



9.27 Township of North Hanover

This section presents the jurisdictional annex for the Township of North Hanover.

9.27.1 Hazard Mitigation Plan Point of Contact

The following individuals have been identified as the hazard mitigation plan’s primary and alternate points of contact.

Primary Point of Contact	Alternate Point of Contact
Richard Mellor, EMC/Police 41 Schoolhouse Road, Jacobstown, NJ 08562 609.758.2522 ext. 216 rmellor@northhanovertwp.com	Alexandra DeGood, Zoning Officer/Construction 41 Schoolhouse Road, Jacobstown, NJ 08562 609.758.2522 ext. 218 adegood@northhanovertwp.com

9.27.2 Municipal Profile

The Township of North Hanover is located in the northeast portion of Burlington County. The Township is bordered by New Hanover and Wrightstown to the south, Springfield to the southwest, and Chesterfield to the west. In addition, The Township is bordered by the Ocean County municipality of Plumsted to the southeast, the Monmouth County municipality of Upper Freehold to the east, and the Mercer County municipality of Hamilton to the north. According to the 2010 Census, the community's population was 7,678. The Township has a total area of 17.423 square miles, including 17.284 square miles of land and 0.139 square miles of water.

North Hanover Township is governed under the Township form of government with a five-member Township Committee. The Township Committee is elected directly by the voters in partisan elections to serve three-year terms of office on a staggered basis, with one or two seats coming up for election each year. At an annual reorganization meeting, the Township Committee selects one of its members to serve as Mayor and another as Deputy Mayor.

Growth/Development Trends

The Township of North Hanover did not note any recent residential/commercial development since 2013 or any major residential or commercial development, or major infrastructure development planned for the next five years in the municipality.

Table 9.27-1. Growth and Development

Property or Development Name	Type (e.g. Res., Comm.)	# of Units / Structures	Location (address and/or block/lot)	Known Hazard Zone(s)	Description/Status of Development
Recent Development from 2013 to present					
None identified					
Known or Anticipated Development in the Next Five (5) Years					
None identified					

** Only location-specific hazard zones or vulnerabilities identified.*

9.27.3 Natural Hazard Event History Specific to the Municipality

Burlington County has a history of natural and non-natural hazard events as detailed in Volume I, Section 5.0 of this plan. A summary of historical events is provided in each of the hazard profiles and includes a chronology of events that have affected the County and its municipalities. For the purpose of this plan update, events that





have occurred in the County from 2013 to present were summarized to indicate the range and impact of hazard events in the community. Information regarding specific damages is included, if available, based on reference material or local sources. This information is presented in the table below. For details of these and additional events, refer to Volume I, Section 5.0 of this plan.

Table 9.27-2. Hazard Event History

Dates of Event	Event Type (Disaster Declaration if applicable)	Burlington County Designated?	Summary of Damages/Losses
April 30-May 1, 2014	Heavy Rain and Flooding		Heavy rain caused considerable poor drainage and creek flooding in the northern Burlington County. Rancocas Creek was hit the hardest by flooding. Many roads were flooded and closed. Approximately \$1 million in property damage in the County.
June 23, 2015	Severe Storm (DR-4231)	Yes	\$10 million in property damage in the County (\$8 million in Medford, \$1 million in Mt Laurel and \$1 million in Medford Lakes)
January 22-24, 2016	Severe Winter Storm (DR-4264)	Yes	Heavy snow fell throughout the County; snowfall totals ranged from 12 inches to 16.4 inches.

Notes:

- EM Emergency Declaration (FEMA)
- FEMA Federal Emergency Management Agency
- DR Major Disaster Declaration (FEMA)
- N/A Not applicable

9.27.4 Hazard Vulnerabilities and Ranking

The hazard profiles in Section 5.0 of this plan have detailed information regarding each plan participant’s vulnerability to the identified hazards. The following summarizes the hazard vulnerabilities and their ranking in the Township of North Hanover. For additional vulnerability information relevant to this jurisdiction, refer to Section 5.0.

Hazard Risk/Vulnerability Risk Ranking

The table below summarizes the hazard risk/vulnerability rankings of potential hazards for the Township of North Hanover. During the review of the hazard/vulnerability risk ranking, the Township indicated the following:

- Flood was changed from a low hazard to a medium hazard.
- Wildfire was changed from a low hazard to a medium hazard.

Table 9.27-3. Hazard Risk/Vulnerability Risk Ranking

Hazard type	Estimate of Potential Dollar Losses to Structures Vulnerable to the Hazard ^{a, c}	Probability of Occurrence	Risk Ranking Score (Probability x Impact)	Hazard Ranking ^b
Coastal Erosion	RCV Exposed to CE Hazard Area: \$0	Rare	6	Low
Drought	Damage estimate not available.	Frequent	36	High
Earthquake	100-Year GBS: \$0	Occasional	28	Medium



Hazard type	Estimate of Potential Dollar Losses to Structures Vulnerable to the Hazard ^{a, c}	Probability of Occurrence	Risk Ranking Score (Probability x Impact)	Hazard Ranking ^b
	500-Year GBS: \$2,408,417 2,500-Year GBS: \$36,030,136			
Flood*	1% Annual Chance: \$117,216,744	Frequent	18	Medium
Landslide	RCV Exposed to Landslide Hazard Area \$0	Rare	6	Low
Severe Storm	100-year MRP: \$476,842 500-year MRP: \$3,790,566 Annualized: \$102,338	Frequent	48	High
Severe Winter Weather	1% GBS: \$17,295,590 5% GBS: \$86,477,951	Frequent	51	High
Wildfire*	Estimated Value in the Extreme, Very High, and High Hazard Areas: \$12,769,977	Occasional	16	Medium

Notes:

- a. Building damage ratio estimates based on FEMA 386-2 (August 2001)
 - b. The valuation of general building stock and loss estimates was based on custom inventory for the municipality.
High = Total hazard priority risk ranking score of 31 and above
Medium = Total hazard priority risk ranking of 20-30+
Low = Total hazard risk ranking below 20
 - c. Loss estimates for the severe storm and severe winter storm hazards are structural values only and do not include the value of contents.
 - d. Loss estimates for the flood and earthquake hazards represent both structure and contents.
 - e. The HAZUS-MH earthquake model results are reported by Census Tract.
- * The Township of North Hanover changed the risk ranking for flood from low to medium and wildfire from low to medium.

