, which is \$31,549.

Metuchen is not presently a member of the Community Rating System (CRS), a voluntary program for communities participating in the NFIP. The CRS is a voluntary incentive program that recognizes and encourages community floodplain management activities that exceed the minimum NFIP requirements. For CRS participating communities, flood insurance premium rates are discounted in increments of 5% based on creditable activities.<sup>9</sup> CRS communities are ranked between 1 and 10, with Class 1 communities receiving a 45% premium discount.

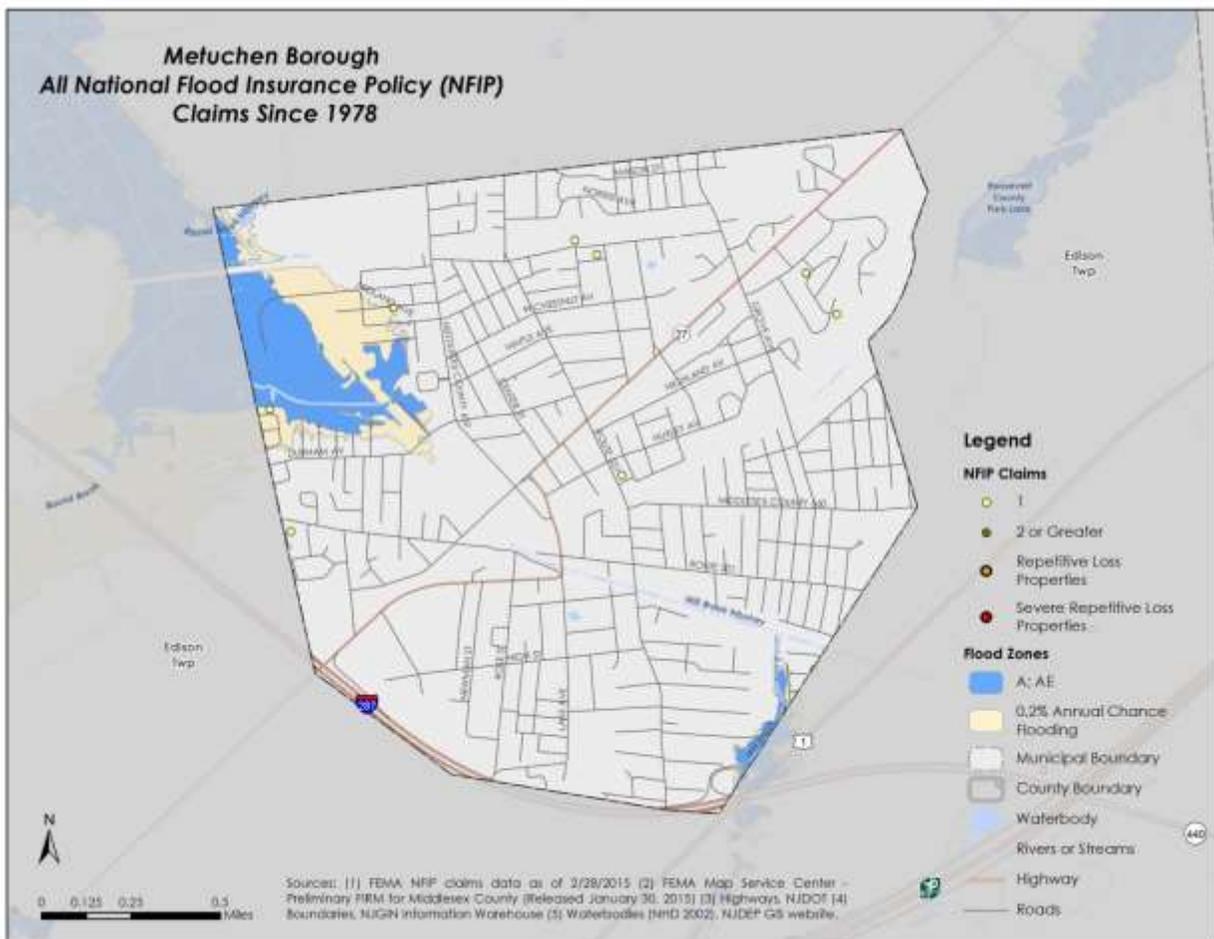
<sup>8</sup> FEMA – Policy and Claim Statistics for Flood Insurance

<sup>9</sup> FEMA – Community Rating System (CRS).



