



9.8 TOWNSHIP OF CHESTER

This section presents the jurisdictional annex for the Township of Chester. The annex includes a general overview of the Township of Chester; an assessment of the Township of Chester’s risk, vulnerability, and mitigation capabilities; and a prioritized action plan to implement prior to a disaster to reduce future losses and achieve greater resilience to natural hazards.

9.8.1 Hazard Mitigation Planning Team

The following individuals are the Township of Chester’s identified HMP update primary and alternate points of contact and NFIP Floodplain Administrator.

Table 9.8-1. Hazard Mitigation Planning Team

Primary Point of Contact	Alternate Point of Contact
Bruce Ellmann, Emergency Management Coordinator 1 Parker Road, Chester, NJ 07930 (908) 879-5514 oem@chestertownship.org	Robin Collins, Clerk/Administrator 1 Parker Road, Chester, NJ 07930 (908) 879-5100 x810 rcollins@chestertownship.org
NFIP Floodplain Administrator	
Dorrie Fox, Planning & Zoning Administrator 1 Parker Road, Chester, NJ 07930 (908) 879-5100 x823 dfox@chestertownship.org	

9.8.2 Jurisdiction Profile

Chester Township is located in southwestern Morris County and is bordered to the north by Roxbury Township, to the south by Somerset County, to the east by Mendham Township, and to the west by Washington Township. There are several parks and preserves located in the Township and include: Chubb Park, Tiger Brook Park, Hacklebarney State Park, and the Black River Fish and Wildlife Management Area. Approximately 12 square miles of the Township is permanently protected from development. Within the Township are three hamlets: Pleasant Hill, Milltown, and Hacklebarney. The Lamington River and its tributary, Burnett Brook, Drakes Brook (tributary), Herzog Brook, Peapack Brook, and Gladstone Brook all flow through the Township.

The Township of Chester is located within the NJ Highlands Region which is an area of 859,358 acres located in the northwest part of the State. The NJ Highlands Planning Act (Highlands Act, P.L. 2004, c.120) provided the statutory authority for the development of the Highlands Regional Plan which established specific boundaries as the Preservation Area and the Planning Area within the Highlands Region with the goal of protecting the natural and cultural resources of the Highlands Region while striving to accommodate a sustainable economy. The fundamental difference between these two areas is that municipal and county conformance with the Regional Plan is required for communities in the Preservation Area but voluntary for those in the Planning Area. The plan provides minimum standards governing municipal master planning, development regulations, and other regulations concerning the development and use of land, including standards for minimum lot sizes and stream setbacks, construction on steep slopes, maximum appropriate population densities, and regulated or prohibited uses for specific portions of the Preservation Area. Of the Township’s 18,698 acres 2,904 are located in the Highlands Planning Area and 15,790 are located in the Highlands Preservation Area.



According to the U.S. Census, the 2010 population for the Township of Chester was 7,838. The estimated 2017 population was 7,931, a 1.2 percent increase from the 2010 Census. Data from the 2017 U.S. Census American Community Survey indicate that 4.2 percent of the population is 5 years of age or younger and 13.8 percent is 65 years of age or older. Communities must deploy a support system that enables all populations to safely reach shelters or to quickly evacuate a hazard area.

9.8.3 Growth/Development Trends

Understanding how past, current, and projected development patterns have or are likely to increase or decrease risk in hazard areas is a key component to understanding a jurisdiction's overall risk to its hazards of concern. Table 9.8-2 summarizes recent and expected future development trends, including major residential/commercial development and major infrastructure development. Figure 9.8-1 and 9.8-2 at the end of this annex illustrate the geographically-delineated hazard areas and the location of potential new development.

Table 9.8-2. Recent and Expected Future Development

Type of Development	2014	2015	2016	2017	2018
Number of Building Permits for New Construction Issued Since the Previous HMP					
Single Family	-	3	3	2	2
Multi-Family	-	0	0	0	0
Other (commercial, mixed-use, etc.)	-	2	3	3	2
Property or Development Name	Type of Development	# of Units / Structures	Location (address and/or block and lot)	Known Hazard Zone(s)*	Description / Status of Development
Recent Major Development and Infrastructure from 2015 to Present					
-	-	-	-	-	-
Known or Anticipated Major Development and Infrastructure in the Next Five (5) Years					
No major development is anticipated					

* Only location-specific hazard zones or vulnerabilities identified.

