



## 9.14 Township of Lafayette

This section presents the jurisdictional annex for the Township of Lafayette.

### 9.14.1 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
Rich Hughes, OEM Coordinator 33 Morris Farm Road, Lafayette, NJ 07848 Phone: (973) 985-5971 Email: <a href="mailto:hughesr22@gmail.com">hughesr22@gmail.com</a>	Bill Macko, Deputy OEM Coordinator 33 Morris Farm Road, Lafayette, NJ 07848 Phone: (973) 383-8809 Email: <a href="mailto:ltrd@ptd.net">ltrd@ptd.net</a>

### 9.14.2 Municipal Profile

Lafayette Township is centrally located in Sussex County. It is bordered to the north by Wantage Township, to the east by Hardyston Township, to the south by Sparta and Andover Townships, and to the west by Frankford and Hampton Townships. The Township covers a total area of approximately 18.0 square miles. According to the U.S. Census, the 2010 population for the Township of Lafayette was 2,538. The following unincorporated communities are located within the Township: Harmonyville, Hopkins Corner, Warbasse, and Branchville Junction. There are many small ponds located throughout the Township and the Paulins Kill flows through the southwestern corner of the Township.

### Growth/Development Trends

The following table summarizes recent residential/commercial development since 2010 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 maps in Section 9.14.8 of this annex which illustrate the hazard areas along with the location of potential new development.

**Table 9.14-1. 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
<b>Recent Development from 2010 to present</b>					
Advanced Housing Group Home	Residential	20 Units	10-12 Route 94	None at this time	Completed
<b>Known or Anticipated Development in the Next Five Years</b>					
Restaurant / Market w/ waste water treatment plant	Commercial	3 structures	37 Route 15	Wildfire: High	Approved
Carson Industries	Light Industrial	13 unit	173-175 Route 94	None at this time	Approved

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

### 9.14.3 Natural Hazard Event History Specific to the Municipality

Sussex 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 2008 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 9.14-2. Hazard Event History**

Date(s) of Event	Event Type	FEMA Declaration # (If Applicable)	County Designated?	Summary of Damages/Losses
August 26 – September 5, 2011	Hurricane Irene	DR-4021	Yes	Downed trees and power lines; damages to roads and catch basins; road closures; flooding along Route 15; home was destroyed on Pond School Road; many homes damaged from the storm
September 28 – October 6, 2011	Remnants of Tropical Storm Lee	DR-4039	Yes	Downed trees and power lines; damages to roads and catch basins; road closures; flooding; many homes damaged from the storm
October 29, 2011	Severe Storm	DR-4048	Yes	Downed trees and power lines; power outages throughout the Township. Overtime costs for debris clearing, snow removal, etc.
October 26 – November 8, 2012	Hurricane Sandy	DR-4086	Yes	Downed trees and power lines; debris removal; power outages

### 9.14.4 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 risk ranking methodology is presented in Section 5.3. However, each municipality had the opportunity to adjust the final ranking based on municipal feedback. The following summarizes the hazard vulnerabilities and their ranking in the Township of Lafayette. 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 Lafayette.

**Table 9.14-3. Hazard Risk/Vulnerability Risk Ranking**

Hazard type	Estimate of Potential Dollar Losses to Structures Vulnerable to the Hazard <sup>a, c</sup>	Probability of Occurrence	Risk Ranking Score (Probability x Impact)	Hazard Ranking <sup>b</sup>
Dam Failure	Damage estimate not available	Occasional	24	Medium
Drought	Damage estimate not available	Frequent	30	Medium
Earthquake	100-Year GBS: \$0	Occasional	28	Medium
	500-Year GBS: \$378,971			
	2,500-Year GBS: \$5,859,616			
Flood	1% Annual Chance: \$21,737,514	Frequent	18	Medium
Geologic	RCV Exposed to Carbonate Rock Areas: \$388,321,883	Occasional	36	Medium*
Hurricane	100-year MRP: \$146,281	Frequent	48	High
	500-year MRP: \$1,254,406			
	Annualized: \$9,379			
Nor'Easter	Damage estimate not available	Frequent	48	High



Hazard type	Estimate of Potential Dollar Losses to Structures Vulnerable to the Hazard <sup>a, c</sup>	Probability of Occurrence	Risk Ranking Score (Probability x Impact)	Hazard Ranking <sup>b</sup>
Severe Weather	100-Year MRP: \$146,281 500-year MRP: \$1,254,406 Annualized: \$9,379	Frequent	48	High
Severe Winter Weather	1% GBS: \$4,843,265 5% GBS: \$24,216,327	Frequent	51	High
Wildfire	Estimated Value in the Extreme, Very High, and High Hazard Areas: \$66,236,221	Frequent	24	Medium
Hazardous Materials	Damage estimate not available	Frequent	36	High

Notes:

- \* The hazard ranking was changed for this hazard based on input from the municipality, population exposed, and/or event history. GBS = General building stock; MRP = Mean return period.
- a. The general building stock valuation is based on the custom inventory generated for the municipality and based on improved value.
- b. High = Total hazard priority risk ranking score of 31 and above  
Medium = Total hazard priority risk ranking of 15-30+  
Low = Total hazard risk ranking below 15
- c. Loss estimates for the severe storm and severe winter storm hazards are structural values only and do not include the estimated value of contents. Loss estimates for the flood and earthquake hazards represent both structure and contents. Potential flood loss estimates were generated using Hazus-MH 3.0 and the 2011 FEMA DFIRM for the 1-percent annual chance event. For the geologic and wildfire hazards, the improved value and estimated contents of buildings located within the identified hazard zones is provided.

