



9.2 Township of Allamuchy

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

9.2.1 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
Anne Marie Tracy, Clerk/Administrator Municipal Building – Alphano Road, Box A, Allamuchy, NJ (908) 852-5132 ext. 110 municipalclerk@allamuchynj.org	Paul Sterbenz, Municipal Engineer/Planning Municipal Building – Alphano Road, Box A, Allamuchy, NJ (908) 238-0900 psterbenz@maserconsulting.com

9.2.2 Municipal Profile

The Township of Allamuchy is located in Warren County along the Pequest River and found within the New Jersey Highlands Region. It was incorporated as Township on April 4, 1873 from portions of Independence Township. Within the Township, there are several unincorporated communities: Long Bridge, Allamuchy, Villa Madonna, Weritown, Alphano, and Saxton Falls. According to the U.S. Census, the 2010 population for Township of Allamuchy was 4,323.

The Township of Allamuchy encompasses 20.3 square miles in eastern Warren County and Township is bordered to the north by the Township of Frelinghuysen and Sussex County, to the south by the Township of Independence, to the east by Morris County, and to the west by the Townships of Frelinghuysen and Independence. The Musconetcong River bounds the Township along the east, which separates the municipality from Morris County. The Pequest River flows through the northerly portion of the Township. Bear Creek and Trout Brook are major tributaries of the Pequest River in 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 map in section 9.2.8 of this annex which illustrates the hazard areas along with the location of potential new development.

Table 9.2-1. Growth and Development

Property or Development Name	Type (e.g. Res., Comm.)	# of Units / Structures	Address	Block / Lot	Known Hazard Zone(s)	Description/Status of Development
Recent Development from 2010 to Present						
Village of Bowers Glen Major Subdivision	Res.	128	Bald Eagle Road	Block 701.02	N/A	Most of the development has been built. There are approx. 20 building lots that remain in the development.
Mountain Ridge at Panther Valley	Res.	372	Mallard Drive	Block 711	Flood: 0.2% Chance	Approx. 200 units have been built to date. Build out is expected by 2017 or 2018.
Known or Anticipated Development in the Next Five (5) Years						
None identified.						

* Only location-specific hazard zones or vulnerabilities identified.





9.2.3 Natural Hazard Event History Specific to the Municipality

Warren 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 at the municipal level, is presented in the table below. This summary is based on reference material or local sources. For further details on these and additional events, refer to Volume I, Section 5.0 of this plan.

Table 9.2-1. 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	There were evacuations of multiple Old Farm development units after a mudslide and the Township provided shelter for over 50 people during the height of the storm. Downed trees and wires occurred throughout the Township. DPW cleared roads and Fire detoured traffic and responded to downed wires, pump outs, as well as a serious mudslide. Roads were closed due to the downed trees and power lines and power was out for up to 10 days. A retention basin dam collapsed which ruined a roadway, compromising underground wires and spreading water and mud into multiple condo units.
October 26 – November 8, 2012	Hurricane Sandy	DR-4086	Yes	The Township experienced downed trees and wires. DPW cleared roads and Fire detoured traffic and responded to downed wires, and pump outs. Shelter was provided for one person. There were numerous road closures due to the downed trees and wires; power outages for up to 10 days.

9.2.4 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 Allamuchy. 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 Allamuchy.

Table 9.2-2. 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
Dam Failure	Damage estimate not available		Frequent	36	High
Drought	Damage estimate not available		Frequent	30	Medium
Earthquake	100-Year GBS:	\$0	Occasional	28	Medium
	500-Year GBS:	\$251,403			
	2,500-Year GBS:	\$4,173,652			
Flood	1% Annual Chance:	\$1,827,370	Frequent	18	Medium
Geologic	RCV Exposed to Carbonate Rock Areas:	\$148,772,766	Frequent	45	High
Hurricane	100-year MRP:	\$365,755	Frequent	48	High
	500-year MRP:	\$1,733,557			
	Annualized:	\$20,919			
Nor'Easter	Damage estimate not available		Frequent	48	High
Severe Storm	100-Year MRP:	\$365,755	Frequent	48	High
	500-year MRP:	\$1,733,557			
	Annualized:	\$20,919			
Severe Winter Storm	1% GBS:	\$3,719,289	Frequent	51	High
	5% GBS:	\$18,596,447			
Wildfire	Estimated Value in the Extreme, Very High, and High Hazard Areas:	\$18,486,880	Frequent	24	Medium
Hazardous Materials	Damage estimate not available		Frequent	36	High

Notes:

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 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 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 2.2 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 Allamuchy.