9.8.4 Capability Assessment

The Township of Chester performed an inventory and analysis of existing capabilities, plans, programs, and policies that enhance its ability to implement mitigation strategies. Section 5 (Capability Assessment) describes the components included in the capability assessment and their significance for hazard mitigation planning. This section summarizes the following findings of the assessment:

- An assessment of legal and regulatory capabilities.
- Development and permitting capabilities.
- An assessment of fiscal capabilities.
- An assessment of education and outreach capabilities.
- Information on National Flood Insurance Program (NFIP) compliance.
- Classification under various community mitigation programs.
- The community's adaptive capacity for the impacts of climate change.

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, planning/policy documents were reviewed, and each jurisdiction was surveyed to obtain a better understanding of their progress in plan integration. The



Township of Chester identified specific integration activities that will be incorporated into municipal procedures are included in the updated mitigation strategy.

PLANNING, LEGAL AND REGULATORY CAPABILITY

The table below summarizes the legal and regulatory tools that are available to the Township of Chester and where hazard mitigation has been integrated.

Table 9.8-3. Planning, Legal and Regulatory Capability

		Authority that enforces (Federal, State, Regional, County, Local)	Is this State Mandated ?	Has the HMP been integrated in the last 5 years ? If yes- how?	
	Do you have this? (Yes/No)			If yes- how? Describe in comments	If no - can it be a mitigation action? If yes, add Mitigation Action #.
Codes, Ordinances, & Requirements					
Building Code	Yes	State & Local	Yes	N/A	-
Comment: State Uniform Construction Code Act (N.J.S. 52:27D-119 et seq.) State mandated on local level under NJAC 5:23-3.14. International Building Code – New Jersey Edition, 2018, NJAC 5:24-3.14. Administered by the Planning Board. Chapter 78 Construction Codes, Uniform. Code adopted by the Township Council of the Township of Chester 6-17-1986 by Ord. No. 1:18-86. Official implements building codes as applicable for included hazards.					
Zoning Code	Yes	Local	Yes, if have planning board	Yes	-
Comment: Updated by the Zoning Office. Chapter 113 (Land Use). Per State of NJ Municipal Land Use Law (MLUL) L. 1975, s. 2, eff Aug 1, 1976, 40-55D-62: 49. Power to zone, requires all jurisdictions to have current zoning and other land development ordinances after the planning board has adopted the land use element and master plan. Reference C. 113 in the municipal code. Adopted 12-2-1997, Amended 4-15-1997). Administered by the Zoning Board. Includes chapters addressing steep slope development (C 113 Pt 3 Art 7) and stormwater management (C 113-309). Zoning Map amended 6-6-2018 by Ord. No. 2018-06.					
Subdivisions	Yes	Local	Yes, if have planning board	Yes	-
Comment: Updated by Planning/Zoning. Chapter 113 (Land Use) Part 4 (Subdivision of Land). Chapter 113-138 Subdivision of Land and Site Plan Requirements. Adopted 4-2-1991 by Ord. No. 2:19Y-91). The enforcing agency for the State Uniform Construction Code shall consist of a Construction Official, Building Subcode Official, Plumbing Subcode Official, Electrical Subcode Official, Fire Protection Subcode Official and such other subcode officials for such additional subcodes as the Commissioner of the Department of Community Affairs, State of New Jersey, shall hereafter adopt as part of the State Uniform Construction Code. The Construction Official shall be the chief administrator of the enforcing agency.					
Stormwater Management	Yes	Local	Yes	Yes	-
Comment: Updated by Planning/Zoning. Chapter 113 (Land Use) Part 8 (Stormwater Control). Title 7 of the NJ Administrative Code (N.J.A.C. 7:8); Chapter 172 Stormwater Control, administered by the DPW. Stormwater Management planning is implemented by the Borough Engineer.					
Post-Disaster Recovery	No		No	No	-
Comment:					
Real Estate Disclosure	Yes	State	Yes	Yes	-
Comment: Updated by the Division of Consumer Affairs. N.J.A.C. 13:45A-29.1. Before signing a contract of sale, all purchasers must receive a New Jersey Public Offering Statement (POS) approved by the New Jersey Real Estate Commission. The POS provides information such as proximity to hospitals, schools, fire and police, as well as any hazards, risks or nuisances in or around the subdivision.					