### National Flood Insurance Program (NFIP) Summary

The following table summarizes the NFIP statistics for the Township of Lafayette.

Table 9.14-4. NFIP Summary

Municipality	# Policies (1)	# Claims (Losses) (1)	Total Loss Payments (2)	# Rep. Loss Prop. (1)	# Severe Rep. Loss Prop. (1)	# Policies in 1% Flood Boundary (3)
Township of Lafayette	12	6	\$125,200	1	0	5

Source: FEMA, 2014

- Note (1) Policies, claims, repetitive loss and severe repetitive loss statistics provided by FEMA and are current as of November 31, 2014 and are summarized by Community Name. Please note the total number of repetitive loss properties excludes the severe repetitive loss properties. The number of claims represents claims closed by 11/31/2014.
- Note (2) Total building and content losses from the claims file provided by FEMA Region 2.
- Note (3) The policies inside and outside of the flood zones is based on the latitude and longitude provided by FEMA Region 2 in the policy file.
- Note (4) 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.
- Note (5) 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 the number of critical facilities, by type, in the community located in the effective FEMA flood zones (1% and 0.2% annual chance boundaries).



**Table 9.14-5. Number of Critical Facilities in the DFIRM 1% and 0.2% Annual Chance Flood Boundaries**

Municipality	0.2% Annual Chance
	DPW
Lafayette, Township of	1

Source: Sussex County; FEMA, 2014

**Other Vulnerabilities Identified by Municipality**

The Township identified the following vulnerable areas in the community:

- Paulinskill River – when the river floods, it impacts State Route 15, Sunset Inn Road, Garrison Road, Decker Road, and Snover Road.
- Areas of steep slope are located throughout the Township
- During periods of heavy rain, many homes in the Township experience basement flooding. The fire department responds to these homes to assist with basement pump outs.

**9.14.5 Capability Assessment**

This section identifies the following capabilities of the local jurisdiction:

- Planning and regulatory capability
- Administrative and technical capability
- Fiscal capability
- Education/Outreach and Community classification
- Self-Assessment of Capability
- 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 Lafayette.

**Table 9.14-6. 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.)
<b>Planning Capability</b>				
Master Plan	Yes	Local	Planning Board	2012
Capital Improvements Plan	Yes	Local	Township Committee	Part of the municipal budget – put away funding for these projects; reviewed/updated annually
Floodplain Management/Basin Plan	No			
Stormwater Management Plan	Yes	Local	Emergency Management / Engineer	Reviewed annually



Table 9.14-6. 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.)
Open Space Plan	Yes	Local	Open Space Commission / Township Committee	Reviewed annually
Stream Corridor Management Plan	No			
Watershed Management or Protection Plan	No			
Economic Development Plan	Yes	Local	Economic Development Subcommittee (Township Committee, Planning Board)	Created subcommittee in 2015 to begin working on this
Comprehensive Emergency Management Plan	Yes	Local	Emergency Management	Reviewed in 2013
Emergency Response Plan	Yes	Local	Emergency Management	Reviewed in 2013
Post-Disaster Recovery Plan	No			
Transportation Plan	Yes	Local		Included in Master Plan
Strategic Recovery Planning Report	No			
Other Plans:	No			
<b>Regulatory Capability</b>				
Building Code	Yes	State and Local	Building Department, Construction Official	State Uniform Construction Code Act (N.J.S. 52:27D-119 et seq.) Chapter 8 – Building and Housing
Zoning Ordinance	Yes	Local	Zoning Officer	Chapter 13 - Zoning
Subdivision Ordinance	Yes	Local	Land Use Board	Chapter 12 – Land Use; Chapter 14 – Land Use Procedures
NFIP Flood Damage Prevention Ordinance	Yes	Federal, State and Local	Construction Official	Chapter 17 – Flood Damage Prevention
NFIP: Cumulative Substantial Damages	No			
NFIP: Freeboard	Yes	State and Local	Construction Official	N.J.A.C 7:13 – Flood Hazard Area Control Act
Growth Management Ordinances	No			
Site Plan Review Requirements	Yes	Local	Site Plan Committee	Chapter 12 – Land Use
Stormwater Management Ordinance	Yes	Local	DPW	Chapter 21 – Stormwater Control
Municipal Separate Storm Sewer System (MS4)	No			
Natural Hazard Ordinance	No			



**Table 9.14-6. 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.)
Post-Disaster Recovery Ordinance	No			
Real Estate Disclosure Requirement	Yes	State	Division of Consumer Affairs	N.J.A.C. 13:45A-29.1
Other [Special Purpose Ordinances (i.e., sensitive areas, steep slope)]	Yes	Local		Ridgeline Preservation