Table 9.2-3. 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)
Allamuchy, Township of	11	2	\$15,033	0	0	1

Source: FEMA, 2014

Note (1) Policies, claims, repetitive loss and severe repetitive loss statistics provided by FEMA and are current as of December 31, 2014 and are summarized by Community Name. Please note the total number of repetitive loss properties excludes the severe repetitive loss properties. Number of claims includes open and closed claims. The number of claims represents claims closed by 12/31/2014.

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

There are no critical facilities located in the FEMA 1% or 0.2% annual chance boundary.

Other Vulnerabilities Identified by Municipality

The hazard profiles in Section 5.0 of this plan have detailed information regarding each plan participant’s vulnerability to the identified hazards. Further, mitigation projects have been identified that may more specifically detail vulnerabilities in the community. There are no additional vulnerabilities identified at this time.

9.2.5 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 Allamuchy.



Table 9.2-4. 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	State / Local	Planning Board	NJSA40:55-D89 2013 Reexamination of Allamuchy Twp. Master Plan
Capital Improvements Plan	Yes	Local	Engineering	
Floodplain Management / Basin Plan	Yes	State / Local	Zoning Officer	Chapter 166 Flood Damage Prevention
Stormwater Management Plan	Yes, 2005	State / Local	Planning Board	Chapter 264 Stormwater Mgmt.
Open Space Plan	Yes	Local	Planning Board	4/2000 Open Space & Recreation
Stream Corridor Management Plan	No			
Watershed Management or Protection Plan	No			
Economic Development Plan				
Comprehensive Emergency Management Plan	Yes	County and Local	OEM	Emergency Operations Plan (EOP)
Emergency Operation Plan	Yes	Local		Emergency Operations Plan (EOP)
Post-Disaster Recovery Plan	No			
Transportation Plan	No			
Strategic Recovery Planning Report	No			
Other Plans:				
Regulatory Capability				
Building Code	Yes	State & Local		State Uniform Construction Code Act (N.J.S. 52:27D-119 et seq.)
Zoning Ordinance	Yes 2013	Local	Planning Board	Chapter 190 Zoning and Land Use
Subdivision Ordinance	Yes 2013	Local	Planning Board.	Chapter 190 Zoning and Land Use
NFIP Flood Damage Prevention Ordinance	Yes, 2011	Federal, State, Local	Zoning Officer	Chapter 166 Flood Damage Prevention
NFIP: Cumulative Substantial Damages				
NFIP: Freeboard	Yes	State, Local	Zoning Officer	Chapter 166 Flood Damage Prevention
Growth Management Ordinances				
Site Plan Review Requirements	Yes, 2013	Local	Planning Board	CHAPTER 190 ZONING & LAND USE
Stormwater Management Ordinance	Yes, 2006	Local	Planning Board	CHAPTER 264 STORMWATER MGMT.
Municipal Separate Storm Sewer System (MS4)	Yes, 2006	Local	Twp. Engineer Planning Board	CHAPTER 264: SEWERS – PART OF 2006 STORMWATER MGMT. PLAN
Natural Hazard Ordinance	No			
Post-Disaster Recovery Ordinance				



Table 9.2-4. 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.)
Real Estate Disclosure Requirement				
Other [Special Purpose Ordinances (i.e., sensitive areas, steep slope)]	Yes, 2013	Local	Planning Board Constr. Official	CHAPTER 190 MUN. CODE