National Flood Insurance Program (NFIP) Summary

The following table summarizes the NFIP statistics for the Township of North Hanover.

Table 9.27-4. NFIP Summary

Municipality	# Policies (1)	# Claims (Losses) (1)	Total Loss Payments (2)	# Rep. Loss Prop. (1)	# Severe Rep. Loss Prop. (1)	# Policies in 100-year Boundary (3)
Township of North Hanover	5	1	\$13,060.31	0	0	0

Source: FEMA Region 2 2017, 2018

(1) Repetitive loss and severe repetitive loss statistics provided by FEMA Region 2 and are current as of 10/31/2017. Policy and claims statistics current as of 9/30/2018
Please note the total number of repetitive loss properties does not include the severe repetitive loss properties. The number of claims represents claims closed by 9/30/2018.

(2) Total building and content losses from the claims file provided by FEMA Region 2.

(3) The policies inside and outside of the flood zones are based on the addresses geocoded from the FEMA Region 2 policy file – 10/31/2017.

Notes: FEMA noted that where there is more than one entry for a property, there may be more than one policy in force or more than one GIS possibility.

A zero percentage denotes less than 1/100th percentage and not zero damages or vulnerability as may be the case.

Critical Facilities

The table below presents Hazards United States (HAZUS) – Multi-Hazards (MH) estimates of the damage and loss of use to critical facilities in the community as a result of a 1-percent annual chance flood event.





Table 9.27-6. Potential Flood Losses to Critical Facilities

Name	Type	Exposure		Potential Loss from 1% Flood Event	
		1% Event	0.2% Event	Percent Structure Damage	Percent Content Damage
None identified.					

Source: FEMA 2017, Burlington County
 Note: - = Damages not calculated by HAZUS-MH v4.0

Other Vulnerabilities Identified

The municipality has identified the following vulnerabilities within their community:

- None identified.

9.27.5 Capability Assessment

This section identifies the following capabilities of the local jurisdiction:

- Planning and regulatory capability
- Administrative and technical capability
- Fiscal capability
- Community classification
- National Flood Insurance Program
- Integration of mitigation planning into existing and future planning mechanisms

Planning and Regulatory Capability

The table below summarizes the regulatory tools that are available to the Township of North Hanover.

Table 9.27-7. Planning and Regulatory Tools

Tool / Program (code, ordinance, plan)	Do you have this? (Yes/No) If Yes, date of adoption or update	Authority (local, county, state, federal)	Dept. /Agency Responsible	Code Citation and Comments (Code Chapter, name of plan, explanation of authority, etc.)
Planning Capability				
Master Plan	Yes (1972)	Local	Township Council	-
Capital Improvements Plan	-	-	-	-
Floodplain Management / Basin Plan	Yes (1979)	Local	Township Engineer	Twp. L.O. Chapter 16-180
Stormwater Management Plan	Yes (1996)	Local	Township Engineer	Twp. L.O. Chapter 11-050
Open Space Plan	Yes (1977)	Local	Land Use Board	Twp. L.O. Chapter 16-350
Stream Corridor Management Plan	Yes (1977)	Local	Township Engineer	Twp. L.O. Chapter 15-085
Watershed Management or Protection Plan	Yes (1977)	Local	Township Engineer	Twp. L.O. Chapter 15-085



Section 9.27: Township of North Hanover

Tool / Program (code, ordinance, plan)	Do you have this? (Yes/No) If Yes, date of adoption or update	Authority (local, county, state, federal)	Dept. /Agency Responsible	Code Citation and Comments (Code Chapter, name of plan, explanation of authority, etc.)
Economic Development Plan	Yes (1996)	Local	Chief Financial Officer	-
Comprehensive Emergency Management Plan	Yes (1994)	Local	Office of Emergency Management	Twp. L.O. Chapter 3-060
Emergency Operation Plan	No	-	-	-
Post-Disaster Recovery Plan	No	-	-	-
Transportation Plan	No	-	-	-
Strategic Recovery Planning Report	No	-	-	-
Other Plans:	No	-	-	-
Regulatory Capability				
Building Code	Yes (1977)	State & Local	Construction Official	Twp. L.O. Chapter 8
Zoning Ordinance	Yes (1979, 2009)	Local	Zoning Board	Twp. L.O. Chapter 16 (amended by Ordinance #2009-18)
Subdivision Ordinance	Yes (1976)	Local	Land Use Board	Twp. L.O. Chapter 15
NFIP Flood Damage Prevention Ordinance	Yes (2017)	Federal, State, Local	Township Engineer	Ordinance 2017-12
NFIP: Cumulative Substantial Damages	No	-	-	-
NFIP: Freeboard	Yes	State, Local	Township Engineer	Ordinance 2017-12
Growth Management Ordinances	Yes (1979)	Local	Township Council	Twp. L.O. Chapter 16-070
Site Plan Review Requirements	Yes (1996)	Local	Land Use Board	Twp. L.O. Chapter 15-070
Stormwater Management Ordinance	Yes (1996)	Local	Township Engineer	Twp. L.O. Chapter 11-050
Municipal Separate Storm Sewer System (MS4)	Yes	-	-	-
Stormwater Program Ordinances <ul style="list-style-type: none"> • Pet waste • Litter Control • Improper Disposal of Waste • Wildlife Feeding • Yard Waste Collection • Illicit Connection • Private Storm Drain Retrofitting • Refuse Container / Dumpster (optional) 	No	-	-	-
Natural Hazard Ordinance	No	-	-	-
Post-Disaster Recovery Ordinance	No	-	-	-





Tool / Program (code, ordinance, plan)	Do you have this? (Yes/No) If Yes, date of adoption or update	Authority (local, county, state, federal)	Dept. /Agency Responsible	Code Citation and Comments (Code Chapter, name of plan, explanation of authority, etc.)
Real Estate Disclosure Requirement	Yes	State	Township Fire Marshal	N.J.S.A. Chapter 5-70
Other (Special Purpose Ordinances [i.e., sensitive areas, steep slope])	No	-	-	-

Administrative and Technical Capability

The table below summarizes potential staff and personnel resources available to the Township of North Hanover.