**Administrative and Technical Capability**

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

**Table 9.14-7. Administrative and Technical Capabilities**

Resources	Is this in place? (Yes or No)	Department/Agency/Position
<b>Administrative Capability</b>		
Planning Board	Yes	Land Use Board
Mitigation Planning Committee	No	
Environmental Board/Commission	No	
Open Space Board/Committee	Yes	Open Space Advisory Committee; Recreation Committee
Economic Development Commission/Committee	Yes	In progress of developing – Economic Development Subcommittee
Maintenance Programs to Reduce Risk	Yes	DPW maintains tree trimming, culvert cleaning/repairs
Mutual Aid Agreements	Yes	Surrounding communities
<b>Technical/Staffing Capability</b>		
Planner(s) or Engineer(s) with knowledge of land development and land management practices	Yes	Municipal Engineer and Planner – contracted and appointed each year
Engineer(s) or Professional(s) trained in construction practices related to buildings and/or infrastructure	Yes	Municipal Engineer and Planner – contracted and appointed each year
Planner(s) or Engineer(s) with an understanding of natural hazards	Yes	Municipal Engineer and Planner – contracted and appointed each year
NFIP Floodplain Administrator	Yes	Construction Official
Surveyor(s)	Yes	Contracted when needed
Personnel skilled or trained in GIS and/or Hazus-MH applications	No	
Scientist familiar with natural hazards	No	
Emergency Manager	Yes	
Grant Writer(s)	Yes	Contracted
Staff with expertise or training in benefit/cost analysis	Yes	Contracted
Professionals trained in conducting damage assessments	Yes	Part of emergency management



### Fiscal Capability

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

**Table 9.14-8. Fiscal Capabilities**

Financial Resources	Accessible or Eligible to Use (Yes/No/Don't Know)
Community Development Block Grants (CDBG, CDBG-DR)	No
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	No
Incur debt through special tax bonds	No
Incur debt through private activity bonds	No
Withhold public expenditures in hazard-prone areas	Don't Know
Other Federal or State Funding Programs	Yes
Open Space Acquisition Funding Programs	Yes
Other	No

### Education/Outreach and Community Classifications

The table below summarizes education/outreach programs the community participates in and the classifications for community program available to the Township of Lafayette.

**Table 9.14-9. Education/Outreach and Community Classifications**

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

NP = Not participating;

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 Community Rating System (CRS) class applies to flood insurance while the Building Code Effectiveness Grading Schedule



(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 1,000 feet of a creditable fire hydrant and is within five 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 <http://www.isomitigation.com/ppc/0000/ppc0001.html>
- The National Weather Service Storm Ready website at <http://www.weather.gov/stormready/howto.htm>
- The National Firewise Communities website at <http://firewise.org/>

### Self-Assessment of Capability

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

Table 9.14-10. Self-Assessment of Capability

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 – due to staff duties and some are outsourced		
Fiscal Capability	X – not enough funding		
Community Political Capability		X	
Community Resiliency Capability	X – emergency services are volunteer; employee staff size is not large enough		
Capability to Integrate Mitigation into Municipal Processes and Activities		X	

### National Flood Insurance Program

NFIP Floodplain Administrator (FPA)

ADD INFO FROM FPA HERE

### Flood Vulnerability Summary

ADD INFO FROM FPA HERE

### Resources

ADD INFO FROM FPA HERE







**Compliance History**

ADD INFO FROM FPA HERE

**Regulatory**

ADD INFO FROM FPA HERE

**Community Rating System**

The Township of Lafayette does not participate in the Community Rating System (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**

**Land Use Planning:** The Township has a Land Use Board which reviews all applications for development and consider natural hazard risk areas in their review.

**Regulatory and Enforcement (Ordinances)**

The Township has multiple chapters pertaining to the mitigation of hazards. These ordinances include the Flood Control Chapter, Stormwater Management Chapter, and an Environmental Impact Statement requirement included in the Site Plan Review Chapter. The Township also has a chapter specific to the hazards associated with environmentally sensitive areas.

**Chapter XVII 270: Flood Control**

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 designed:

- A. To protect human life and health;
- B. To minimize expenditure of public money for costly flood control projects;
- C. To minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;
- D. To minimize prolonged business interruptions;
- E. To 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;
- F. To help maintain a stable tax base by providing for the alternate use and development of areas of special flood hazard so as to minimize future flood blight areas;
- G. To ensure that potential buyers are notified that property is in an area of special flood hazard; and
- H. To ensure that those who occupy the areas of special flood hazard assume responsibility for their actions.

**Chapter XXI: Stormwater Control**

The purposed of the Stormwater Control chapter is to implement best management practices for stormwater management designed to promote the public health, safety and general welfare the citizens.





### Operational and Administration

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The Township has established a Joint Land Use Board that are responsible for the review of development applications. The Township has a Zoning officer as well as a planning and zoning board secretary.

### Funding

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**Operating Budget:** The Township's operating budget contains minimal provisions for expected repairs like snow removal and infrastructure repair after a storm or natural disaster.

**Grants:** The Township has received funding from the NJDOT, Sustainable Jersey, The Garden State Preservation Trust Fund, and Clean Communities grant programs for the completion of mitigation and emergency response related projects including roadway and drainage improvements.

### Education and Outreach

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The Township's website's home page posts information regarding upcoming community events and important municipal decisions.

