



9.20 Township of Maple Shade

This section presents the jurisdictional annex for the Township of Maple Shade.

9.20.1 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
Joseph Andl, Township Manager 200 Stiles Avenue, Maple Shade, NJ 08052 856.779.9610 ext. 161 jandl@mapleshade.com	Kevin Rijs, P.P., AICP, Community Development Director 200 Stiles Avenue, Maple Shade, NJ 08052 856.779.9610 ext. 151 krijs@mapleshade.com

9.20.2 Municipal Profile

The community was known as Chester Township, and existed essentially as a neighborhood of Moorestown Township. In 1922, the residents of Chester Township voted to separate from Moorestown, electing a Township Committee. The first Municipal Building on Main Street was completed in 1927, and in it was placed the first public library in 1930. In 1945, the community chose to become Maple Shade Township.¹

In 1975, Township chose by referendum to adopt the Council-Manager (Faulkner Act) form of government under which the government presently operates. Under the Council-Manager form, the council is the legislative body of the municipality but also appoints the positions of Municipal Clerk, Tax Assessor and well as provides for appointments of members of Boards, Commissions and Authorities. Perhaps most importantly, the council appoints a qualified manager to serve as the chief executive.

The mayor serves as the presiding member of the council. The Manager has the full administrative responsibility for the municipality, including appointment of department heads as well as subordinates, preparation and presentation of the budget and the negotiation of contracts.

Maple Shade is located in the north-western portion of Burlington County along the Pennsauken Creek. The Township is bordered by Cinnaminson to the north, Moorestown to the east, and Mount Laurel to the south. To the west, Maple shade is bordered by Cherry Hill and Pennsauken in Camden County. According to the U.S. Census Bureau, Maple Shade encompasses 3.8 square miles, of which only 000.1 square mile or 0.03% of the Township is water. According to the 2010 Census, the community's population was 19,131.

Growth/Development Trends

The following table summarizes recent residential/commercial development since 2013 to present and any known or anticipated major residential/commercial development and major infrastructure development that has been identified in the next five years within the municipality. Refer to the map in 9.20.8 of this annex which illustrates the hazard areas along with the location of potential new development.

¹ <http://www.mapleshade.com/About.aspx>



Table 9.20-1. 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					
Carmax	Comm	1	Rt.38 & Rt.41 173.04/10	Could not locate.	Complete
Elite Acura	Comm	1	2840 Rt.73 N 189.01/1.01	None	Complete
Wawa Rt. 38/Lenola	Comm	1	600 Rt.38 E 189.01/5.01	Wildfire: High	Complete
Wawa Rt. 73	Comm	1	2920 Rt.73 N 172/1.03	None	Complete
CVS Rt.73	Comm	1	2920 Rt.73 N 172/1.03	Could not locate.	Complete
Known or Anticipated Development in the Next Five (5) Years					
Starbucks/Bank	Comm	2	597 Rt.38 W 189/5.02	None	Under Construction
Wawa (Rt.38 & Waverly)	Comm	1	2801 Rt.73 S 193/6	None	Approvals Pending
Sammy's Car Wash	Comm	1	491 Rt.38 W 173/2.07	None	Pending Final Approvals
Sensational Host Expansion	Comm	1	3030 Rt.73 N 67/1	Flood: 1% Event: A-Zone; Wildfire: High; SLOSH: Category 2; Sea-Level Rise:2 ft. SLR	Planning Phase

* Only location-specific hazard zones or vulnerabilities identified.

9.20.3 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 9.20-2. 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) Utility outages and road closures
January 22-24, 2016	Severe Winter Storm	Yes	Heavy snow fell throughout the County; snowfall totals ranged from 12 inches to 16.4 inches.





Dates of Event	Event Type (Disaster Declaration if applicable) (DR-4264)	Burlington County Designated?	Summary of Damages/Losses
			Utility outages and road closures

Notes:

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

9.20.4 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 Maple Shade. 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 Maple Shade. 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.