Table 9.27-8. Administrative and Technical Capabilities

Resources	Is this in place? (Yes or No)	Department/ Agency/Position
Administrative Capability		
Planning Board	Yes	Joint Land Use Board
Mitigation Planning Committee	No	-
Environmental Board/Commission	No	-
Open Space Board/Committee	No	-
Economic Development Commission/Committee	No	-
Maintenance programs to reduce risk	No	-
Mutual aid agreements	No	-
Technical/Staffing Capability		
Planner(s) or engineer(s) with knowledge of land development and land management practices	Yes	Township Engineer, Township Planner
Engineer(s) or professional(s) trained in construction practices related to buildings and/or infrastructure	Yes	Township Construction Official, Township Engineer
Planners or engineers with an understanding of natural hazards	Yes	Township Engineer, Township Construction Official
NFIP Floodplain Administrator (FPA)	Yes	Township Engineer
Surveyor(s)	No	-
Personnel skilled or trained in GIS and/or Hazards United States (HAZUS) – Multi-Hazards (MH) applications	Yes	Township Engineer
Scientist familiar with natural hazards	No	-
Emergency Manager	Yes	Emergency Management Coordinator
Grant writer(s)	No	-
Staff with expertise or training in benefit/cost analysis	Yes	Chief Financial Officer
Professionals trained in conducting damage assessments	No	-

Fiscal Capability

The table below summarizes financial resources available to the Township of North Hanover.



Table 9.27-9. Fiscal Capabilities

Financial Resources	Accessible or Eligible to Use (Yes/No)
Community development Block Grants (CDBG, CDBG-DR)	Yes
Capital improvements project funding	Yes
Authority to levy taxes for specific purposes	Yes
User fees for water, sewer, gas or electric service	No
Impact fees for homebuyers or developers of new development/homes	Yes
Stormwater utility fee	No
Incur debt through general obligation bonds	Yes
Incur debt through special tax bonds	Yes
Incur debt through private activity bonds	No
Withhold public expenditures in hazard-prone areas	No
Other federal or state Funding Programs	Yes
Open Space Acquisition funding programs	No
Other	No

Community Classifications

The table below summarizes classifications for community program available to the Township of North Hanover.

Table 9.27-10. Community Classifications

Program	Do you have this? (Yes/No)	Classification (if applicable)	Date Classified (if applicable)
Community Rating System (CRS)	No	-	-
Building Code Effectiveness Grading Schedule (BCEGS)	Yes	3	2008
Public Protection (ISO Fire Protection Classes 1 to 10)	No	-	-
Storm Ready Certification	No	-	-
Firewise Communities classification	No	-	-
Natural disaster/safety programs in/for schools	No	-	-
Organizations with mitigation focus (advocacy group, non-government)	No	-	-
Public education program/outreach (through website, social media)	No	-	-
Public-private partnership initiatives addressing disaster-related issues	No	-	-

Note:

- N/A Not applicable
- NP Not participating
- Unavailable

The classifications listed above relate to the community’s ability to provide effective services to lessen its vulnerability to the hazards identified. These classifications can be viewed as a gauge of the community’s capabilities in all phases of emergency management (preparedness, response, recovery and mitigation) and are used as an underwriting parameter for determining the costs of various forms of insurance. The CRS class applies to flood insurance while the BCEGS and Public Protection classifications apply to standard property insurance. CRS classifications range on a scale of 1 to 10 with class 1 being the best possible classification, and





class 10 representing no classification benefit. Firewise classifications include a higher classification when the subject property is located beyond 1000 feet of a creditable fire hydrant and is within 5 road miles of a recognized Fire Station.

Criteria for classification credits are outlined in the following documents:

- The Community Rating System Coordinators Manual
- The Building Code Effectiveness Grading Schedule
- The ISO Mitigation online ISO’s Public Protection website at <https://www.isomitigation.com/ppc/>
- The National Weather Service Storm Ready website at <http://www.stormready.noaa.gov/index.html>
- The National Firewise Communities website at <http://firewise.org/>

Self-Assessment of Capability

The table below provides an approximate measure of the Township of North Hanover’s capability to work in a hazard-mitigation capacity and/or effectively implement hazard mitigation strategies to reduce hazard vulnerabilities.

Table 9.27-11. Self-Assessment Capability for the Municipality

Area	Degree of Hazard Mitigation Capability		
	Limited (If limited, what are your obstacles?)*	Moderate	High
Planning and regulatory capability		X	
Administrative and technical capability		X	
Fiscal capability		X	
Community political capability		X	
Community resiliency capability		X	
Capability to integrate mitigation into municipal processes and activities		X	

National Flood Insurance Program

NFIP Floodplain Administrator (FPA)

Alexandra DeGood, Zoning Officer

Compliance History

The Township is in good compliance with the National Flood Insurance Program.

Regulatory

The Township of North Hanover’s floodplain management ordinance meets the minimum set by FEMA and the State of New Jersey.

Integration of Hazard Mitigation into Existing and Future Planning Mechanisms

For a community to succeed in reducing long-term risk, hazard mitigation must be integrated into the day-to-day local government operations. As part of this planning effort, each community was surveyed to obtain a better understanding of their community’s progress in plan integration. A summary is provided below. In addition, the community identified specific integration activities that will be incorporated into municipal procedures.



Planning

Hazard Mitigation: The Township of North Hanover actively participated in the 5-year update of the Burlington County Hazard Mitigation Plan. The Township continues to support the implementation, monitoring, maintenance, and updating of the plan.

Regulatory and Enforcement (Ordinances)

Ordinance 2017-12: Flood Damage Prevention: It is the purpose of this chapter to promote the public health, safety and general welfare and to minimize public and private losses due to flood conditions in specific areas by provisions designated:

- Protect human life and health;
- Minimize expenditure of public money for costly flood control projects;
- Minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;
- Minimize prolonged business interruptions;
- Minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets, bridges located in areas of special flood hazard;
- Help maintain a stable tax base by providing for the sound use and development of areas of special flood hazard so as to minimize future flood blight areas;
- Ensure that potential buyers are notified that property is in an area of special flood hazard; and
- Ensure that those who occupy the areas of special flood hazard assume responsibility for their actions.

In order to accomplish its purpose, this chapter includes methods and provisions for:

- Restricting or prohibiting uses which are dangerous to health, safety and property due to water or erosion hazards or which result in damaging increases in erosion or in flood heights or velocities;
- Requiring that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction;
- Controlling the alteration of natural floodplains, stream channels and natural protective barriers, which help accommodate and channel floodwaters;
- Controlling filling, grading, dredging and other development which may increase flood damage; and
- Preventing or regulating the construction of flood barriers which will unnaturally divert floodwaters or which may increase flood hazards in other areas.