	Do you have this? (Yes/No)	Authority that enforces (Federal, State, Regional, County, Local)	Is this State Mandated ?	Has the HMP been integrated in the last 5 years ? If yes- how?	
				If yes- how? Describe in comments	If no - can it be a mitigation action? If yes, add Mitigation Action #.
Growth Management	No		Yes, if have planning board	Yes	-
<i>Comment: State Mandated on a municipal level. See Zoning Ordinance; Also - Plan Endorsement Process via the State Development & Redevelopment Plan provides for the delineation of Growth Areas and Environs; Use of the endorsed plans in the implementation of state environmental regulations makes the Plan Endorsement process a growth management strategy.</i>					
Shoreline Development	No	-	Yes	-	-
<i>Comment: NJ Coastal Area Facility Review Act (N.J.S.A. 13:19) or CAFRA regulates almost all development along the coast for activities including construction, relocation, and enlargement of buildings or structures, and excavation, grading, shore protection structures, and site preparation. This law is implemented through NJ's Coastal Zone Management Rules N.J.A.C. 7:7E-1 et seq.</i>					
Site Plan Review	Yes	Local	Yes, if have planning board	Yes	-
<i>Comment: Updated by Planning/Zoning. Administered by the Planning Board. Reference Ch 113: Land Use/Ch 113 Pt 2: Site Plan Review/Ch 113 Pt 2 Art 7: Final Approval of municipal code. Allows for the environmental commission and floodplain administrator as a designated official to review site plans.</i>					
Environmental Protection	No		Yes	-	-
<i>Comment: Township has an Environmental Commission created by Chapter 17 of the municipal Code which has have power to conduct research into the use and possible use of the open land areas of the township and may coordinate the activities of unofficial bodies organized for similar purposes, and may advertise, prepare, print and distribute books, maps, charts, plans and pamphlets which in its judgment it deems necessary for its purposes. It shall keep an index of all open areas, publicly or privately owned, including open marsh lands, swamps and other wetlands, in order to obtain information of the proper use of such areas, and may, from time to time, recommend to the Chester Township Planning Board plans and programs for inclusion in a Township Master Plan and the development and use of such areas. Also there is an environmental element in the Master Plan which includes a description of floodplains, areas of environmental concern.</i>					
Flood Damage Prevention	Yes	Federal, State, Local	No	No	Chester Township-008
<i>Comment: Updated by Planning/Zoning. Chapter 113 (Land Use) Part 7 (Flood Damage Prevention) amended 5-19-1987 by Ord. No. 1:15B-87. The rules that are utilized by the NJ Department of Environmental Protection and other environmental agencies are codified at Title 7 of the NJ Municipal Administrative Code. The code should be updated to include one foot of freeboard for residential construction.</i>					
Wellhead Protection	Yes	Local	No	No	-
<i>Comment: Updated by Planning/Zoning. Chapter 113 (Land Use) Part 242.2 (Wellhead Protection).</i>					
Emergency Management	No		Yes	No	-
<i>Comment: Per the NJ Civilian Defense and Disaster Control Act (App.A:9_43.2) Counties and municipalities must have written Emergency Operations Plans to be reviewed every 2 years. See Emergency Operations Plans below.</i>					
Climate Change	No		No	No	-
<i>Comment:</i>					
Disaster Recovery Ordinance	No		No	No	-
<i>Comment:</i>					
Disaster Reconstruction Ordinance	No		No	-No	-
<i>Comment:</i>					