It should be noted that NFIP claims are not a direct or completely accurate proxy for flood risk in a community. The data does not include flood damages to structures that had no flood insurance. Also, in some cases, structures or contents may have been underinsured. The NFIP claims data also does not include any damages to public facilities, which may be insured via other means (such as self-insurance or non-FEMA policies); such damages may also be addressed through other federal programs such as FEMA’s Public Assistance Program.

**Figure 9-2**  
**Map of NFIP Claims in the Borough of Metuchen (1978 to 2015),**  
**Including Repetitive Loss and Severe Repetitive Loss Properties**  
**(Source: FEMA National Flood Insurance Program, February 2015)**





### 3.2.5 Flood Risk to Repetitive Loss Properties in Metuchen

FEMA requires a discussion of NFIP Repetitive Loss and Severe Repetitive flood loss statistics in hazard mitigation plans. A repetitive loss property is a structure covered by a contract for flood insurance made available under the NFIP that has incurred flood-related damage on two occasions, in which the cost of the repair, on average, equaled or exceeded 25% of market value of the structure at the time of each such flood event. As of February 2015, there were no NFIP Repetitive Loss properties in this jurisdiction.

### 3.2.6 Flood Risk to Severe Repetitive Loss Properties in Metuchen

The definition of Severe Repetitive Flood Loss (SRL) is included in the County portion of this mitigation plan. As of February 2015, there were no SRL properties in Metuchen.

## 3.3 Hurricanes and Tropical Storms

Based on input from the hazard ranking process, Metuchen considers hurricanes and tropical storms significant hazards, and thus there is a short discussion in the present subsection.

### 3.3.1 Wind Risk Estimates

There are three significant hazards related to hurricanes, tropical storms, and to a lesser extent, nor'easters. These are: floods, storm surge, and high winds. Both floods and storm surge are addressed in the flood section of the present municipal appendix, as well as the County section of the hazard mitigation plan update. This subsection provides a preliminary quantification of hurricane wind risk based that was generated by FEMA's HAZUS-MH software (version 2.1, 2014). The calculations in Table 9-10 show a range of loss categories across the top row versus "occupancy classes" on the first column. The occupancy classes are various land uses that are represented in HAZUS. The last two columns indicate the projected 50-year and 100-year risks, i.e. the total amount of damage over those planning horizons. The figures are based on annualizing losses, then discounting them to present value using the software. There is more detailed information about the calculations and Countywide results in the main section of this HMP update.

### FEMA Project Worksheets from Tropical Storm Irene and Hurricane Sandy

Following many natural disasters, FEMA engineers and field teams complete formal assessments of damage to community assets, and document these in project worksheets (PWs). The PWs are the basis of FEMA Public Assistance grants for repairs. There are seven categories of damage, indicated by the letters A through G. These are: A – debris removal; B – emergency protective measures; C – roads and bridges; D – water control facilities; E – public buildings; F – utilities, and; G – recreational facilities/other. The categories and amounts of the PWs are listed in Table 9-11 below for Tropical Storm Irene and Hurricane Sandy. Note that in some cases there are multiple different organizations in a community that are applicants for FEMA Public Assistance. In order to simplify the table, the PW amounts for all applicants in a community are combined.



**Table 9-10**  
**Probabilistic Wind Risk in Metuchen, 50- and 100-year Planning Horizons**  
(Source: FEMA, HAZUS-MH version 2.1)