## 9.14.6 Mitigation Strategy and Prioritization

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

### Past Mitigation Initiative Status

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The following table indicates progress on the community's mitigation strategy identified in the 2011 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 9.14-11. Past Mitigation Initiative Status

<b>Initiative Number</b>	<b>2011 Mitigation Action</b>	<b>Responsible Party</b>	<b>Status</b> (In progress, No progress, Complete)	<b>Describe Status</b> 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)?	<b>Next Step</b> (Include in 2016 HMP? or Discontinue)	<b>Describe Next Step</b> 1. If including action in the 2015 HMP, revise/reword to be more specific (as appropriate). 2. If discontinue, explain why.
Lafayette Township 1	Retrofit roof to meet current snow load standards on the Lafayette Fire Company building located on Route 15	Station Commander	Complete	Roof has been replaced and meets current standards	Discontinue	The roof of the fire department has been replaced; therefore, this action will not be included in the plan update.
Lafayette Township 2	Retrofit roof to meet current snow load standards on Lafayette Department of Public Works Garage and Emergency Medical Services located on Morris Farm Road.	Director of Public Works	In Progress	Main DPW roof – no progress Salt shed & equipment storage shed - completed	Include in 2016 HMP	When replacing the roof of the DPW facility, current snow load standards will be incorporated.
Lafayette Township 3	Retrofit roof to meet current snow load standards of Lafayette Township Elementary School located on Beaver Run Road.	School Board Administrator	Complete	New roof in 2012	Discontinue	The roof of the school was replaced; therefore, this action will not be included in the plan update.
Lafayette Township 4	Retrofit Lafayette Township Elementary School with impact resistant windows and shutters. Located on Beaver Run Road.	School Board Administrator	No Progress		Discontinue	This is not a concern for the Township; therefore, this action will not be included in the plan update.
Lafayette Township 5	Retrofit Lafayette Federated Church (shelter) with impact resistant windows and shutters. Located on Route 15.	Facility Administrator	No Progress		Discontinue	This is not a concern for the Township; therefore, this action will not be included in the plan update.
Lafayette Township 6	Implement the Fire Wise Program throughout the township.	OEM Coordinator	No Progress		Discontinue	This is not a concern for the Township; therefore, this action will not be included in the plan update.



<b>Initiative Number</b>	<b>2011 Mitigation Action</b>	<b>Responsible Party</b>	<b>Status</b> (In progress, No progress, Complete)	<b>Describe Status</b> 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)?	<b>Next Step</b> (Include in 2016 HMP? or Discontinue)	<b>Describe Next Step</b> 1. If including action in the 2015 HMP, revise/reword to be more specific (as appropriate). 2. If discontinue, explain why.
Lafayette Township 7	Construct a storm-water runoff management system for Dennis Road and Pellettown Road.	Director of Public Works	Complete		Discontinue	This action has been completed; therefore, it will not be included in the plan update.
Lafayette Township 8	Culvert upgrade and improvement along Decker Road and Snover Road.	Director of Public Works	No Progress	Township road but the culvert is too large and is the responsibility of the County	Include in 2016 HMP	Decker and Snover Roads are owned by the Township; however, the culvert needs to be replaced by the County due to its size. This action will be included in the plan update.
Lafayette Township 9	Stormwater management system upgrade and improvement along Beaver Run Road.	OEM Coordinator	No Progress		Discontinue	County Road; not a major flooding concern for the Township
Lafayette Township 10	Stormwater management system upgrade and improvement along Meadows Road.	OEM Coordinator	Complete	DPW has made the repairs where needed	Discontinue	DPW has made the repairs where needed
Lafayette Township 11	Flood-proofing of the Emergency Medical Service and Fire Company building.	Municipal Fire Chief	No Progress		Discontinue	Not a concern for the Township; the buildings are not impacted by flooding
Lafayette Township 12	Conduct all-hazards public education and outreach program for hazard mitigation and preparedness.	OEM Coordinator, in coordination with SCDEM	In Progress	Ongoing program in the Township	Include in 2016 HMP	



**Completed Mitigation Initiatives not Identified in the Previous Mitigation Strategy**

The Township has identified the following mitigation projects/activities that have also been completed but were not identified in the previous mitigation strategy in the 2011 Plan:

- New retaining wall, drainage and road improvements on Dennis Road – funding through FEMA reimbursement and grant from New Jersey.

**Proposed Hazard Mitigation Initiatives for the Plan Update**

The Township participated in a mitigation action workshop in April 2015 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). FEMA Region 2 and NJOEM led a second workshop in May 2015 and provided the municipalities the results of the risk assessment to further assist with the identification of mitigation actions. Additionally, the Township attended an annex support meeting in October 2015 to identify and finalize mitigation actions for their community.

Table 9.14-11 summarizes the comprehensive-range of specific mitigation initiatives the Township 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 9.14-12 provides a summary of the prioritization of all proposed mitigation initiatives for the Plan update.