Administrative and Technical Capability

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

Table 9.2-5. Administrative and Technical Capabilities

Resources	Is this in place? (Yes or No)	Department/ Agency/Position
Administrative Capability		
Planning Board	Yes	PLANNING NJSA 40:55D
Mitigation Planning Committee	No	
Environmental Board/Commission	Yes	PLANNING CHAPTER 10 MUN. CODE
Open Space Board/Committee	Yes	PLANNING
Economic Development Commission/Committee	Yes	GOVERNING BODY
Maintenance Programs to Reduce Risk	Yes	
Mutual Aid Agreements	Yes	POLICE, FIRE
Technical/Staffing Capability		
Planner(s) or Engineer(s) with knowledge of land development and land management practices	Yes	ENGINEER/PLANNER PAUL STERBENZ – MASER CONSULTING P.A.
Engineer(s) or Professional(s) trained in construction practices related to buildings and/or infrastructure	Yes	MASER CONSULTING
Planners or engineers with an understanding of natural hazards	Yes	PLANNER/ENGINEER PAUL STERBENZ
NFIP Floodplain Administrator	Yes	David Diehl, Zoning Official
Surveyor(s)	Yes	ENGINEER’S OFFICE – COUNCIL
Personnel skilled or trained in GIS and/or Hazus-MH applications	Yes	ENGINEER’S OFFICE
Scientist familiar with natural hazards	Yes	ENGINEER – COUNCIL
Emergency Manager	Yes	CONSTRUCTION OFFICIAL/ENGINEER/COUNCIL
Grant Writer(s)	Yes	CONSTRUCTION OFFICIAL/ENGINEER/COUNCIL
Staff with expertise or training in benefit/cost analysis	No	
Professionals trained in conducting damage assessments	No	

Fiscal Capability

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





Table 9.2-6. 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	No
Authority to Levy Taxes for specific purposes	Yes
User fees for water, sewer, gas or electric service	Yes (water and sewer)
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	No
Incur debt through private activity bonds	No
Withhold public expenditures in hazard-prone areas	No
Other Federal or State Funding Programs	Yes
Open Space Acquisition Funding Programs	Yes
Other	N/A

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 Allamuchy.

Table 9.2-7. 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	N/A
Building Code Effectiveness Grading Schedule (BCEGS)	No	NP	N/A
Public Protection (ISO Fire Protection Classes 1 to 10)	Yes	4	3/15
Storm Ready	No	NP	N/A
Firewise	No	NP	N/A
Disaster/Safety Programs in/for Schools	Yes	N/A	N/A
Organizations with Mitigation Focus (advocacy group, non-government)	No	N/A	N/A
Public Education Program/Outreach (through website, social media)	Yes	Stormwater/ Env. Educat.	N/A
Public-Private Partnerships	N/A	N/A	N/A

N/A = Not applicable; 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 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 <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 Allamuchy’s capability to work in a hazard-mitigation capacity and/or effectively implement hazard mitigation strategies to reduce hazard vulnerabilities.

Table 9.2-8. Self-Assessment of Capability

Area	Degree of Hazard Mitigation Capability		
	Limited (If limited, what are your obstacles?)	Moderate	High
Planning and Regulatory Capability	Budget/ Staff Size		
Administrative and Technical Capability	Budget/ Staff Size		
Fiscal Capability	Budget		
Community Political Capability		Many Volunteers	
Community Resiliency Capability		Residents Involved	
Capability to Integrate Mitigation into Municipal Processes and Activities.	Budget/ Staff Size		

National Flood Insurance Program

NFIP Floodplain Administrator (FPA)

David Diehl, Zoning Official

Flood Vulnerability Summary

The Township maintains lists/inventories of properties that have been damaged by floods. For those properties interested in mitigation (acquisition/elevation), funding would be provided by the property owner, flood insurance, ICC and grant funding.

Resources

NFIP administration services and functions the FPA provides includes permits and inspections. The Township does not provide any education or outreach to the community regarding flood hazards/risk or flood risk reduction. The FPA indicated that there are barriers to running an effective floodplain management program that includes limited staff and funding. The FPA does feel adequately supported and trained to fulfill his responsibilities as the municipal FPA. The FPA would consider attending education and/or certification training on floodplain management if it were offered.





Compliance History

The Township is currently in good standing with the NFIP.

Regulatory

The Township's floodplain management ordinances meets the FEMA and state minimum requirements. It is found in Chapter 166 of the municipal code and is in accordance with a model ordinance provided by the State of New Jersey in 2011. Additionally, the Township has provisions in their land use code (Chapter 190) to restrict development in certain areas such as floodplains, steep slopes, etc.

Community Rating System

The Township of Allamuchy does not participate in the Community Rating System (CRS) program. The Township has considered joining and would attend an informational seminar if offered locally.

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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

The Township is located in both the Highlands Planning and Preservation Areas; the goals of the 2011 Highlands Master Plan Element include to protect, restore and enhance the quality and quantity of surface and groundwater, to preserve extensive and contiguous areas of land in its natural state, to promote the conservation of water resource, and to promote brownfield remediation and redevelopment if possible. Many objectives are aimed to protect forest resources, open water and riparian areas, steep slopes, critical habitats, water resources and prime groundwater recharge areas. The Plan proposes to prohibit certain land uses in these areas in addition to land located above carbonate bedrock.