Occupancy Class	Total SF	Building Damages	Contents Damages	Inventory Loss	Relocation Cost	Business Income Loss	Rental Loss	Lost Wages
Residential	7,254,196	\$171,583	\$53,750	\$0	\$10,557	\$0	\$4,478	\$0
Commercial	2,195,882	\$18,526	\$8,274	\$173	\$3,013	\$2,030	\$1,755	\$2,272
Industrial	735,251	\$5,629	\$4,195	\$736	\$322	\$87	\$64	\$144
Agricultural	23,796	\$185	\$95	\$11	\$29	\$2	\$1	\$1
Religious	313,211	\$2,956	\$1,085	\$0	\$409	\$207	\$36	\$486
Government	31,561	\$252	\$140	\$0	\$54	\$2	\$12	\$293
Education	183,280	\$1,358	\$581	\$0	\$242	\$55	\$10	\$129
<b>Totals</b>	<b>10,737,178</b>	<b>\$200,488</b>	<b>\$68,121</b>	<b>\$921</b>	<b>\$14,626</b>	<b>\$2,382</b>	<b>\$6,355</b>	<b>\$3,324</b>

**Table 9-10**  
**Probabilistic Wind Risk in Metuchen, 50- and 100-year Planning Horizons**  
(Source: FEMA, HAZUS-MH version 2.1)

Occupancy Class	Total Annualized Loss	50-year Risk	100-year Risk
Residential	\$240,367	\$3,317,302	\$3,429,794
Commercial	\$36,043	\$497,433	\$514,301
Industrial	\$11,177	\$154,252	\$159,483
Agricultural	\$324	\$4,466	\$4,617
Religious	\$5,179	\$71,476	\$73,900
Government	\$752	\$10,384	\$10,736
Education	\$2,374	\$32,769	\$33,881
<b>Totals</b>	<b>\$296,216</b>	<b>\$4,088,083</b>	<b>\$4,226,712</b>

**Table 9-11**  
**FEMA Public Assistance Expenditures in Tropical Storm Irene and Hurricane Sandy, by Category**  
(Source: FEMA Region II, Public Assistance)

Event Name/Public Assistance Category	A	B	C	D	E	F	G	Total
Tropical Storm Irene	\$57,359	\$41,356	\$8,611	\$0	\$1,658	\$16,803	\$0	\$125,787
Hurricane Sandy	\$2,197	\$0	\$0	\$0	\$6,543	\$0	\$0	\$8,740
<b>Total</b>	<b>\$59,555</b>	<b>\$41,356</b>	<b>\$8,611</b>	<b>\$0</b>	<b>\$8,201</b>	<b>\$16,803</b>	<b>\$0</b>	<b>\$134,527</b>



## 4. Capability Assessment

Each community within the planning area has a unique set of capabilities and priorities that affect its mitigation strategy. The following tables detail the capabilities assessed for the Borough of Metuchen during this plan update.

### 4.1.1 Planning and Regulatory

Tool / Program (code, ordinance, plan)	( Yes/No)	Code Citation and Comments
Master Plan	Y	
Capital Improvements Plan	N	
Floodplain Management / Basin Plan	N	
Stormwater Management Plan	Y	
Open Space Plan	N	
Stream Corridor Management Plan	N	
Watershed Management or Protection Plan	N	
Economic Development Plan	N	
Comprehensive Emergency Management Plan	Y	
Emergency Operation Plan	Y	
Post-Disaster Recovery Plan	N	
Transportation Plan	N	
Strategic Recovery Planning Report	N	
Zoning Ordinance	Y	
Subdivision Ordinance	Y	
NFIP: Cumulative Substantial Damages	N	
Growth Management Ordinances	N	
Site Plan Review Requirements	Y	
Stormwater Management Ordinance	Y	
Municipal Separate Storm Sewer System (MS4)	Y	
Combined Sewer Overflows (CSO)	N	
Natural Hazard Ordinance	N	
Post-Disaster Recovery Ordinance	N	
Real Estate Disclosure Requirement	N	
Other [Special Purpose Ordinances (i.e., sensitive areas, steep slope)]	N	State minimums

### 4.1.2 Staff/Personnel

Resources	Is this in place? (Y/N)	Department/ Agency/Position
Planning Board	Y	
Mitigation Planning Committee	N	
Environmental Board/Commission	Y	
Open Space Board/Committee	N	
Economic Development Commission/Committee	Y	
Maintenance Programs to Reduce Risk	N	
Mutual Aid Agreements	Y	
Planner(s) or Engineer(s) with knowledge of land development and land management practices	Y	