Table 9.14-12. Proposed Hazard Mitigation Initiatives

Initiative	Mitigation Initiative	Applies to New and/or Existing Structures*	Hazard(s) Mitigated	Goals Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category	CRS Category
Lafayette-1	Support the mitigation of vulnerable structures via retrofit (e.g. elevation, flood-proofing) or acquisition/relocation to protect structures from future damage, with repetitive loss and severe repetitive loss properties as a priority when applicable. Phase 1: Identify appropriate candidates and determine most cost-effective mitigation option (in progress). Phase 2: Work with the property owners to implement selected action based on available funding and local match availability.											
	See above.	Existing	Flood, Severe Weather Wildfire, Severe Winter Weather	All	Engineering via NFIP FPA with NJOEM, FEMA support	High	High	FEMA Mitigation Grant Programs and local budget (or property owner) for cost share	Ongoing (outreach and specific project identification); Long term DOF (specific project application and implementation)	High	SIP	PP
Lafayette-2	Purchase and install generators at the following locations: <ul style="list-style-type: none"> <li>Township municipal building</li> <li>Township elementary school</li> </ul>	Existing	All	1, 2, 6	OEM, Township Committee	High	Medium	HMGP with local cost share	Short Term / DOF	High	SIP	PP
Lafayette-3	Work with the State of New Jersey to alleviate the flooding of Route 15 from the Paulinskill River.	Existing	Flood, Severe Weather, Severe Winter Weather	All	Township, State of New Jersey	High	Medium to High	State Grants; Municipal Budget	Short Term / DOF	High	SIP	PP
Lafayette-4	Perform regular drainage system maintenance throughout Township. Purchase Vac-All to assist with this maintenance program.	Existing	Flood, Severe Weather, Severe Winter Weather	1, 2, 6	DPW	Medium to High	Low to Medium	Municipal Budget	Ongoing	High	SIP	PP
Lafayette-5	Portable generators and submersible pumps to assist homeowners during periods of flooding; allows fire department to respond to more critical events	Existing	All	1, 2, 6	OEM, Fire Department	High	Medium	Municipal Budget, grant funding where available	Short Term / DOF	Medium	SIP	PP
Lafayette-6	Install, reroute and increase the capability of storm drainage systems throughout the Township.	Existing	Flood, Severe Weather, Severe	1, 2, 5, 6	DPW	Medium	Medium	Municipal Budget, Grant funding	Short Term / DOF	Medium	SIP	PP



**Table 9.14-12. Proposed Hazard Mitigation Initiatives**

Initiative	Mitigation Initiative	Applies to New and/or Existing Structures*	Hazard(s) Mitigated	Goals Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category	CRS Category
			Winter Weather					where available				
Lafayette-7	When it comes time to replacing the roof of the Township DPW facility, current snow load standards will be incorporated into the design of the roof.	Existing	Severe Winter Weather	2, 6	DPW	Medium	Medium to High	Municipal Budget	Long Term	Medium	SIP	PP
Lafayette-8	Work with the County to upgrade culverts along Decker and Snover Roads. Due to the size of culverts, the County needs to do the work.	Existing	Flood, Severe Weather, Severe Winter Weather	1, 2, 5, 6	DPW, County Roads	High	Medium to High	Municipal and County Budgets	Short to Long Term	High	SIP	PP
Lafayette-9	Continue to enhance and develop the all-hazards public education and outreach program for hazard mitigation and preparedness for the Township.	N/A	All	All	Township	High	Low	Municipal Budget	Ongoing	High	EAP, LPR	PI, PR

**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:

- 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
- NJDEP New Jersey Department of Environmental Protection
- NJOEM New Jersey Office of Emergency Management
- 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)
- SRL Severe Repetitive Loss Grant Program (discontinued)

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

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





Costs:

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 reappropriation 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 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 9.14-13. 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 Objectives	Total	High/Medium/Low
Lafayette-1	Support the mitigation of vulnerable structures via retrofit (e.g. elevation, flood-proofing) or acquisition / relocation to protect structures from future damage, with repetitive loss and severe repetitive loss properties as a priority when applicable.	1	1	1	0	0	0	0	1	1	1	1	1	0	0	8	High
Lafayette-2	Purchase and install generators at the following locations: <ul style="list-style-type: none"> <li>Township municipal building</li> <li>Township elementary school</li> </ul>	1	1	1	1	0	0	0	0	1	1	1	1	1	0	9	High
Lafayette-3	Work with the State of New Jersey to alleviate the flooding of Route 15 from the Paulinskill River.	1	1	1	1	0	0	0	1	1	1	1	0	1	0	9	High
Lafayette-4	Perform regular drainage system maintenance throughout Township. Purchase Vac-All to assist with this maintenance program.	1	1	1	1	0	0	0	1	1	1	1	0	1	0	9	High
Lafayette-5	Portable generators and submersible pumps to assist homeowners during periods of flooding; allows fire department to respond to more critical events	1	1	1	1	0	0	0	0	1	1	1	1	1	0	9	Medium
Lafayette-6	Install, reroute and increase the capability of storm drainage systems throughout the Township.	1	1	1	1	0	0	0	1	1	1	1	0	1	0	9	Medium
Lafayette-7	When it comes time to replacing the roof of the Township DPW facility,	1	1	1	1	0	0	0	1	1	1	1	0	1	0	9	Medium