Table 9.20-3. 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: \$3,013,711	Occasional	12	Low
Drought	Damage estimate not available.	Frequent	30	Medium
Earthquake	100-Year GBS: \$0 500-Year GBS: \$2,575,554 2,500-Year GBS: \$37,409,263	Occasional	28	Medium
Flood*	1% Annual Chance: \$86,328,706	Frequent	18	Medium
Landslide	RCV Exposed to Landslide Hazard Area \$345,332,490	Occasional	12	Low
Severe Storm	100-year MRP: \$3,376,477 500-year MRP: \$25,403,710 Annualized: \$122,981	Frequent	48	High
Severe Winter Weather	1% GBS: \$26,797,901 5% GBS: \$133,989,506	Frequent	51	High
Wildfire	Estimated Value in the Extreme, Very High, and High Hazard Areas: \$0	Occasional	12	Low

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.

National Flood Insurance Program (NFIP) Summary

The following table summarizes the NFIP statistics for the Township of Maple Shade.

Table 9.20-4. 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 Maple Shade	27	7	\$240,619.32	4	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.

* The hazard ranking for flood was changed from low to medium.

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 9.20-5. 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:

- Township of Maple Shade – (Pennsauken Creek North Branch) primary flooding source due to heavy rains and local thunderstorms.
- Township of Maple Shade – (Pennsauken Creek South Branch) primary flooding source due to heavy rains and local thunderstorms.

9.20.5 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 Maple Shade.

Table 9.20-6. 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	Local	Planning Board	Master Pan Reexamination completed in 2016
Capital Improvements Plan	Yes	Local	Governing Body	Reviewed annually
Floodplain Management / Basin Plan	Yes	Local	Township	Chapter 174
Stormwater Management Plan	Yes	Local	Planning Board	Element of the Municipal Master Plan
Open Space Plan	Yes	Local	Township	Open Space Plan
Stream Corridor Management Plan	No			
Watershed Management or Protection Plan	Yes	County	NJDEP	Watershed Management Area 18: Lower Delaware
Economic Development Plan	Yes	County	Economic Development & Regional Planning	The Township also has an active Advisory Board of Commerce Chapter 4-41.
Comprehensive Emergency Management Plan	Yes	Local & County	Township	Comprehensive Emergency Management Plan
Emergency Operation Plan	Yes	Local	Township	12/2014 Last revised
Post-Disaster Recovery Plan	No			
Transportation Plan	Yes	Various	Various	The Municipal Master Plan contains a Circulation Plan Element (2010) and is within the DVRPC MPO Region. Cross County Connections is the TMA for the Township.
Strategic Recovery Planning Report				
Other Plans:				
Regulatory Capability				
Building Code	Yes	State & Local	Construction Office	State Uniform Construction Code Act (N.J.S. 52:27D-119 et seq.)
Zoning Ordinance	Yes	Local	Planning & Zoning	Chapter 205: Zoning



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.)
Subdivision Ordinance	Yes	Local	Planning & Zoning Board	Chapter 178: Subdivisions & Site Plans
NFIP Flood Damage Prevention Ordinance	Yes	Federal, State, Local	Construction	Chapter 99: Flood Damage Prevention Ordinance; revised 11/9/2017
NFIP: Cumulative Substantial Damages	No			
NFIP: Freeboard	Yes	State, Local		
Growth Management Ordinances	No			
Site Plan Review Requirements	Yes	Local	Planning & Zoning Board	Chapter 178: Subdivisions & Site Plans
Stormwater Management Ordinance	Yes	Local	Planning & Zoning Board Engineer	Chapter 174: Stormwater Control
Municipal Separate Storm Sewer System (MS4)	Yes	Local	Department of Public Works	Annual Monitoring and Reporting to NJDEP through Water Quality Program and Stormwater Pollution Prevention Plan (SPPP) ast revised 01/04/2016. NJPDES#: NJG0148849
Natural Hazard Ordinance	No			
Post-Disaster Recovery Ordinance	No			
Real Estate Disclosure Requirement	No			
Other (Special Purpose Ordinances [i.e., sensitive areas, steep slope])	Yes	Local	Planning & Zoning Boards	Tree Preservation Ordinance 178-15.F.

Administrative and Technical Capability

The table below summarizes potential staff and personnel resources available to the Township of Maple Shade.