The 2005 Stormwater Management Plan was adopted as a means to reduce the impacts on public health and the infrastructure by flooding caused by stormwater runoff, as well as increased soil erosion and nonpoint source pollution. Mitigation actions include changes to existing ordinances and adoption of new ordinances. All new development must be able to manage any increases in stormwater runoff on-site; mitigation projects off-site will not be permitted as a replacement.

Regulatory and Enforcement (Ordinances)

The Township has multiple ordinances pertaining to the mitigation of hazards. These ordinances include the NFIP Flood Damage Prevention Ordinance, a stormwater management ordinance, ordinances fire and flood damage prevention, and a hazardous substance cleanup ordinance. The Township's ordinances are available on-line via the ecode website: <http://www.ecode360.com/AL0810>

The Township encourages the consideration of low occupancy, low-density zoning in hazard areas when practical. The Township also limits development in high hazard areas. When updating the municipal ordinances, hazard mitigation is and will continue to be a priority. When reviewing permits, the process includes addressing hazards in the Township. Hazard resistant construction standards are incorporated into the design and location of projects as well. The Township's rezoning procedures also recognize hazard areas as limits on zoning changes.

Operational and Administration

The Township has established a Land Use Board and Environmental Commission that aid in planning decisions to support the conservation and preservation of the Township's critical environmental features.

Funding

There is no line-item in the municipal budget for mitigation project funding. However, in the past, the Township has used local funds to implement mitigation projects. No FEMA funding has been used in the past to fund mitigation activities.

Education and Outreach

The Township is currently working on a public outreach program to inform its citizens on hazards. The Township conducts public outreach through the issuance of periodic newsletters, the placement of information on its



website, and the dissemination of information at public meetings. The Township is also a participant in a Reverse 911 Notification System.

This action has been included in their mitigation strategy. Refer to action ‘Allamuchy-4’ in Table 9.2-10 for details regarding this mitigation action.

9.2.6 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 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.

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Table 9.2-9. Past Mitigation Initiative Status

2010 Mitigation Action	Responsible Party	Status (In progress, No progress, Complete)	Description of 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 Step (Include in 2016 HMP, Discontinue)	Description of Next Step(s) 1. If including action in the 2016 HMP, revise/reword to be more specific (as appropriate). 2. If discontinue, explain why
Stream-bank stabilization of the Musconetcong River for one mile along Waterloo Road.	Department of Public Works (DPW) Supervisor	No Progress	1. 0 % complete 2. Budget and personnel constraints have restricted this action from moving forward 3. No funding secured	Discontinue	The town does not have the resources or the authority for this project along a protected watershed; therefore, it will not be included in the 2016 HMP.
Implement Fire Wise Program for the Township.	Township OEM	In Progress	1. 0 % completed 2. Personnel constraints have prevented this project from moving forward 3. No funding secured	Include in 2016 HMP	Due to personnel constraints, this project has not been completed. The Townships hopes to implement a limited Fire Wise program; therefore, this project will be included in the 2016 HMP.
Conduct all hazards public education and outreach program for hazard mitigation and preparedness.	Warren County OEM, Township OEM	In Progress	1. 50 % completed 2. 3.	Include in 2016 HMP	The Township is currently working on this initiative and will continue to do so. Therefore, this action will be included in the 2016 HMP.

OEM = Office of Emergency Management.



Completed Mitigation Initiatives not Identified in the Previous Mitigation Strategy

There are no additional mitigation projects/activities identified that have also been completed but were not identified in the previous mitigation strategy in the 2011 Plan.

Proposed Hazard Mitigation Initiatives for the Plan Update

The County hosted a mitigation action workshop in March 2015 where the following FEMA publications were provided to all plan participants to use as a resource as part of the municipal 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). In May 2015, the Township participated in a second workshop led by FEMA Region 2 and NJOEM and was provided the results to the risk assessment to further assist with the identification of mitigation actions.

Table 9.2-10 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.’ Table 9.2-11 summarizes the evaluation of each mitigation initiative, listed by Action Number.