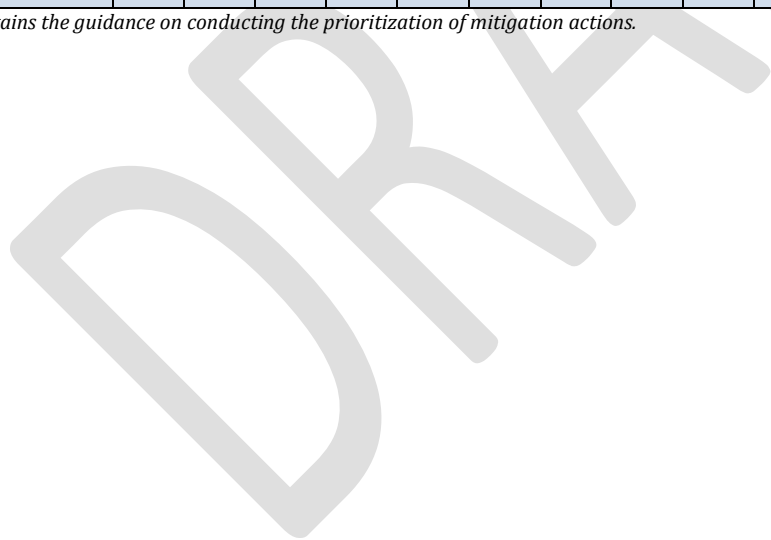




Table 9.14-13. Summary of Prioritization of Actions

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 Objectives	Total	High/Medium/Low
	current snow load standards will be incorporated into the design of the roof.																
Lafayette-8	Work with the County to upgrade culverts along Decker and Snover Roads. Due to the size of culverts, the County needs to do the work.	1	1	1	1	0	0	0	1	1	1	1	0	1	0	9	High
Lafayette-9	Continue to enhance and develop the all-hazards public education and outreach program for hazard mitigation and preparedness for the Township.	1	1	1	1	1	1	1	0	1	1	1	1	0	0	11	High

Note: Refer to Section 6 which contains the guidance on conducting the prioritization of mitigation actions.





#### **9.14.7 Future Needs To Better Understand Risk/Vulnerability**

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None at this time.

#### **9.14.8 Hazard Area Extent and Location**

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

#### **9.14.9 Additional Comments**

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None at this time.