Table 9.20-7. Administrative and Technical Capabilities

Resources	Is this in place? (Yes or No)	Department/ Agency/Position
Administrative Capability		
Planning Board	Yes	Chapter 4-35
Mitigation Planning Committee	No	
Environmental Board/Commission	Yes	Municipal Green Team Chapter 17
Open Space Board/Committee	No	
Economic Development Commission/Committee	Yes	Advisory Board of Commerce Chapter 4-41
Maintenance programs to reduce risk	Yes	Forestry Management Plan; Stormwater Management Plan; Capital Improvement Plan
Mutual aid agreements	Yes	Surrounding municipalities
Technical/Staffing Capability		





Resources	Is this in place? (Yes or No)	Department/ Agency/Position
Planner(s) or engineer(s) with knowledge of land development and land management practices	Yes	Professional Engineers appointed each year to serve the Governing Body; Planning and Zoning Boards.
Engineer(s) or professional(s) trained in construction practices related to buildings and/or infrastructure	Yes	Professional Engineers appointed each year to serve the Governing Body; Planning and Zoning Boards.
Planners or engineers with an understanding of natural hazards	Yes	Professional Engineers appointed each year to serve the Governing Body; Planning and Zoning Boards.
NFIP Floodplain Administrator (FPA)	Yes	Municipal Engineer
Surveyor(s)	Yes	The appointed Municipal Engineer has a surveying department
Personnel skilled or trained in GIS and/or Hazards United States (HAZUS) – Multi-Hazards (MH) applications	Yes	The Appointed Municipal Engineer has a GIS department & the County and NJDEP has GIS information services available to the Township.
Scientist familiar with natural hazards	No	
Emergency Manager	Yes	The Township Manager and designated officials
Grant writer(s)	Yes	The Township Manager and Staff and the appointed Municipal Engineers have grant writing capabilities and experience
Staff with expertise or training in benefit/cost analysis	Yes	The Township Manager, Finance Office and appointed Township Professionals have expertise in cost benefit analysis
Professionals trained in conducting damage assessments	Yes	The Township Manager is certified and the appointed Municipal Engineer has professionals trained in damage assessments.

Fiscal Capability

The table below summarizes financial resources available to the Township of Maple Shade.

Table 9.20-8. Fiscal Capabilities

Financial Resources	Accessible or Eligible to Use (Yes/No)
Community development Block Grants (CDBG, CDBG-DR)	CDBG - Yes
Capital improvements project funding	Yes
Authority to levy taxes for specific purposes	Yes
User fees for water, sewer, gas or electric service	Yes
Impact fees for homebuyers or developers of new development/homes	No
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	Yes



Financial Resources	Accessible or Eligible to Use (Yes/No)
Other federal or state Funding Programs	No
Open Space Acquisition funding programs	County, State, and Federal Programs
Other	No

Community Classifications

The table below summarizes classifications for community program available to the Township of Maple Shade.

Table 9.20-9. 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)	No		
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)	Yes	Sustainable Jersey	
Public education program/outreach (through website, social media)	Yes		
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 Maple Shade’s capability to work in a hazard-mitigation capacity and/or effectively implement hazard mitigation strategies to reduce hazard vulnerabilities.

Table 9.20-10. 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 – Budget Constraints		
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)

James McKelvie, PE, CME, Township Engineer, Alaimo Group

Flood Vulnerability Summary

The Township of Maple Shade does not maintain lists or inventories of properties that have been damaged by flooding. During Hurricane Sandy and other recent events, there was no structural damage within the Township. The Township Engineer does not make Substantial Damage estimates. Currently there are no properties interested or involved with mitigation projects (elevation and acquisition).

Resources

The construction code official and the township engineer assume the responsibilities of floodplain administration for the Township of Maple Shade and work together as needed. At this time, there are no education or outreach programs to the community regarding flood hazards/risk or flood risk reduction. The FPA stated that there are currently no barriers to running an effective floodplain management program and he does feel adequately supported and trained to fulfill the responsibilities as the municipal floodplain administrator. The FPA would consider attending continuing education and certification training on floodplain management if it were offered in the future.

Compliance History

The Township is in good standing with the NFIP, however the date of the most recent compliance audit is unknown. The Township Flood Plain Management Ordinance was recently reviewed and approved for update by the NJDEP in accordance with the minimum standards to maintain consistency with the NFIP.

Regulatory

The Township of Maple Shade’s floodplain ordinance meets the minimum set by FEMA and the State of New Jersey. There are additional ordinances that support floodplain management within the Township. The Township is currently not in the CRS program.