	Do you have this? (Yes/No)	Authority that enforces (Federal, State, Regional, County, Local)	Is this State Mandated ?	Has the HMP been integrated in the last 5 years ? If yes- how?	
				If yes- how? Describe in comments	If no - can it be a mitigation action? If yes, add Mitigation Action #.
Hazardous Material Ordinance	Yes	Local	-	-	-
<i>Comment: Chapter 104 Hazardous Materials allows for the liability of cleanup and abatement costs.</i>					
Soil Erosion and Sediment Control	Yes	Local	-	-	-
<i>Comment: Chapter 113-191 Erosions Control Plan. Requires a soil erosion and sediment control plan conforming with the requirements of Part 3, Soil Removal and Land Disturbances, and Part 7, Flood Damage Prevention..</i>					
Other: Steep slopes	Yes	Local	No	Yes	-
<i>Comment: Updated by Planning/Zoning. Chapter 113 (Land Use) Part 118 (Steep Slopes)</i>					
Planning Documents					
Comprehensive / Master Plan	Yes	Local	Municipal: Yes/No County: Yes	Yes	-
<i>Comment: Updated by the Planning Board. Highlands Regional Master Plan (2004), Chester Township Master Plan (2000, Reexamination Report 2007). Per NJSA: Yes, if planning board (40:55D-28) and must be re-examined every ten years (40:55D-89.1); County: Yes (40:27-2). Adopted on October 23, 2001, re-examination in 2013. The Plan includes maps for existing land use, critical wildlife habitat, environmental features, public utilities, community facilities, historic sites, zoning, circulation, and geology.</i>					
Capital Improvement Plan	Yes	Local	Allowed	Yes/No	-
<i>Comment: Updated annually by Township Chief Financial Officer. Per NJSA 40:55D-29 the governing body is authorized to direct the planning board to prepare a CIP with at least a six year planning horizon. Administered by the Administration.</i>					
Disaster Debris Management Plan	Yes	Local	No	-	Chester Township-007
<i>Comment: Department of Public Works</i>					
Floodplain or Watershed Plan	Yes	Regional	No	Yes	-
<i>Comment: Highlands Master Plan</i>					
Stormwater Management Plan	Yes	Local	Yes	Yes	-
<i>Comment: Updated by Engineering. Stormwater Management Plan 2005. On website.</i>					
Stormwater Pollution Prevention Plan	Yes	Local	Yes	Yes	-
<i>Comment: Updated by Engineering. Stormwater Pollution Prevention Plan 2019. On website. Per NJDEP Storm Water Management Rule (N.J.A.C. 7:8, et seq.). The Municipal Stormwater Regulation Program was developed in response to the U. S. Environmental Protection Agency's (USEPA) Phase II rules published in December 1999. The Department issued final stormwater rules on February 2, 2004 and four (4) NJPDES general permits authorizing stormwater discharges from Tier A and Tier B municipalities, as well as public complexes, and highway agencies that discharge stormwater from municipal separate storm sewers (MS4s).</i>					
Urban Water Management Plan	No		No	N/A	-
<i>Comment:</i>					
Habitat Conservation Plan	No		No	N/A	-
<i>Comment: May develop a conservation plan element in master plan per NJSA 40:5D-28b (8).</i>					
Economic Development Plan	No		No	N/A	-
<i>Comment: Per NJSA 40:55D-28b. (9) There can be a generic Economic Development Element of the County Comprehensive Plan. Municipality can establish Economic Development Commission that can facilitate incentive programs (façade programs, low-interest loans, etc.).</i>					