Table 9.2-10. 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
Allamuchy-1	Construct an emergency access ramp to Interstate 80 to expedite emergency vehicular response	Existing	All	1, 6	Township OEM	High	High	NJ DOT, County OEM, Local Budget	Short Term	Medium	SIP	PP, ES
Allamuchy-2	Emergency generator for DPW garage	Existing	All	1, 2, 6	Township DPW	Medium	Medium	Local Budget and County OEM	Short Term	Medium	SIP	PP
Allamuchy-3 (old)	Implement the Fire Wise Program for the Township.	New and Existing	Wildfire	All	Township OEM	High	Low	NJ Forest Fire Service, Local Budget	Short Term / DOF	High	LPR	PR, PP
Allamuchy-4 (old)	Conduct all hazards public education and outreach program for hazard mitigation and preparedness.	N/A	All	All	Township and County OEMs	High	Low	HMGP with local cost share	Short Term / Ongoing	High	LPR, EAP	PR, PI

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
 HMA Hazard Mitigation Assistance Program

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





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 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:

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 9.2-11. 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
Allamuchy-1	Emergency access ramp to Interstate 80	1	1	0	1	0	0	-1	0	0	0	1	1	1	0	5	Medium
Allamuchy-2	Emergency generator for DPW garage	0	1	1	0	0	0	1	0	0	0	0	1	1	0	5	Medium
Allamuchy-3 (old)	Implement Fire Wise Program for the Township.	1	1	1	1	1	1	0	0	1	1	0	0	0	0	8	High
Allamuchy-4 (old)	Conduct all hazards public education and outreach program for hazard mitigation and preparedness.	1	1	1	1	1	1	0	0	1	1	0	0	0	0	8	High

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





9.2.7 Future Needs To Better Understand Risk/Vulnerability

None at this time.

9.2.8 Hazard Area Extent and Location

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

9.2.9 Additional Comments

None at this time.

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Figure 9.2-1. Township of Allamuchy Hazard Area Extent and Location Map 1