DRAFT



Figure 9.14-1. Township of Lafayette Hazard Area Extent and Location Map 1

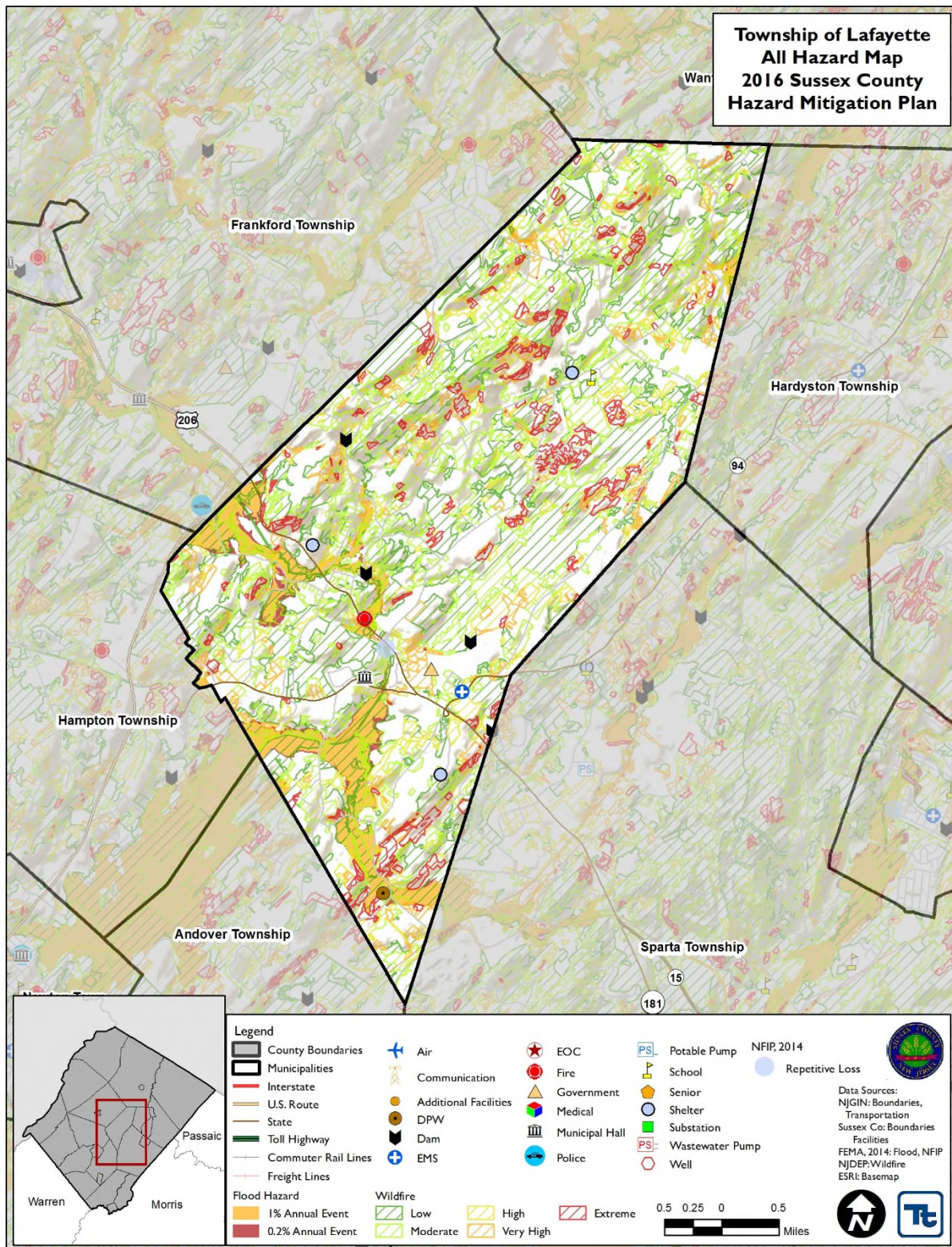
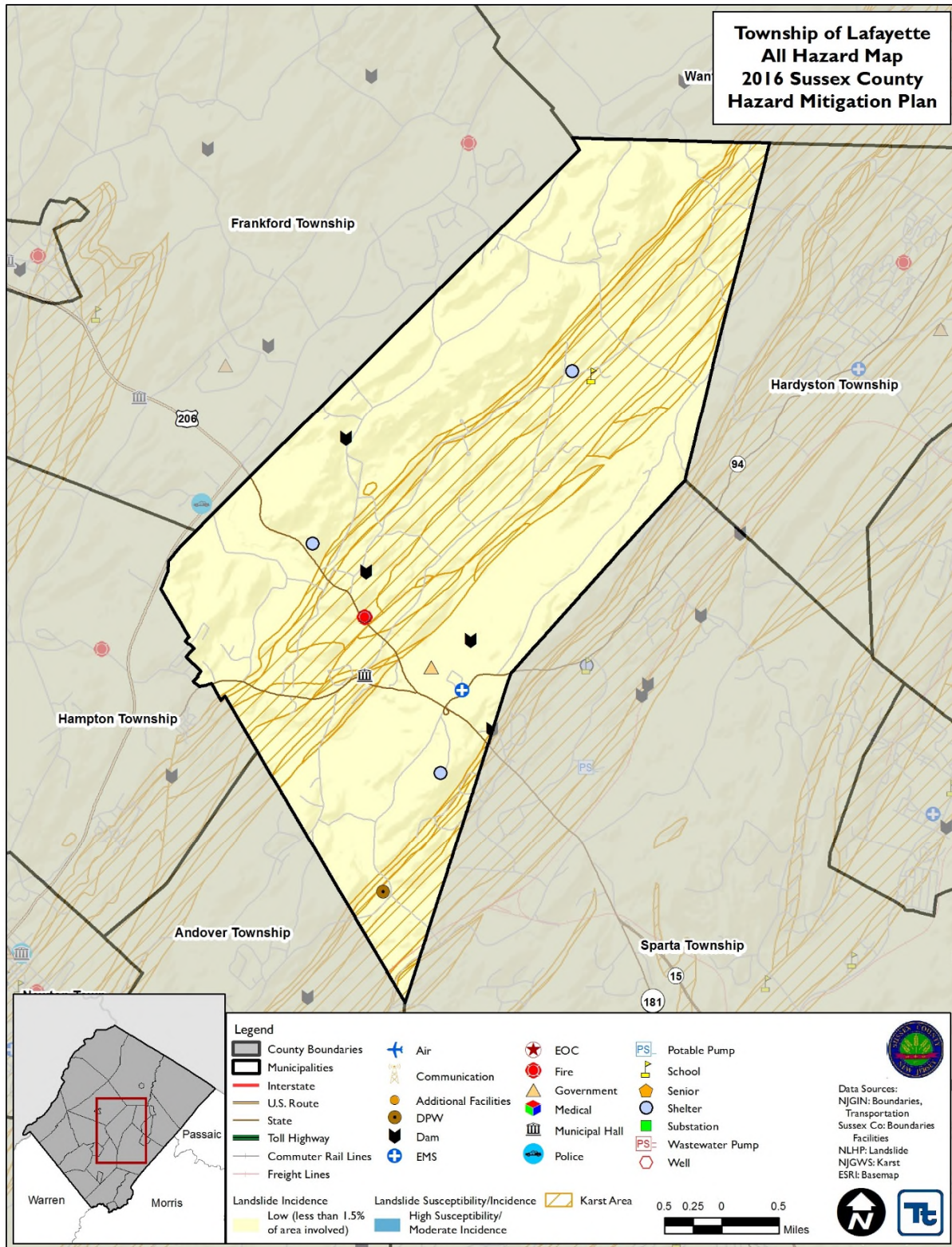




Figure 9.14-2. Township of Lafayette Hazard Area Extent and Location Map 2





**Action Number:** Lafayette-2  
**Mitigation Action/Initiative:** Purchase and install generators at critical facilities

Assessing the Risk	
<b>Hazard(s) addressed:</b>	All
<b>Specific problem being mitigated:</b>	Loss of power to critical facilities in the Township
Evaluation of Potential Actions/Projects	
<b>Actions/Projects Considered (name of project and reason for not selecting):</b>	1. Purchase and install generators at the municipal building and elementary school
	2. Use portable generators – not feasible for longer power outages
	3. Do nothing – current problem continues
Action/Project Intended for Implementation	
<b>Description of Selected Action/Project</b>	Purchase and install generators at the municipal building and elementary school
<b>Action/Project Category</b>	SIP
<b>Goals/Objectives Met</b>	1, 2, 6
<b>Applies to existing and/or new development; or not applicable</b>	Existing
<b>Benefits (losses avoided)</b>	High
<b>Estimated Cost</b>	Medium
<b>Priority</b>	High
Plan for Implementation	
<b>Responsible/Lead Agency/Department</b>	Township OEM and Committee
<b>Local Planning Mechanism</b>	Emergency Operations, Capital Improvement
<b>Potential Funding Sources</b>	HMGP with local cost share
<b>Timeline for Completion</b>	Short Term / DOF
Reporting on Progress	
<b>Date of Status Report/ Report of Progress</b>	Date: Progress on Action/Project:



**Action Number:** Lafayette-2

**Mitigation Action/Initiative:** Purchase and install generators at critical facilities

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Provide shelter for those impacted by power outages
Property Protection	1	Allow Township buildings to function during power outages
Cost-Effectiveness	1	
Technical	1	
Political	0	
Legal	0	
Fiscal	0	
Environmental	0	
Social	1	
Administrative	1	
Multi-Hazard	1	All hazards
Timeline	1	
Local Champion	1	
Other Community Objectives	0	
Total	9	
<b>Priority (High/Med/Low)</b>	<b>High</b>	



**Action Number:** Lafayette-4  
**Mitigation Action/Initiative:** Perform regular drainage system maintenance throughout Township. Purchase Vac-All to assist with this maintenance program.

Assessing the Risk	
<b>Hazard(s) addressed:</b>	Flood, Severe Weather, Severe Winter Weather
<b>Specific problem being mitigated:</b>	Drainage systems in the Township become overwhelmed with debris and during periods of heavy rain, these areas flood. Using a vac-all would help with system maintenance.
Evaluation of Potential Actions/Projects	
<b>Actions/Projects Considered (name of project and reason for not selecting):</b>	1. Perform regular drainage system maintenance throughout Township. Purchase Vac-All to assist with this maintenance program.
	2. Do nothing – current problem continues
	3. No other feasible options were identified
Action/Project Intended for Implementation	
<b>Description of Selected Action/Project</b>	Perform regular drainage system maintenance throughout Township. Purchase Vac-All to assist with this maintenance program.
<b>Action/Project Category</b>	SIP
<b>Goals/Objectives Met</b>	1, 2, 6
<b>Applies to existing and/or new development; or not applicable</b>	Existing
<b>Benefits (losses avoided)</b>	Medium to High
<b>Estimated Cost</b>	Low to Medium
<b>Priority</b>	High
Plan for Implementation	
<b>Responsible/Lead Agency/Department</b>	DPW
<b>Local Planning Mechanism</b>	Stormwater Management
<b>Potential Funding Sources</b>	Municipal Budget; Grant funding where available
<b>Timeline for Completion</b>	Ongoing
Reporting on Progress	
<b>Date of Status Report/ Report of Progress</b>	Date: Progress on Action/Project:





**Action Number:** Lafayette-4

**Mitigation Action/Initiative:** Perform regular drainage system maintenance throughout Township. Purchase Vac-All to assist with this maintenance program.

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	
Property Protection	1	Protect areas in the Township from flooding and damages from floods
Cost-Effectiveness	1	
Technical	1	
Political	0	
Legal	0	
Fiscal	0	
Environmental	1	
Social	1	
Administrative	1	
Multi-Hazard	1	Flood, Severe Weather, Severe Winter Weather
Timeline	0	
Local Champion	1	
Other Community Objectives	0	
Total	9	
<b>Priority (High/Med/Low)</b>	<b>High</b>	



**Action Number:** Lafayette-5  
**Mitigation Action/Initiative:** Portable generators and submersible pumps to assist homeowners during periods of flooding

Assessing the Risk	
<b>Hazard(s) addressed:</b>	All
<b>Specific problem being mitigated:</b>	Fire department responds to all calls related to flooded basements. They only have a set number of pumps. While attending to these calls, there is less availability for more crucial events.
Evaluation of Potential Actions/Projects	
<b>Actions/Projects Considered (name of project and reason for not selecting):</b>	1. Purchase portable generators and submersible pumps to assist homeowners during periods of flooding.
	2. Do nothing – current problem continues
	3. No other feasible options were identified
Action/Project Intended for Implementation	
<b>Description of Selected Action/Project</b>	Purchase portable generators and submersible pumps to assist homeowners during periods of flooding. This will alleviate the need of the fire department to conduct basement pump outs and be available for more critical events.
<b>Action/Project Category</b>	SIP
<b>Goals/Objectives Met</b>	1, 2, 6
<b>Applies to existing and/or new development; or not applicable</b>	Existing
<b>Benefits (losses avoided)</b>	High
<b>Estimated Cost</b>	Medium
<b>Priority</b>	Medium
Plan for Implementation	
<b>Responsible/Lead Agency/Department</b>	OEM, Fire Department
<b>Local Planning Mechanism</b>	Emergency Operations
<b>Potential Funding Sources</b>	Municipal Budget; Grant Funding where available
<b>Timeline for Completion</b>	Short Term / DOF
Reporting on Progress	
<b>Date of Status Report/ Report of Progress</b>	Date: Progress on Action/Project:



**Action Number:** Lafayette-5

**Mitigation Action/Initiative:** Portable generators and submersible pumps to assist homeowners during periods of flooding

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Provide assistance to homes with flooded basements
Property Protection	1	
Cost-Effectiveness	1	
Technical	1	
Political	0	
Legal	0	
Fiscal	0	
Environmental	0	
Social	1	
Administrative	1	
Multi-Hazard	1	Flood, Severe Weather
Timeline	1	
Local Champion	1	
Other Community Objectives	0	
Total	9	
<b>Priority (High/Med/Low)</b>	<b>Medium</b>	