Zoning Ordinance: Chapter 16 (amended by Ordinance #2009-18) of the municipal code covers zoning. The purpose of the zoning ordinance is to establish a pattern for the use of land in the Township of North Hanover. The township is an agricultural community. It is the further purpose of this chapter to allow and provide for orderly growth within the township while maintaining the agricultural nature of the community, based on the master plan for the township and the Municipal Land Use Law, and is enacted in order to promote and protect the public health, safety, morals, comfort, convenience, and the general welfare of the people. This chapter is intended to regulate the use of land within zoning districts, maintain the agricultural nature of the community, promote orderly development, regulate the intensity of use and the location of buildings, establish standards of development, limit congestion in the street, prohibit incompatible uses, regulate the alteration of existing buildings, protect against hazards, and conserve the taxable value of land.

NJDEP Municipal Stormwater Regulation Program: New Jersey Department of Environmental Protection issued the statewide municipal stormwater permits that became effective January 1, 2018 and authorizes stormwater discharges from municipal separate storm sewer systems (MS4s) to the waters of the state.



Municipalities that have been issued a Notice of Authorization (NOA) to discharge under the Tier A (urban and coastal municipalities) or Tier B (more rural municipalities) master general permit must develop and implement a stormwater program. The first New Jersey Pollutant Discharge Elimination System (NJPDES) permit authorizing discharges from MS4 municipalities became effective in 2004 (subsequently renewed in 2009 and now in 2018), so most municipalities have developed stormwater programs; however, the 2018 permit requires municipalities to maintain a stormwater management plan and enforce stormwater ordinances to address development and redevelopment consistent with the Stormwater Management rules at N.J.A.C 7:8, as well as implementation of additional requirements. For more information on the municipal stormwater regulation program, see http://www.nj.gov/dep/dwq/msrp_home.htm. The Township of North Hanover is a Tier B municipality.

Stormwater Management: Township. L.O. Chapter 11-050 discusses stormwater management. The chapter is intended to regulate the feeding of wildlife, disposal of waste, including pet solid waste, yard waste collection, litter, and other waste and pollution that may find its way into stormwater runoff in order to improve, preserve and protect the water quality of waters and streams within the Township and surrounding communities that may be downstream from the Township so as to protect the health safety and welfare of the public. This chapter also regulates connections to the municipal separate storm sewer system (MS4) operated by the Township and establishes penalties for violations of the provisions of this chapter.

Operational and Administration

Mutual Aid Agreements: The Township maintains mutual aid agreements with neighboring communities for continuity of operations.

Vegetation Management: The Township maintains a tree maintenance and clearing program along roadways in high hazard areas.

Information Sharing: The Township is working with Burlington County to improve municipal communications systems to include information sharing with the county and surrounding municipalities.

Floodplain Administrator Participation: The Township promotes the participation of Floodplain Administrator within the planning process and other activities.

Joint Land Use Board: The North Hanover Joint Land Use Board reviews all land use proposals, including subdivisions, site plans, and variances. Meetings are held the fourth Wednesday of every month.

Funding

The Township has identified various financial resources that are available including Community Development Block Grants, Capital Improvements Project Funding, authority to levy taxes for specific purposes, impact fees for new development, state mitigation grant programs, and incurring debt through general obligation and special tax bonds.

Education and Outreach

The Township of North Hanover offers training on best practices for hazard mitigation, grant applications, and hazard identification. The Township completes outreach related to hazards in the form of the municipal website (<http://www.northhanovertwp.com/>).

Burlington County utilizes the Swift911 Emergency Notification system. Swift911 is used in order to keep residents informed during fires, outages, floods, hurricanes, evacuations, road closures and more. All notifications are delivered for the sole purpose of delivering emergency messages and public notifications that



are time sensitive in order to increase the safety and security. This service is also extended to the 40 municipalities within Burlington County, including the Township of North Hanover.

9.27.6 Mitigation Strategy and Prioritization

This section discusses past mitigations actions and status, describes proposed hazard mitigation initiatives, and prioritization.

Past Mitigation Initiative Status

The following table indicates progress on the community’s mitigation strategy identified in the 2013 Plan. Actions that are carried forward as part of this plan update are included in the following subsection in its own table with prioritization. Previous actions that are now on-going programs and capabilities are indicated as such in the following table and may also be found under ‘Capability Assessment’ presented previously in this annex.



Table 9.27-12. Status of Previous Mitigation Actions

Action Number	2013 Mitigation Action	Responsible Party	Status (In progress, No progress, Complete)	Describe Status 1. Please describe what was accomplished and indicate % complete. 2. If there was no progress, indicate what obstacles/delays encountered? 3. If there was progress, how is/was the action being funded (e.g., FEMA HMGP grant, local budget)?	Next Steps 1. Project to be included in 2019 HMP or Discontinue 2. If including action in the 2019 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
NoH-1	Establish and implement a tree maintenance and clearing program along roadways in high hazard areas	Lead: OEM Support: Public Works, NJDEP	In Progress	1. Ongoing 2.	1. Discontinue 2. - 3. Ongoing capability
NoH-2	Develop requirements on types of facilities that require backup power.	Lead: OEM Support: Twp. Solicitor	No Progress	Action not pursued	1. Include in 2019 HMP 2. - 3. -
NoH-3	Acquire back-up power generators for critical facilities.	Lead: OEM Support: Public Works	No Progress	Action not pursued	1. Include in 2019 HMP 2. - 3. -
NoH-4	Conduct a feasibility study to determine advantages of obtaining an FCC AM Radio license to establish local AM radio transmission capability for providing local residents with specific related emergency messages in real time.	Lead: OEM Support: Undetermined	No Progress	Action not pursued	1. Include in 2019 HMP 2. - 3. -
NoH-5	Develop and implement a residents disaster preparation outreach program, including education on proper installation and/or use of backup power	Lead: OEM Support: Undetermined	No Progress	Action not pursued	1. Include in 2019 HMP 2. - 3. -
NoH-6	Develop and implement and support a volunteer Community Emergency Response Team (CERT)	Lead: OEM Support: Undetermined	No Progress	Action not pursued	1. Include in 2019 HMP 2. - 3. -
NoH-7	Develop and implement a public outreach program for the education of residents on the risks of wildfire including personal mitigation techniques and strategies	Lead: OEM Support: Local Fire Service	No Progress	Action not pursued	1. Include in 2019 HMP 2. - 3. -