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

Master Plan: The Maple Shade Township Planning Board prepared the 2016 Master Plan Reexamination Report and Master Plan Amendment which includes examining and updating the Township's strategic policies, goals, objectives, assumptions, and related principles and standards. This document amends municipal planning policies, goals and objectives, and directs future Township planning efforts. This Master Plan Amendment continues to the strategic foundation for successful redevelopment. The Goals and Objectives generally remain unchanged 2006-2016. Goal 6 - Environment – is to preserve environmentally sensitive areas in their natural state, and to protect natural resources and areas of conservation. One of the objectives for this goal is to protect wetland and flood plain areas by generally mapping these locations and identifying State and Federal preservation requirements. Another objective is to promote stormwater management practices that positively affect aquifer recharge areas, flood plains, wetlands, waterways, and properties abutting waterways. This is also reflected in the 2016 Master Plan Amendment Policy Update j: Maple Shade Township applies sustainable practices to protect its natural resources, including wetlands, flood plains, street trees, forested areas, wildlife habitats, and stream corridors.

Regulatory and Enforcement (Ordinances)

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 the 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 www.nj.gov/dep/dwq/msrp_home.htm. The Township of Maple Shade is a Tier A municipality.

Stormwater Management: Chapter 174 of the municipal code discusses stormwater control. The policy statement of this code is: Flood control, groundwater recharge and pollutant reduction through nonstructural or low-impact techniques shall be explored before relying on structural best management practices (BMPs). Structural BMPs should be integrated with nonstructural stormwater management strategies and proper maintenance plans. Nonstructural strategies include both environmentally sensitive site design and source controls that prevent pollutants from being placed on the site or from being exposed to stormwater. Source control plans should be developed based upon physical site conditions and the origin, nature and the anticipated quantity or amount of potential pollutants. Multiple stormwater management BMPs may be necessary to achieve the established performance standards for water quality, quantity and groundwater recharge. This chapter is intended to regulate design and performance standards for stormwater management measures, standards for structural stormwater management measures, safety standards for stormwater management basins, maintenance



and repair, private storm drain retrofitting, and refuse containers and dumpsters so as to protect public health, safety and welfare, and to prescribe penalties for the failure to comply.

Flood Damage Prevention: The purpose of the flood damage prevention ordinance (Chapter 99 of the municipal code) is 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 designed to:

- 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 and 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 hazard.
- Ensure that potential buyers are notified that property is in an area of special flood hazard.
- Ensure that those who occupy the areas of special flood hazard assume responsibility for their actions.

Operational and Administration

The Township of Maple Shade has the following Departments:

- Clean Communities
- Clerk's Office
- Code Enforcement
- Construction Office
- Finance Office
- Municipal Court
- Parks & Recreation
- Planning & Zoning
- Public Safety
- Public Works
- Tax Collector
- Tax Assessor
- Town Council
- Fire Department
- First Aid Squad

Sustainable Jersey: The Township of Maple Shade is bronze certified in the Sustainable Jersey program. Sustainable Jersey certification is a prestigious designation for municipal governments in New Jersey. Municipalities that achieve the certification are considered by their peers, by state government and by the experts and civic organizations in New Jersey, to be among the leading municipalities. All actions taken by municipalities to score points toward certification must be accompanied by documentary evidence and is reviewed. The certification is free and completely voluntary.

Funding

The Township Manager and Staff and the appointed Municipal Engineers have grant writing capabilities and experience. Financial resources that the Township has access to or are eligible to use include Community





Development Block Grants, Capital Improvement Project Funding, the authority to levy taxes for specific purposes, user fees for water, sewer, gas, or electric service, the ability to incur debt through general obligation bonds, the ability to incur debt through special tax bonds, the ability to withhold public expenditures in hazard-prone areas, and open space acquisition funding programs that are provided by county, state, and federal programs.

Education and Outreach

Maple Shade Township has a website where one can access information about Township Departments, FAQ, Calendar, Municipal Code, make online payments, see upcoming events, and see recent posts from the Maple Shade Police Department. On the Public Safety page one has the ability to sign up for and/or view the Maple Shade nixle alerts.