Resources	Is this in place? (Y/N)	Department/ Agency/Position
Engineer(s) or Professional(s) trained in construction practices related to buildings and/or infrastructure	Y	
Planners or engineers on staff with a strong understanding of natural hazards	Y	
NFIP Floodplain Administrator	Y	
Surveyors	N	
GIS layers and maps	N	
Personnel trained in GIS	N	
Personnel trained in HAZUS	N	
Emergency Manager	Y	
Grant Writer	N	
Staff with expertise in cost/benefit analysis	N	
Professionals trained in conducting damage assessments	Y	

#### 4.1.3 Education/Outreach and Community Classifications

Program	Do you Participate in/Use this Program (Yes/No)	Classification (if applicable)	Date Classified (if applicable)
Community Rating System (CRS)	N		
Building Code Effectiveness Grading Schedule (BCEGS)			
Public Protection (ISO Fire Protection Classes 1 to 10)	N		
Storm Ready	N		
Firewise	N		
Disaster/Safety Programs in/for Schools	Y		
Organizations with Mitigation Focus (advocacy group, non-government)	N		
Public Education Program/Outreach (through website, social media)	Y		
Public-Private Partnerships	N		

#### 4.1.4 Fiscal Capabilities

	Yes/No
Do you have a line item in your operating budget for mitigation project funding?	N
If no, will you look at mitigation actions when allocating funding in the future?	Y
Do you have a line item in the Capital Improvement Budget for mitigation project funding?	N
Have you provided funding for mitigation projects identified in the hazard mitigation plan?	N
Does your town have the authority to Levy Taxes for specific purposes?	
Does your town have user fees for water, sewer, gas or electric service?	Y
Do you impose impact Fees for homebuyers or developers of new development/homes?	N
Does your community have an open space acquisition fund?	N
Do you use bonds to finance projects (general obligation bonds, special tax bonds, private activity bonds)	Y



## 5. Mitigation Strategy

This section describes what projects, initiatives, and other actions the Borough has undertaken or plans to implement to reduce risk and loss within its jurisdiction. This includes the status of previously identified actions and any other projects that have been completed since the 2010 Plan was adopted. The additional actions were determined by the LPC based on self-determined priorities and experience.

### 5.1 Past Mitigation Actions

The table below lists the mitigation projects and actions that were included in the original 2010 Plan.

Mitigation Action	Responsible Party	Status	Review Comments
Metuchen 1: Storm Water Management	Borough and Metuchen Public Works Department	The Borough worked with a recent development applicant to clean out part of the drainage system, but is looking to further the project. See project below.	
Metuchen 2: Backup power (generator) and/or utility protective measures for Fire House	Fire Department	The Fire Department uses portable generators and has addressed backup power to the limits of the building's capability. The Department is looking to relocate to another facility.	

### 5.2 Other Mitigation Actions

The Borough of Metuchen also secured a grant for a generator project for Borough Hall and the Department of Public Works building.

### 5.3 Proposed Mitigation Actions

The table below details the mitigation initiatives the Borough of Metuchen would like to pursue to minimize future effects of hazard events. These actions have been determined through a local assessment of current risk and needs. The LPC met with the Plan Consultant to review all hazard and risk assessment data and evaluate the strategy. These initiatives are dependent upon funding and may change based on municipal priorities and future hazard events.



For each new mitigation action, the Borough has ranked as ‘High’, ‘Medium’, or ‘Low’, based on the evaluation criteria outlined in Section 5.

Proposed Action	Anticipated Benefits	Responsible Party	Funding or Implementation Mechanism	Timeline	Priority
Install transfer switches at all critical municipal facilities	Ensure power duplicity at critical facilities during power disruptions	OEM	Grants	1-3 years	High
Work with schools and gas stations to install transfer switches	Ensure power duplicity capabilities at community facilities during power disruptions	OEM	Grants/Staff time	1-3 years	Medium
Work with schools and churches to establish comfort station locations through the Borough	Improve capacity to distribute fuel and maintain community services/comfort stations during severe events.	OEM	Staff Time/Grants	1-3 years	Medium
Relocate Firehouse	The Firehouse is limited in its capacity to service Department needs. The age of the building makes it difficult or unfeasible to retrofit for improved functionality.	Fire Department	Capital/Grants	2-5 years	High
Cleanout stormwater main	Reduce localized flooding that makes roads impassable for emergency response vehicles.	DPW	Capital Funds	1-3 years	High
Continue to work with State and County on awareness and outreach programs and trainings for Hazardous Materials.	Improved awareness and capacity to manage critical needs if an event were to occur.	OEM	Staff time	Ongoing	High
Purchase generator trailers for use with quick connects at critical and community facilities	Ensure power duplicity at critical and community facilities during power disruptions.	OEM	Grants	1-3 years	High