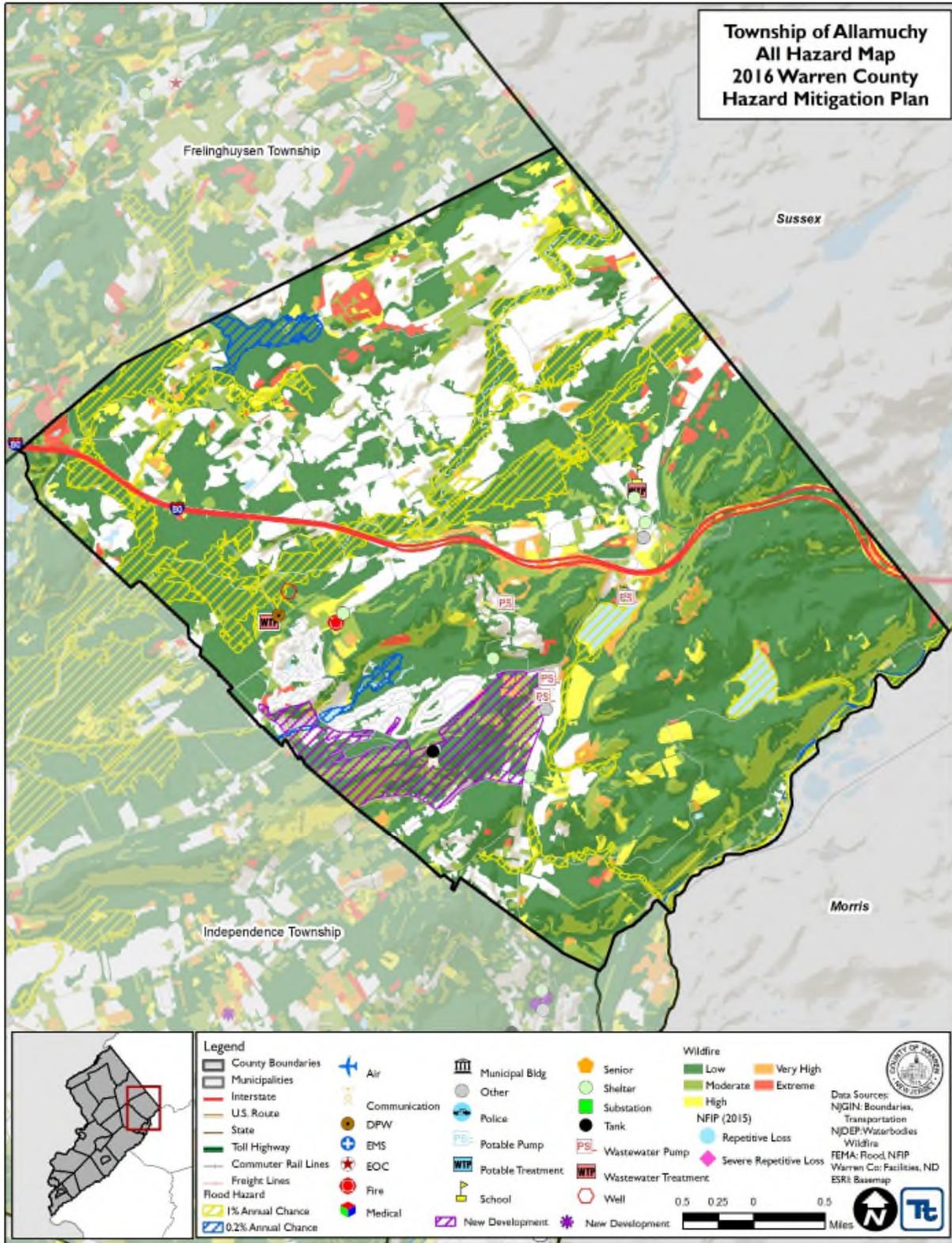
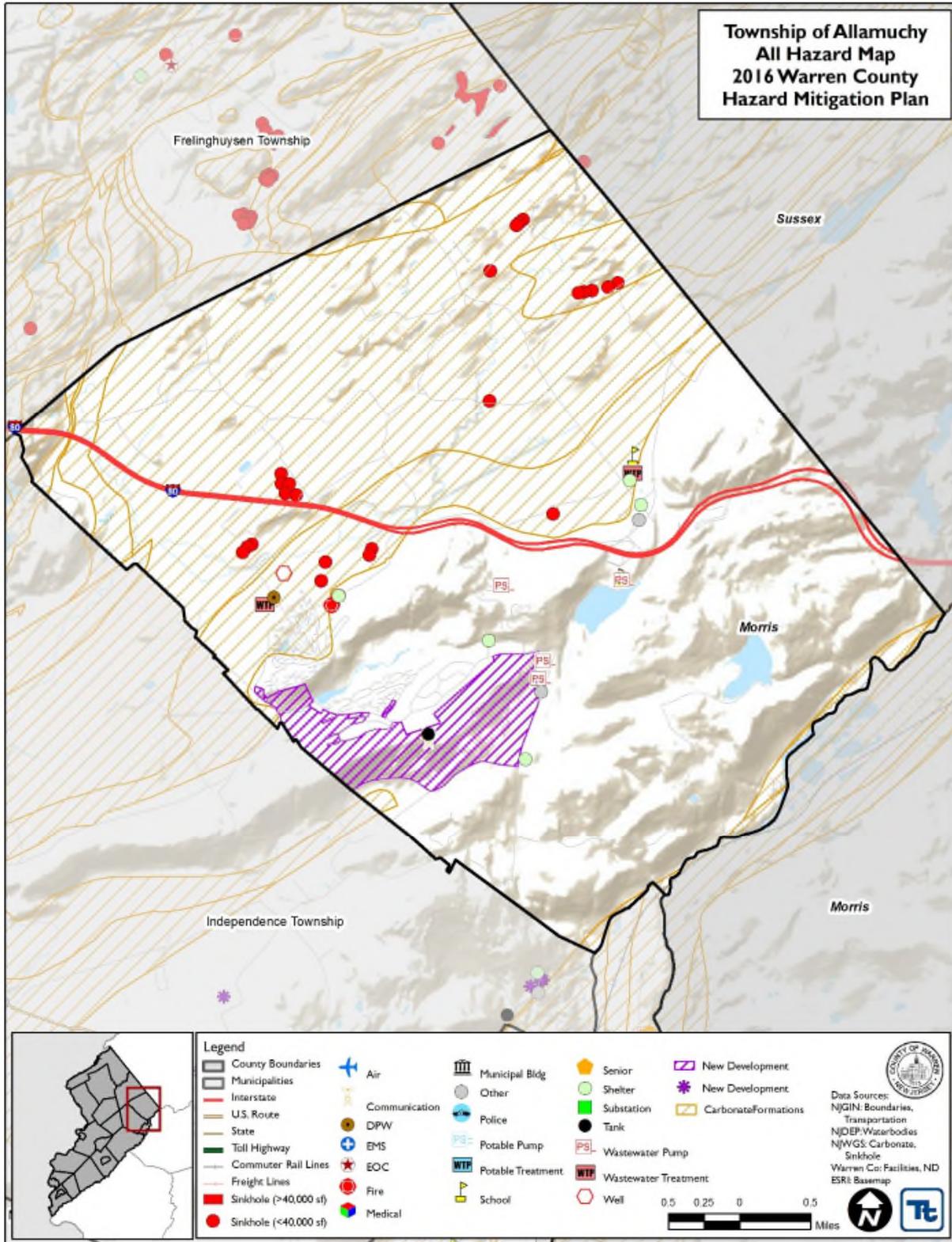