9.20.6 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 9.20-11. 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.
MS-1	Conduct further studies to identify areas prone to flooding throughout the Township and identify potential properties for elevation or acquisition	Maple Shade Township	In Progress	On going	1. Include in 2019 HMP 2.
MS-2	Consider participating in CRS program	Twp. Council; Planning	No Progress		1. Discontinue 2. No longer a priority
MS-3	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	Municipality with support from Planning Partners, County Planning, NJOEM, FEMA	Complete	On going	1. Discontinue 2. Ongoing capability
MS-4	Improve municipal communication systems.	Municipality with support from County, NJOEM and FEMA	Complete	On going	1. Discontinue 2. Ongoing capability
MS-5	Obtain and install backup power sources at critical facilities.	Municipality with support from County, NJOEM and FEMA	In Progress	On going	1. Include in 2019 HMP 2. Determine best suited locations, secure funding
MS-6	Create/Enhance/Maintain Mutual Aid agreements with neighboring communities for continuity of operations	Municipality with support from County, NJOEM, FEMA and surrounding communities	Complete	On going	1. Discontinue 2. Ongoing capability
MS-7	Continue to support the implementation, monitoring, maintenance, and updating of this Plan through participating in the 5 year Plan Update	Municipality with support from Planning Partners,	Complete	Complete	1. Discontinue



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.
		County Planning, NJOEM, FEMA			
MS-8	Promote the participation of Floodplain Administrator within the planning process and other related activities.	Municipality with support from County, NJOEM and FEMA	Complete	On going	1. Discontinue 2. Ongoing capability
MS-9	Enhance community resilience to severe storms (incl. severe winter storms) by joining the NOAA "Storm Ready" program.	Municipality with support from County, NJOEM and FEMA	No Progress		1. Discontinue 2. No longer a priority
MS-10	Provide public education and outreach on proper installation and/or use of backup power	Municipal Clerk	No Progress	Construction Office reviews and approves applications in accordance with applicable codes and standards.	1. Discontinue 2. No longer needed
MS-11	Address dangerous trees threatening people and property through proactive tree-trimming (vegetation management) programs in conjunction with property owners and utility companies.	Municipal DPW	Complete	Tree preservation and maintenance fund has been established.	1. Discontinue 2. Ongoing capability



Completed Mitigation Initiatives Not Identified in the Previous Mitigation Strategy

The Township of Maple Shade 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 by the municipality.

Proposed Hazard Mitigation Initiatives for the Plan Update

The municipality 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 9.20-12 summarizes the comprehensive-range of specific mitigation initiatives the Township of Maple Shade 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 9.20-13 provides a summary of the prioritization of all proposed mitigation initiatives for the Plan update.



Table 9.20-12. 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
MS-1 (former MS-1)	Conduct further studies to identify areas prone to flooding throughout the Township and identify potential properties for elevation or acquisition	No	Flooding	1, 2, 5	Maple Shade Township	High	Low	Municipal budget, HMA grants	Ongoing	Medium	LPR, SIP	PP, PR
MS-2 (former MS-5)	Obtain and install backup power sources at critical facilities.	Yes	All	1, 2, 6	Municipality with support from County, NJOEM and FEMA	Medium	Medium	Municipal budget	Short	Medium	SIP	ES
MS-3	During future updates of the Master Plan, Floodplain Management Plan, or the Emergency Operation Plan, work to integrate hazard mitigation principles and recommendations into the plans. Additionally, use these hazard mitigation principles and plan recommendations to update local building and zoning codes to create a more resilient community.	No	All Hazards	All	Municipality	High	Low	Municipal Budget	Short Term, Depending on update schedule	High	LPR	PR, PI
MS-4	The Township will promote and support non-structural flood hazard mitigation alternatives for at risk properties within the floodplain, specifically those that have been identified as Repetitive Loss (RL) and Severe Repetitive Loss (SRL). At risk areas include: <ul style="list-style-type: none"> Regent Ave Route 73 Alternatives would include acquisition/relocation or elevation depending on feasibility, and the completion of initiative is dependent on funding, benefits versus cost, and willing participation of property owners.	No	Flood	1, 2	Municipality with support from County	High	High	Grant funding; Municipal budget	Short	High	SIP	PP





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 9.20-13. 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
MS-1 (former MS-1)	Conduct further studies to identify areas prone to flooding throughout the Township and identify potential properties for elevation or acquisition	1	1	1	1	1	0	0	0	0	1	0	1	1	0	8	Medium
MS-2 (former MS-5)	Obtain and install backup power sources at critical facilities.	1	1	1	1	1	1	0	-1	0	1	1	1	1	0	9	Medium
MS-3	During future updates of the Master Plan, Floodplain Management Plan, or the Emergency Operation Plan, work to integrate hazard mitigation principles and recommendations into the plans. Additionally, use these hazard mitigation principles and plan recommendations to update local building and zoning codes to create a more resilient community.	1	1	1	1	1	1	1	0	0	1	1	0	1	0	10	High
MS-4	The Township will promote and support non-structural flood hazard mitigation alternatives for at risk properties within the floodplain, specifically those that have been identified as Repetitive Loss (RL) and Severe	1	1	0	1	1	1	-1	0	0	1	0	1	1	0	8	High