	Do you have this? (Yes/No)	Authority that enforces (Federal, State, Regional, County, Local)	Is this State Mandated ?	Has the HMP been integrated in the last 5 years ? If yes- how?	
				If yes- how? Describe in comments	If no - can it be a mitigation action? If yes, add Mitigation Action #.
Shoreline Management Plan	No		No	N/A	-
<i>Comment:</i>					
Community Wildfire Protection Plan	No		No	N/A	-
<i>Comment:</i>					
Community Forest Management Plan	Yes	Local	No	Yes	-
<i>Comment: Managed by the Parks consultant. Optional accreditation for county and municipalities for reduction of liability, New Jersey Urban and Community Forestry Program (NJUCF).</i>					
Transportation Plan	Yes	Local	No	Yes	-
<i>Comment: Master Plan Transportation Element. Includes trees along transportation corridors.</i>					
Agriculture Plan	Yes	Local, County, State	No	Yes	-
<i>Comment: Master Plan Agricultural Element</i>					
Climate Action Plan	No	Local	No	N/a	-
<i>Comment:</i>					
Tourism Plan	No	Local	No	N/A	-
<i>Comment:</i>					
Business Development Plan	No	Local	No	N/A	-
<i>Comment:</i>					
Other: Stream Corridor Management Plan	Yes	State	Yes	Yes	-
<i>Comment: Updated by NJDEP</i>					
Other: Open Space Plan	Yes	Local	Yes	Yes	-
<i>Comment: Updated by Council. Addresses open space requirement of Highlands Regional Master Plan and hazard areas indicated in the mitigation plan. Intended to protect the watershed to ensure safe drinking water for downstream users of the Raritan River.</i>					
Response/Recovery Planning					
Comprehensive Emergency Management Plan (CEMP) / Emergency Operations Plan (EOP)	Yes	Local	Yes	Yes/No	-
<i>Comment: EOP updated by the OEM Director. October 2019.</i>					
Threat & Hazard Identification & Risk Assessment (THIRA)	No	Local	No	No	-
<i>Comment:</i>					
Post-Disaster Recovery Plan	No	Local	No	No	-
<i>Comment:</i>					
Continuity of Operations Plan	Yes	Local	No	Yes/No	-
<i>Comment: Element of the EOP.</i>					
Public Health Plan	Yes	Local	No	Yes	-
<i>Comment: Annex included in the EOP.</i>					



		Authority that enforces (Federal, State, Regional, County, Local)	Is this State Mandated ?	Has the HMP been integrated in the last 5 years ? If yes- how?	
	Do you have this? (Yes/No)			If yes- how? Describe in comments	If no - can it be a mitigation action? If yes, add Mitigation Action #.
Other	-		-	-	-



Table 9.8-4. Development and Permitting Capability

Criterion	Response
Does your jurisdiction issue development permits? - If no, who does? If yes, which department?	Yes Planning and Zoning, Engineer, Construction Official Development goes to Planning Board
Does your jurisdiction have the ability to track permits by hazard area?	Yes
Does your jurisdiction have a buildable lands inventory? -If yes, please describe briefly. -If no, please quantitatively describe the level of buildout in the jurisdiction.	Yes Buildable Lands Inventory conducted in 2017

ADMINISTRATIVE AND TECHNICAL CAPABILITY

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

Table 9.8-5. Administrative and Technical Capabilities

Staff/Personnel Resource	Available?	Department/Agency/Position
Administrative Capability		
Planning Board	Yes	-
Mitigation Planning Committee	No	No
Environmental Board / Commission	Yes	Environmental Commission: Planning & Zoning
Open Space Board / Committee	Yes	The Township has an Open Space Advisory Committee and a Parks and Recreation Committee; Planning & Zoning
Economic Development Commission / Committee	No	-
Warning Systems / Services (reverse 911, outdoor warning signals)	Yes	RAVE
Maintenance program to reduce risk	Yes	DPW storm basin maintenance
Mutual aid agreements	Yes	Administration, Police, DPW
Technical/Staffing Capability		
Planners or engineers with knowledge of land development and land management practices	Yes	Consultant Planner & Consultant Engineer
Engineers or professionals trained in building or infrastructure construction practices	Yes	Consultant Planner & Consultant Engineer
Planners or engineers with an understanding of natural hazards	Yes	Consultant Planner & Consultant Engineer
Staff with training in benefit/cost analysis	Yes	Chief Financial Officer
Staff with training in green infrastructure	Yes	Consultant Engineer
Staff with education/knowledge/training in low impact development	Yes	Consultant Engineer
Surveyor	No	Consultant Engineer