## 6. Plan Implementation

The LPC shall document, as needed and appropriate:

- Hazard events and losses in Metuchen and the effects that mitigation actions have had on impacts and losses,
- Progress on the implementation of mitigation actions, including efforts to obtain outside funding for projects,
- Any obstacles or impediments to the implementation of actions,
- Additional mitigation actions believed to be appropriate and feasible,
- All public and stakeholder input and comment on the Plan that has been received by the Borough.
- Copies of any grant applications filed on behalf of the Borough

### Continued Public Input

The Borough of Metuchen is committed to incorporating public input into its ongoing hazard mitigation planning. The public will have an opportunity to comment on the Plan prior to any changes and during the 5-year plan update. The annual progress reports will be posted on the County mitigation website in addition to the adopted Plan.

All public comments and input on the plan will be recorded and addressed, as appropriate. Opportunity to comment on the plan will be provided directly through the County's website. Public comments can also be submitted in writing to the County's HMP Coordinator. All public comments shall be addressed to: Middlesex County Office of Emergency Management c/o All Hazards Pre-disaster Mitigation Plan Coordinator, 1001 Fire Academy Drive, Sayreville, NJ 08872.

The Borough of Metuchen's LPC shall ensure that:

- Copies of the latest approved Plan are available for review at Borough Hall along with instructions to facilitate public input and comment on the Plan.
- Public notices are made as appropriate to inform the public of the availability of the Plan, particularly during Plan update cycles.
- For minor changes to this appendix, the Borough of Metuchen will post a notice on the Borough's website and invite the public to review and comment.
- For major changes involving Borough Council approval, the Borough will use its standard public notice procedures inviting the public to review the document and provide feedback.

### Plan Adoption

On [insert date] Middlesex County submitted the initial draft of the 2015 Plan Update to NJOEM for review and comment. After addressing NJOEM comments in the document, the HMP was resubmitted



for final consideration and approval by NJOEM and FEMA. FEMA approved the plan on [insert date], and the Plan update was forwarded to the Middlesex County Board of Chosen Freeholders for adoption, which occurred on [insert date].

The Borough Council approved the plan on [insert date]. The Borough resolution for adoption is provided below, the County's adoption resolution is provided as Appendix F of the 2015 HMP update. Following adoption, the plan update was resubmitted to FEMA for final approval, which occurred on [insert date]. The FEMA approval letter is included as Appendix G.

## Plan Maintenance

The Borough of Metuchen will review this Appendix of the County's hazard mitigation plan appendix each year and give the County's HMP Coordinator an annual progress report. The OEM Coordinator is responsible for convening the LPC, initiating the plan review, and submitting the annual progress report. The LPC may use worksheets #1 and #3 in the FEMA 386-4 guidance document, to facilitate the review and progress report. FEMA guidance worksheets are provided in Appendix G. Local progress reports shall be provided to the County HMP Coordinator at least two weeks prior to the annual plan review meeting.

Additionally, the LPC will convene and review the plan when major hazard events impact the jurisdiction, potentially yielding opportunities for mitigation grant funding, or when new information suggests that plan elements do not accurately reflect the community's risk or its mitigation priorities.

If necessary, the OEM Coordinator will convene a meeting of the LPC to review and approve all changes. The Borough retains the discretion to implement minor changes to the document without formal procedures involving the Borough Council subject to local policies and regulations.

In addition to the annual progress report, the Borough of Metuchen will provide Middlesex County with a copy of the written notice of any changes to the jurisdictional appendix at the time such changes are implemented.