Table 9.20-13. 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
	Repetitive Loss (SRL). At risk areas include: <ul style="list-style-type: none"> • Regent Ave • Route 73 Alternatives would include acquisition/relocation or elevation depending on feasibility, and the completion of initiative is dependent on funding, benefits versus cost, and willing participation of property owners.																

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



9.20.7 Future Needs to Better Understand Risk/Vulnerability

None at this time.

9.20.8 Hazard Area Extent and Location

Hazard area extent and location maps have been generated for the Township of Maple Shade 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 Maple Shade has significant exposure. These maps are illustrated in the hazard profiles within Section 5.4, Volume I of this Plan.

9.20.9 Additional Comments

None at this time.



Figure 9.20-1. Township of Maple Shade Hazard Area Extent and Location Map 1

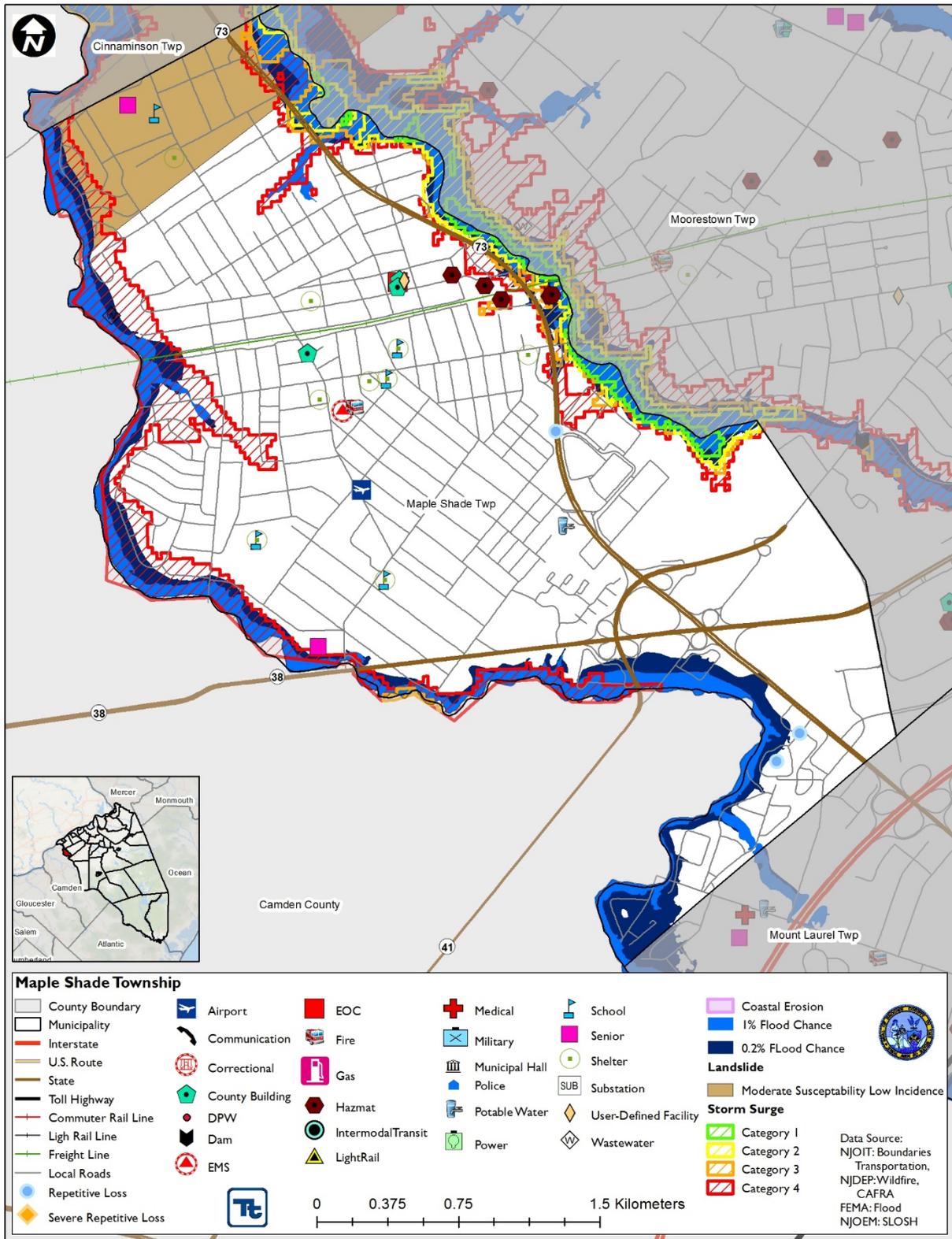
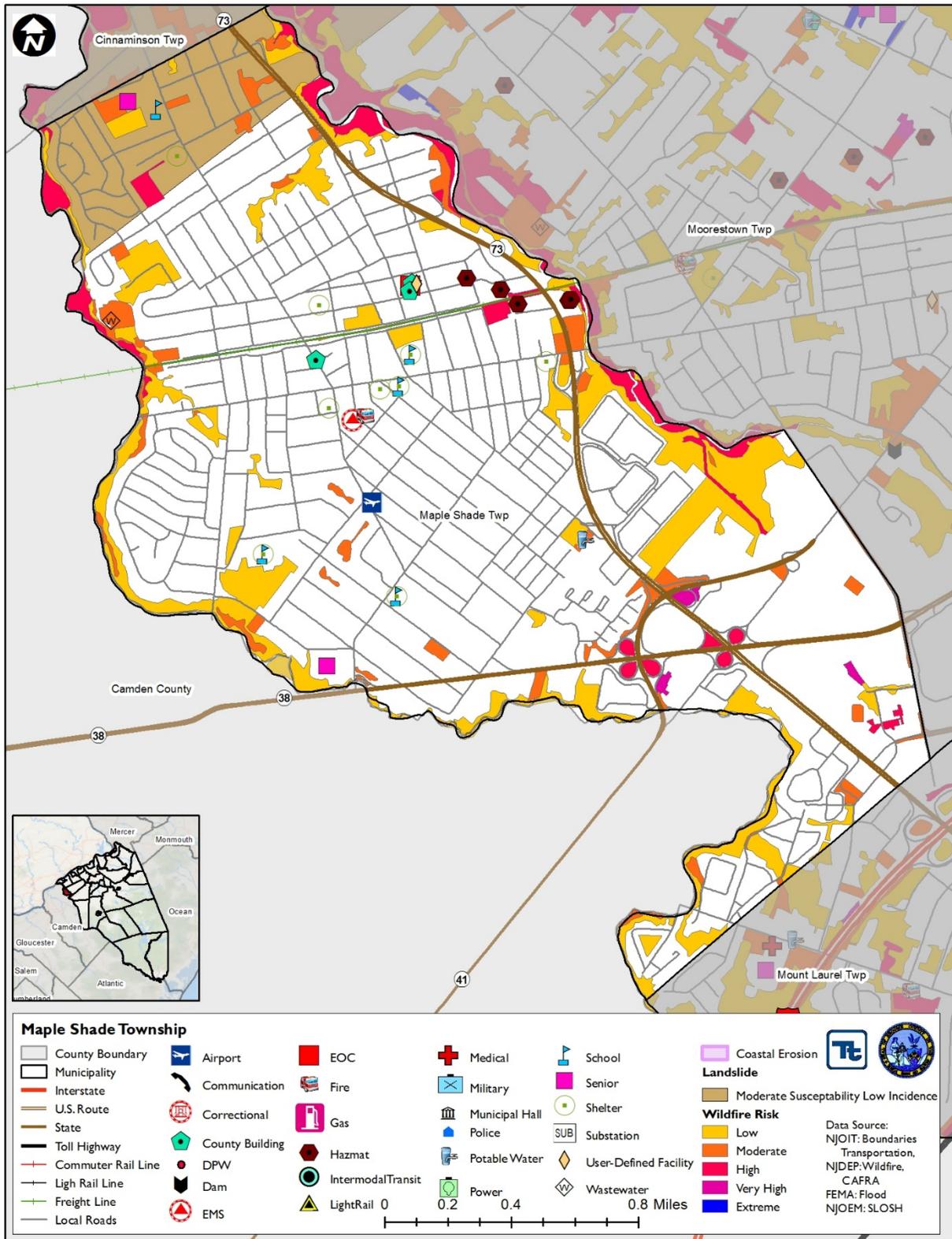