Action Number	2013 Mitigation Action	Responsible Party	Status (In progress, No progress, Complete)	Describe Status 1. Please describe what was accomplished and indicate % complete. 2. If there was no progress, indicate what obstacles/delays encountered? 3. If there was progress, how is/was the action being funded (e.g., FEMA HMGP grant, local budget)?	Next Steps 1. Project to be included in 2019 HMP or Discontinue 2. If including action in the 2019 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
NoH-8	Develop a Local Ordinance imposing water use restrictions for the washing of vehicles and landscaping during times of declared water emergency shortages.	Lead: OEM Support: Twp. Solicitor	No Progress	Action not pursued	1. Include in 2019 HMP 2. - 3. -
NoH-9	Develop and implement a program for the purchase or promotion of NOAA weather radios for critical facilities and residents.	Lead: OEM Support: Undetermined	No Progress	Action not pursued	1. Include in 2019 HMP 2. - 3. -
NoH-10	Develop and implement a maintenance strategy program for local fire department drafting access locations.	Lead: OEM Support: Local Fire Service	No Progress	Action not pursued	1. Include in 2019 HMP 2. - 3. -
NoH-11	Develop and implement a maintenance program for existing storm water removal systems	Lead: OEM Support: Public Works	No Progress	Action not pursued	1. Include in 2019 HMP 2. - 3. -
NoH-12	Identify and map key access roadways for the evacuation of residents in times of emergency.	Lead: OEM Support: local Fire /EMS Services	No Progress	Action not pursued	1. Include in 2019 HMP 2. - 3. -
NoH-13	Identify and map roadway hazardous snow accumulations sites while developing mitigation strategies	Lead: OEM Support: Burlington County Highway Dept.	No Progress	Action not pursued	1. Include in 2019 HMP 2. - 3. -
NoH-14	Develop and implement administrative policy strategies to ensure participation as a Storm Ready Community	Lead: OEM Support: Undetermined	No Progress	Action not pursued	1. Include in 2019 HMP 2. - 3. -
NoH-15	Develop and implement administrative policy strategies to ensure participation in Firewise Program.	Lead: OEM Support: Undetermined	No Progress	Action not pursued	1. Include in 2019 HMP 2. - 3. -
NoH-16	Conduct an engineering study to determine and implement	Lead: OEM	No Progress	Action not pursued	1. Include in 2019 HMP 2. -





Action Number	2013 Mitigation Action	Responsible Party	Status (In progress, No progress, Complete)	Describe Status 1. Please describe what was accomplished and indicate % complete. 2. If there was no progress, indicate what obstacles/delays encountered? 3. If there was progress, how is/was the action being funded (e.g., FEMA HMGP grant, local budget)?	Next Steps 1. Project to be included in 2019 HMP or Discontinue 2. If including action in the 2019 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
	improved drainage in flood prone areas.	Support: Twp. Engineer B.C. Hgwy. Dept.			3. -
NoH-17	Evaluate benefits of participating in CRS program	Twp. Committee; Planning	No Progress	Action not pursued	1. Include in 2019 HMP 2. - 3. -
NoH-18	Conduct and facilitate community and public education and outreach for residents and businesses to promote natural hazard risk reduction to include: <ul style="list-style-type: none"> Disaster preparedness Hazard mitigation 	Municipality with support from Planning Partners, County Planning, NJOEM, FEMA	No Progress	Action not pursued	1. Include in 2019 HMP 2. - 3. -
NoH-19	Improve municipal communications systems to include information sharing with county and surrounding municipalities.	Municipality with support from County, NJOEM and FEMA	In Progress	1. County leading effort	1. Discontinue 2. - 3. Ongoing capability
NoH-20	Create/Enhance/Maintain Mutual Aid agreements with neighboring communities for continuity of operations	Municipality with support from County, NJOEM, FEMA and surrounding communities	In Progress	1. Ongoing 2.	1. Discontinue 2. - 3. Ongoing capability
NoH-21	Promote the participation of Floodplain Administrator within the planning process and other activities.	Municipality with support from Planning Partners, County Planning, NJOEM, FEMA	In Progress	1. In progress 2. 3.	1. Discontinue 2. - 3. Ongoing capability



Completed Mitigation Initiatives Not Identified in the Previous Mitigation Strategy

The Township of North Hanover has identified the following mitigation projects/activities that have also been completed but were not identified in the previous mitigation strategy in the 2013 Plan:

- None identified

Proposed Hazard Mitigation Initiatives for the Plan Update

The Township of North Hanover participated in a mitigation action workshop in March 2018 and was provided the following FEMA publications to use as a resource as part of their comprehensive review of all possible activities and mitigation measures to address their hazards: FEMA 551 ‘Selecting Appropriate Mitigation Measures for Floodprone Structures’ (March 2007) and FEMA ‘Mitigation Ideas – A Resource for Reducing Risk to Natural Hazards’ (January 2013).

Table 9.27-13 summarizes the comprehensive-range of specific mitigation initiatives the Township of North Hanover would like to pursue in the future to reduce the effects of hazards. Some of these initiatives may be previous actions carried forward for this plan update. These initiatives are dependent upon available funding (grants and local match availability) and may be modified or omitted at any time based on the occurrence of new hazard events and changes in municipal priorities. Both the four FEMA mitigation action categories and the six CRS mitigation action categories are listed in the table below to further demonstrate the wide-range of activities and mitigation measures selected.

As discussed in Section 6, 14 evaluation/prioritization criteria are used to complete the prioritization of mitigation initiatives. For each new mitigation action, a numeric rank is assigned (-1, 0, or 1) for each of the 14 evaluation criteria to assist with prioritizing your actions as ‘High’, ‘Medium’, or ‘Low.’ The table below summarizes the evaluation of each mitigation initiative, listed by Action Number.

Table 9.27-14 provides a summary of the prioritization of all proposed mitigation initiatives for the Plan update.