Figure 9.2-2. Township of Allamuchy Hazard Area Extent and Location Map 2





Action Number: Allamuchy-1
Mitigation Action/Initiative: Emergency Access Ramp to Route 80

Assessing the Risk	
Hazard(s) addressed:	All
Specific problem being mitigated:	Need for quicker access to Route 80 in the event of an emergency
Evaluation of Potential Actions/Projects	
Actions/Projects Considered (name of project and reason for not selecting):	1. Build emergency access road for Route 80
	2. Do nothing – current problem continues
	3. No other feasible options were identified
Action/Project Intended for Implementation	
Description of Selected Action/Project	Build an emergency access road to provide access for Township emergency personnel (EMS and Fire) onto Route 80 eastbound at the Alphano Bridge Road
Action/Project Category	SIP
Goals/Objectives Met	1, 6
Applies to existing and/or new development; or not applicable	Existing
Benefits (losses avoided)	High – protect life; allows for faster emergency vehicle response
Estimated Cost	High (\$500,000)
Priority*	Medium
Plan for Implementation	
Responsible/Lead Agency/Department	Township OEM
Local Planning Mechanism	Emergency Management
Potential Funding Sources	State DOT, County OEM, Township
Timeline for Completion	Short Term
Reporting on Progress	
Date of Status Report/ Report of Progress	Date: Progress on Action/Project:



Action Number: Allamuchy-1

Mitigation Action/Initiative: Emergency Access Ramp to Route 80

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Faster response to Route 80 MUAs
Property Protection	1	Faster response to Route 80 fires
Cost-Effectiveness	0	
Technical	1	
Political	0	
Legal	0	
Fiscal	-1	Out of township budget range
Environmental	0	
Social	0	
Administrative	0	
Multi-Hazard	1	
Timeline	1	
Local Champion	1	Township fire, EMS and OEM
Other Community Objectives	0	
Total	5	
Priority (High/Med/Low)	Medium	



Action Number: Allamuchy-2

Mitigation Action/Initiative: Emergency generator for DPW garage

Assessing the Risk	
Hazard(s) addressed:	All
Specific problem being mitigated:	Lack of emergency power for a vital Township resource
Evaluation of Potential Actions/Projects	
Actions/Projects Considered (name of project and reason for not selecting):	1. Purchase and install generator at DPW building/complex
	2. Do nothing – current problem continues
	3. No other feasible options were identified
Action/Project Intended for Implementation	
Description of Selected Action/Project	Purchase and install an emergency generator to power the DPW building/complex in the event of a power outage
Action/Project Category	SIP
Goals/Objectives Met	1, 6
Applies to existing and/or new development; or not applicable	Existing
Benefits (losses avoided)	Medium – support continuity of operations pre- and post-disaster
Estimated Cost	Medium (\$30,000)
Priority*	Medium
Plan for Implementation	
Responsible/Lead Agency/Department	Township DPW
Local Planning Mechanism	Emergency Management
Potential Funding Sources	County OEM, Township
Timeline for Completion	Short Term
Reporting on Progress	
Date of Status Report/ Report of Progress	Date: Progress on Action/Project:



Action Number: Allamuchy-2

Mitigation Action/Initiative: Emergency generator for DPW garage

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	0	
Property Protection	1	Allow for easier DPW actions when there is no power
Cost-Effectiveness	1	
Technical	0	
Political	0	
Legal	0	
Fiscal	1	
Environmental	0	
Social	0	
Administrative	0	
Multi-Hazard	0	
Timeline	1	
Local Champion	1	Allamuchy DPW and OEM
Other Community Objectives	0	
Total	5	
Priority (High/Med/Low)	Medium	