Figure 9.20-2. Township of Maple Shade Hazard Area Extent and Location Map 2





Action Number:

MS-2 (former MS-5)

Mitigation Action Name:

Obtain and install backup power sources at 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, 6
Critical Facility (Y/N)	Yes
Benefits (losses avoided)	Medium
Estimated Cost	Medium
Priority*	Medium
Plan for Implementation	
Responsible Organization	Municipality with support from County, NJOEM and FEMA
Local Planning Mechanism	Hazard mitigation, emergency management
Potential Funding Sources	Municipal budget
Timeline for Completion	Short
Reporting on Progress	
Date of Status Report/ Report of Progress	Date: 1/31/18 Status: Ongoing; Determine best suited locations, secure funding



SECTION 9.20: TOWNSHIP OF MAPLE SHADE

Action Number:

MS-2 (former MS-5)

Mitigation Action Name:

Obtain and install backup power sources at critical facilities.

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Allows essential facilities to function during power outages and provide services to the community to protect the life and safety of residents
Property Protection	1	Allow facilities to operate during power outages and prevent damages that would result if power was not supplied to the building
Cost-Effectiveness	1	
Technical	1	
Political	1	
Legal	1	
Fiscal	0	Need funding to complete project
Environmental	-1	
Social	0	
Administrative	1	
Multi-Hazard	1	All hazards
Timeline	1	
Agency Champion	1	
Other Community Objectives	0	
Total	9	
Priority (H/M/L)	Medium	



Action Number: MS-4

Mitigation Action Name: The Township will promote and support non-structural flood hazard mitigation alternatives for at risk properties within the floodplain, specifically those that have been identified as Repetitive Loss (RL) and Severe Repetitive Loss (SRL). At risk areas include:

- Regent Ave
- Route 73

Alternatives would include acquisition/relocation or elevation depending on feasibility, and the completion of initiative is dependent on funding, benefits versus cost, and willing participation of property owners.

Assessing the Risk	
Hazard(s) addressed:	Flood
Specific problem being mitigated:	Repetitively flooded properties place an undue stress on the property owner and Township and efforts should be made to mitigate them.
Evaluation of Potential Actions/Projects	
Actions/Projects Considered (name of project and reason for not selecting):	No Action - current problem continues Construct flood walls/barriers around vulnerable areas – costly and can divert floodwaters to other areas Deployable flood barriers for vulnerable areas – Requires a great deal of work to implement prior to each event
Action/Project Intended for Implementation	
Description of Selected Action/Project	Work with owners to explore mitigation opportunities for repetitively flooded properties, and if appropriate and feasible, carry out acquisition, relocation, elevation and floodproofing measures to protect these properties.
Mitigation Action Type	SIP
Goals Met	1, 2
Critical Facility (Y/N)	No
Benefits (losses avoided)	High
Estimated Cost	High
Priority*	High
Plan for Implementation	
Responsible Organization	Municipality with support from County
Local Planning Mechanism	Hazard mitigation, emergency management
Potential Funding Sources	Grant funding; Municipal budget
Timeline for Completion	Short
Reporting on Progress	
Date of Status Report/ Report of Progress	Date: 5/31/18 Status: New Action



Action Number:
Mitigation Action Name:

MS-4

The Township will promote and support non-structural flood hazard mitigation alternatives for at risk properties within the floodplain, specifically those that have been identified as Repetitive Loss (RL) and Severe Repetitive Loss (SRL). At risk areas include:

- Regent Ave
- Route 73

Alternatives would include acquisition/relocation or elevation depending on feasibility, and the completion of initiative is dependent on funding, benefits versus cost, and willing participation of property owners.

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Educate residents about options to mitigate their home to protect themselves from flood damages
Property Protection	1	Educate residents about options to mitigate their home to their home from flood damages
Cost-Effectiveness	0	
Technical	1	
Political	1	
Legal	1	
Fiscal	-1	
Environmental	0	
Social	0	
Administrative	1	
Multi-Hazard	0	Flood
Timeline	1	
Agency Champion	1	
Other Community Objectives	0	
Total	8	
Priority (H/M/L)	High	