Table 9.27-13. Proposed Hazard Mitigation Initiatives

Initiative	Mitigation Initiative	Critical Facility (Yes / No)	Hazard(s) Mitigated	Goals and Objectives Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category	CRS Category
T. North Hanover-1 (former NoH-2)	Develop requirements on types of facilities that require backup power.	No	All Hazards	1, 2, 3	Lead: OEM Support: Twp. Solicitor	Medium	Low	Municipal budget	Short term	High	LPR	PR
T. North Hanover-2 (NoH-3)	Acquire back-up power generators for critical facilities.	Yes	All Hazards	1, 2, 3	Lead: OEM Support: Public Works	Medium	Medium	HMGP, PDM, Municipal budget	Short term	High	SIP	PP
T. North Hanover-3 (NoH-4)	Conduct a feasibility study to determine advantages of obtaining an FCC AM Radio license to establish local AM radio transmission capability for providing local residents with specific related emergency messages in real time.	No	All Hazards	1, 5, 6	Lead: OEM Support: Undetermined	Medium	Low	Municipal budget	Short term	High	LPR	ES
T. North Hanover-4 (NoH-5)	Develop and implement a residents disaster preparation outreach program, including education on proper installation and/or use of backup power	No	All hazards	1, 2, 5	Lead: OEM Support: Undetermined	Low	Low	Municipal budget	Short term	High	EAP	PI
T. North Hanover-5 (NoH-6)	Develop and implement and support a volunteer Community Emergency Response Team (CERT)	No	All hazards	1, 2, 5, 6	Lead: OEM Support: Undetermined	Medium	Low	Municipal budget	Short term	High	LPR	ES
T. North Hanover-6 (NoH-7)	Develop and implement a public outreach program for the education of residents on the risks of wildfire including personal mitigation techniques and strategies	No	Wildfire	1, 2, 5	Lead: OEM Support: Local Fire Service	Medium	Low	Municipal budget	Short term	High	EAP	PI
T. North Hanover-7 (NoH-8)	Develop a Local Ordinance imposing water use restrictions for the washing of vehicles and landscaping during times of declared water emergency shortages.	No	Drought	1, 2, 4, 5	Lead: OEM Support: Twp. Solicitor	Medium	Low	Municipal budget	Short term	High	LPR	ES
T. North Hanover-8 (NoH-9)	Develop and implement a program for the purchase or promotion of NOAA weather radios for critical facilities and residents.	No	All hazards	1, 2, 5	Lead: OEM Support: Undetermined	Medium	Low	Municipal budget	Short term	High	LPR	ES





Table 9.27-13. Proposed Hazard Mitigation Initiatives

Initiative	Mitigation Initiative	Critical Facility (Yes / No)	Hazard(s) Mitigated	Goals and Objectives Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category	CRS Category
T. North Hanover-9 (NoH-10)	Develop and implement a maintenance strategy program for local fire department drafting access locations.	No	All hazards	1, 2	Lead: OEM Support: Local Fire Service	Medium	Low	Municipal budget	Short term	High	LPR	ES
T. North Hanover-10 (NoH-11)	Develop and implement a maintenance program for existing storm water removal systems	No	Severe Storm, Flood	1, 2	Lead: OEM Support: Public Works	Medium	Low	Municipal budget	Short term	High	LPR	SP
T. North Hanover-11 (NoH-12)	Identify and map key access roadways for the evacuation of residents in times of emergency.	No	All Hazards	1, 6	Lead: OEM Support: local Fire /EMS Services	Medium	Low	Municipal budget	Short term	High	LPR	ES
T. North Hanover-12 (NoH-13)	Identify and map roadway hazardous snow accumulations sites while developing mitigation strategies	No	Winter Storm	1, 6	Lead: OEM Support: Burlington County Highway Dept.	Medium	Low	Municipal budget	Short term	High	LPR	ES
T. North Hanover-13 (NoH-14)	Develop and implement administrative policy strategies to ensure participation as a Storm Ready Community	No	Severe Storm, Severe Winter Storm	1, 2, 5, 6	Lead: OEM Support: Undetermined	Medium	Medium	Municipal budget	Short term	High	LPR	ES
T. North Hanover-14 (NoH-15)	Develop and implement administrative policy strategies to ensure participation in Firewise Program.	No	Wildfire	1, 2	Lead: OEM Support: Undetermined	Medium	Low	Municipal budget	Short term	High	LPR	ES
T. North Hanover-15 (NoH-16)	Conduct an engineering study to determine and implement improved drainage in flood prone areas.	No	Flood, Severe Storm	1, 2	Lead: OEM Support: Twp. Engineer B.C. Hgwy. Dept.	Medium	Low	Municipal budget	Short term	High	LPR	SP
T. North Hanover-16 (NoH-17)	Evaluate benefits of participating in CRS program	No	Flood	1, 2, 5	Twp. Committee; Planning	Medium	Low	Municipal budget	Short term	High	LPR	PR
T. North Hanover-	Conduct and facilitate community and public education and outreach	No	All hazards	1, 2, 5	Municipality with support	Medium	Low	Municipal budget	Short term	High	EAP	PI





Table 9.27-13. Proposed Hazard Mitigation Initiatives

Initiative	Mitigation Initiative	Critical Facility (Yes / No)	Hazard(s) Mitigated	Goals and Objectives Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category	CRS Category
17 (NoH-18)	for residents and businesses to promote natural hazard risk reduction to include: <ul style="list-style-type: none"> Disaster preparedness Hazard mitigation 				from Planning Partners, County Planning, NJOEM, FEMA							

Notes:

Not all acronyms and abbreviations defined below are included in the table.

*Does this mitigation initiative reduce the effects of hazards on new and/or existing buildings and/or infrastructure? Not applicable (N/A) is inserted if this does not apply.

Acronyms and Abbreviations:

CAV	Community Assistance Visit
CRS	Community Rating System
DPW	Department of Public Works
FEMA	Federal Emergency Management Agency
FPA	Floodplain Administrator
HMA	Hazard Mitigation Assistance
N/A	Not applicable
NFIP	National Flood Insurance Program
OEM	Office of Emergency Management

Potential FEMA HMA Funding Sources:

FMA	Flood Mitigation Assistance Grant Program
HMGP	Hazard Mitigation Grant Program
PDM	Pre-Disaster Mitigation Grant Program
RFC	Repetitive Flood Claims Grant Program (discontinued in 2015)
SRL	Severe Repetitive Loss Grant Program (discontinued in 2015)

Timeline:

Short	1 to 5 years
Long Term	5 years or greater
OG	On-going program
DOF	Depending on funding

Costs:

Where actual project costs have been reasonably estimated:

Low	< \$10,000
Medium	\$10,000 to \$100,000
High	> \$100,000

Where actual project costs cannot reasonably be established at this time:

Low	Possible to fund under existing budget. Project is part of, or can be part of an existing on-going program.
Medium	Could budget for under existing work plan, but would require a reapportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.
High	Would require an increase in revenue via an alternative source (i.e., bonds, grants, fee increases) to implement. Existing funding levels are not adequate to cover the costs of the proposed project.

Benefits:

Where possible, an estimate of project benefits (per FEMA's benefit calculation methodology) has been evaluated against the project costs, and is presented as:

Low=	< \$10,000
Medium	\$10,000 to \$100,000
High	> \$100,000

Where numerical project benefits cannot reasonably be established at this time:

Low	Long-term benefits of the project are difficult to quantify in the short term.
Medium	Project will have a long-term impact on the reduction of risk exposure to life and property, or project will provide an immediate reduction in the risk exposure to property.
High	Project will have an immediate impact on the reduction of risk exposure to life and property.





Mitigation Category:

- *Local Plans and Regulations (LPR)* – These actions include government authorities, policies or codes that influence the way land and buildings are being developed and built.
- *Structure and Infrastructure Project (SIP)* - These actions involve modifying existing structures and infrastructure to protect them from a hazard or remove them from a hazard area. This could apply to public or private structures as well as critical facilities and infrastructure. This type of action also involves projects to construct manmade structures to reduce the impact of hazards.
- *Natural Systems Protection (NSP)* – These are actions that minimize damage and losses, and also preserve or restore the functions of natural systems.
- *Education and Awareness Programs (EAP)* – These are actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them. These actions may also include participation in national programs, such as StormReady and Firewise Communities

CRS Category:

- *Preventative Measures (PR)* - Government, administrative or regulatory actions, or processes that influence the way land and buildings are developed and built. Examples include planning and zoning, floodplain local laws, capital improvement programs, open space preservation, and storm water management regulations.
- *Property Protection (PP)* - These actions include public activities to reduce hazard losses or actions that involve (1) modification of existing buildings or structures to protect them from a hazard or (2) removal of the structures from the hazard area. Examples include acquisition, elevation, relocation, structural retrofits, storm shutters, and shatter-resistant glass.
- *Public Information (PI)* - Actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them. Such actions include outreach projects, real estate disclosure, hazard information centers, and educational programs for school-age children and adults.
- *Natural Resource Protection (NR)* - Actions that minimize hazard loss and also preserve or restore the functions of natural systems. These actions include sediment and erosion control, stream corridor restoration, watershed management, forest and vegetation management, and wetland restoration and preservation.
- *Structural Flood Control Projects (SP)* - Actions that involve the construction of structures to reduce the impact of a hazard. Such structures include dams, setback levees, floodwalls, retaining walls, and safe rooms.
- *Emergency Services (ES)* - Actions that protect people and property during and immediately following a disaster or hazard event. Services include warning systems, emergency response services, and the protection of essential facilities



Table 9.27-14. Summary of Prioritization of Actions

Mitigation Action/Project Number	Mitigation Action/Initiative	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community	Total	High / Medium / Low
T. North Hanover-1 (former NoH-2)	Develop requirements on types of facilities that require backup power.	1	1	1	1	1	1	0	1	1	1	1	1	1	1	13	High
T. North Hanover-2 (NoH-3)	Acquire back-up power generators for critical facilities.	1	1	1	1	1	1	0	1	1	1	1	1	1	1	13	High
T. North Hanover-3 (NoH-4)	Conduct a feasibility study to determine advantages of obtaining an FCC AM Radio license to establish local AM radio transmission capability for providing local residents with specific related emergency messages in real time.	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	High
T. North Hanover-4 (NoH-5)	Develop and implement a residents disaster preparation outreach program, including education on proper installation and/or use of backup power	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	High
T. North Hanover-5 (NoH-6)	Develop and implement and support a volunteer Community Emergency Response Team (CERT)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	High
T. North Hanover-6 (NoH-7)	Develop and implement a public outreach program for the education of residents on the risks of wildfire including personal mitigation techniques and strategies	1	1	1	1	1	1	1	1	1	1	0	1	1	1	13	High
T. North Hanover-7 (NoH-8)	Develop a Local Ordinance imposing	1	1	1	1	1	1	1	1	1	1	0	1	1	1	13	High





Table 9.27-14. Summary of Prioritization of Actions

Mitigation Action/Project Number	Mitigation Action/Initiative	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community	Total	High / Medium / Low
	water use restrictions for the washing of vehicles and landscaping during times of declared water emergency shortages.																
T. North Hanover-8 (NoH-9)	Develop and implement a program for the purchase or promotion of NOAA weather radios for critical facilities and residents.	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	High
T. North Hanover-9 (NoH-10)	Develop and implement a maintenance strategy program for local fire department drafting access locations.	1	1	1	1	1	1	1	1	1	1	0	1	1	1	13	High
T. North Hanover-10 (NoH-11)	Develop and implement a maintenance program for existing storm water removal systems	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	High
T. North Hanover-11 (NoH-12)	Identify and map key access roadways for the evacuation of residents in times of emergency.	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	High
T. North Hanover-12 (NoH-13)	Identify and map roadway hazardous snow accumulations sites while developing mitigation strategies	1	1	1	1	1	1	1	1	1	1	0	1	1	1	13	High
T. North Hanover-13 (NoH-14)	Develop and implement administrative policy strategies to ensure participation as a Storm Ready Community	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	High
T. North Hanover-14 (NoH-15)	Develop and implement administrative policy strategies to ensure	1	1	1	1	1	1	1	1	1	1	0	1	1	1	13	High





Table 9.27-14. Summary of Prioritization of Actions

Mitigation Action/Project Number	Mitigation Action/Initiative	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community	Total	High / Medium / Low
	participation in Firewise Program.																
T. North Hanover-15 (NoH-16)	Conduct an engineering study to determine and implement improved drainage in flood prone areas.	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	High
T. North Hanover-16 (NoH-17)	Evaluate benefits of participating in CRS program	1	1	1	1	1	1	1	1	1	1	0	1	1	1	13	High
T. North Hanover-17 (NoH-18)	Conduct and facilitate community and public education and outreach for residents and businesses to promote natural hazard risk reduction to include: Disaster preparedness Hazard mitigation	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	High

Note: Refer to Section 6, which conveys guidance on prioritizing mitigation actions.



9.27.7 Future Needs to Better Understand Risk/Vulnerability

None at this time.

9.27.8 Hazard Area Extent and Location

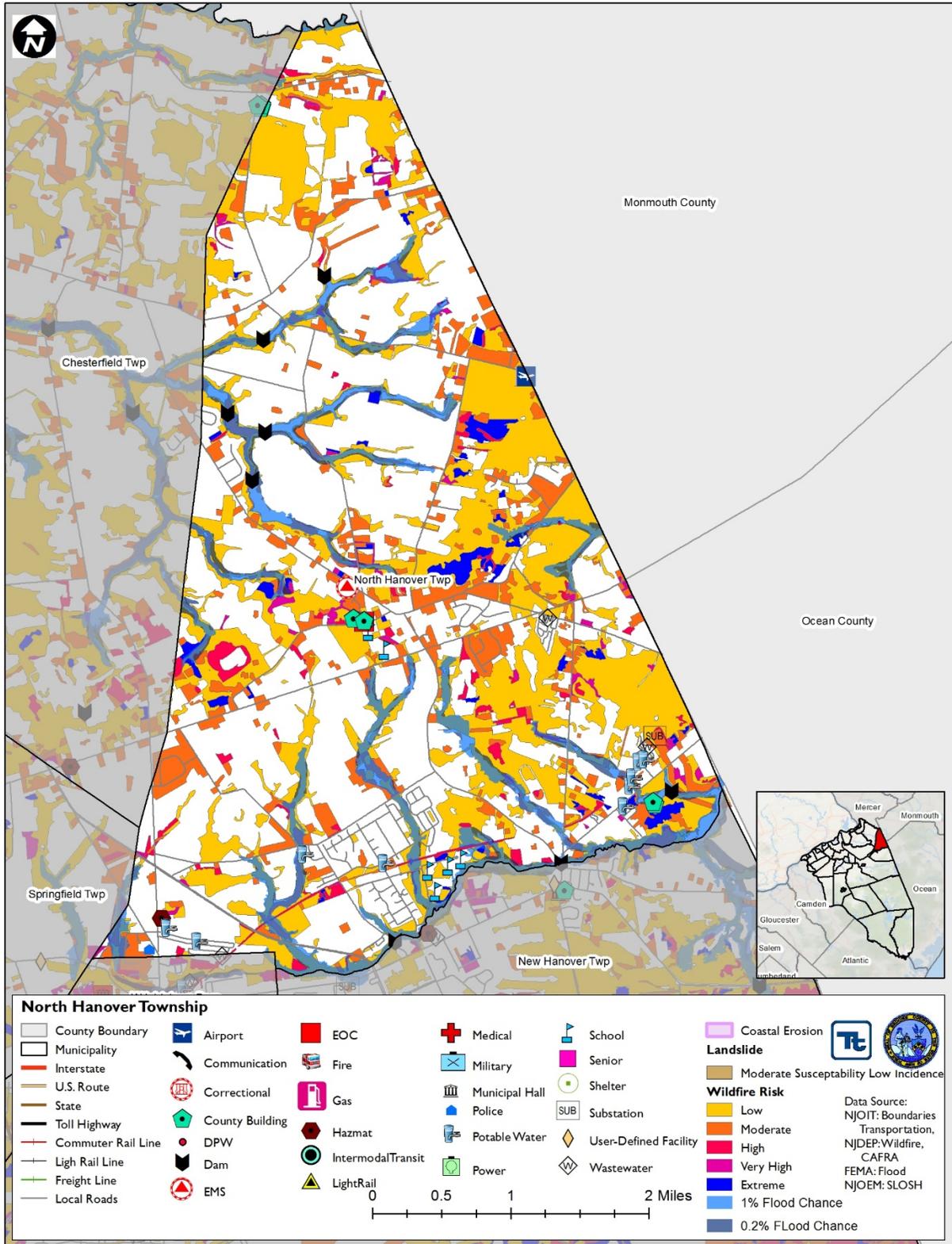
Hazard area extent and location maps have been generated for the Township of North Hanover that illustrate the probable areas impacted within the municipality. These maps are based on the best available data at the time of the preparation of this plan and are considered to be adequate for planning purposes. Maps have only been generated for those hazards that can be clearly identified using mapping techniques and technologies, and for which the Township of North Hanover has significant exposure. These maps are illustrated in the hazard profiles within Section 5.4, Volume I of this Plan.

9.27.9 Additional Comments

None at this time.



Figure 9.27-1. Township of North Hanover Hazard Area Extent and Location Map 1





Action Number:

T. North Hanover-2 (NoH-3)

Mitigation Action Name:

Acquire back-up power generators for critical facilities

Assessing the Risk	
Hazard(s) addressed:	All
Specific problem being mitigated:	Backup power to essential facilities is critical during an emergency event
Evaluation of Potential Actions/Projects	
Actions/Projects Considered (name of project and reason for not selecting):	No Action - current problem continues Solar panels: weather dependent and costly. Mobile generator: may lack sufficient power supply or run time.
Action/Project Intended for Implementation	
Description of Selected Action/Project	Installation of generators and backup power required to ensure the building's ability to remain functional during an event.
Mitigation Action Type	SIP
Goals Met	1, 2, 3
Critical Facility (Y/N)	Yes
Benefits (losses avoided)	Medium
Estimated Cost	Medium
Priority*	High
Plan for Implementation	
Responsible Organization	Lead: OEM; Support: Public Works
Local Planning Mechanism	Hazard mitigation, emergency management
Potential Funding Sources	HMGP, PDM, Municipal Budget
Timeline for Completion	Short Term
Reporting on Progress	
Date of Status Report/ Report of Progress	



Action Number:

T. Hanover-2 (Former NoH-3)

Mitigation Action Name:

Acquire back-up power generators for critical facilities

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	
Property Protection	1	
Cost-Effectiveness	1	
Technical	1	
Political	1	
Legal	1	
Fiscal	0	Need funding to complete project
Environmental	1	
Social	1	
Administrative	1	
Multi-Hazard	1	All hazards
Timeline	1	
Agency Champion	1	
Other Community Objectives	1	
Total	13	
Priority (H/M/L)	High	