Staff/Personnel Resource	Available?	Department/Agency/Position
Stormwater engineer	Yes	Consultant Engineer
Personnel skilled or trained in GIS applications	Yes	Consultant Planner
Local or state water quality professional	Yes	Health Department
Scientist familiar with natural hazards in local area	No	Insert appropriate information
Emergency manager	Yes	OEM
Watershed planner	Yes	Highlands Council
Environmental specialist	Yes	Consultant Engineer
Grant writers	Yes	Chief Financial Officer and Township Administrator
Resilience Officer	No	-
Other	No	-

FISCAL CAPABILITY

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

Table 9.8-6. Fiscal Capabilities

Financial Resource	Accessible or Eligible to Use?
Community Development Block Grants (CDBG, CDBG-DR)	Yes, County
Capital Improvements Project Funding	Yes, Governing Body
Authority to Levy Taxes for Specific Purposes	Yes, Governing Body
User Fees for Water, Sewer, Gas or Electric Service	No
Incur Debt through General Obligation Bonds	Yes, Governing Body
Incur Debt through Special Tax Bonds	Yes
Incur Debt through Private Activity Bonds	No
Withhold Public Expenditures in Hazard-Prone Areas	No
State-Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	No
Clean Water Act 319 Grants (Nonpoint Source Pollution)	Yes
Other	Yes, County, State, and Governing Body

EDUCATION AND OUTREACH CAPABILITY

The table below summarizes the education and outreach resources available to the Township of Chester.

Table 9.8-7. Education and Outreach Capabilities

Criterion	Response
Do you have a public information officer or communications office?	Yes
Do you have personnel skilled or trained in website development?	Yes, Consultant
Do you have hazard mitigation information available on your website? ▪ If yes, briefly describe.	Yes
Do you use social media for hazard mitigation education and outreach? ▪ If yes, briefly describe.	www.chestertownship.org/ OEM site



Criterion	Response
Do you have any citizen boards or commissions that address issues related to hazard mitigation? ▪ If yes, briefly describe.	Yes
Do you have any other programs already in place that could be used to communicate hazard-related information? ▪ If yes, briefly describe.	Facebook Twitter
Do you have any established warning systems for hazard events? ▪ If yes, briefly describe.	Yes

COMMUNITY CLASSIFICATIONS

The table below summarizes the classifications for community programs available to the Township of Chester.

Table 9.8-8. Community Classifications

Program	Participating?	Classification	Date Classified
Community Rating System	No	_____	
Building Code Effectiveness Grading Schedule (BCEGS)	No	_____	
Public Protection (Fire ISO Protection Class)	Yes	4	September 2014
Storm Ready Certification	No	_____	
Firewise Community Classification	No	_____	
Sustainable Jersey	Yes	Bronze	

ADAPTIVE CAPACITY

Adaptive capacity is defined as “the ability of systems, institutions, humans and other organisms to adjust to potential damage, to take advantage of opportunities, or respond to consequences” (IPCC 2014). In other words, it describes a jurisdiction’s current ability to adjust to, protect from, or withstand a hazard event. This term is often discussed in reference to climate change; however, adaptive capacity also includes an understanding of local capacity for adapting to current and future risks and changing conditions.

- Does the municipality have access to resources to determine the possible impacts of climate change upon the municipality? Yes.
- Is the administrative supportive of integrating climate change in policies or actions? Yes.
- Is climate change already being integrated into current policies/plans or actions (projects/monitoring) within the municipality? No.

The table below summarizes the adaptive capacity for each hazard and the jurisdiction’s rating.

Table 9.8-9. Adaptive Capacity

Hazard	Adaptive Capacity (Capabilities) - High/Medium/Low
Dam Failure	Low
Disease Outbreak	Medium
Drought	Low
Earthquake	Medium
Extreme Temperature	Medium
Flood	High
Geological Hazards	Medium
Harmful Algal Bloom	Medium



Hazard	Adaptive Capacity (Capabilities) - High/Medium/Low
Hazardous Substances	High
Infestation	Medium
Severe Weather	High
Severe Winter Weather	Medium
Wildfire	High

NATIONAL FLOOD INSURANCE PROGRAM

This section provides specific information on the management and regulation of the regulatory floodplain.

Table 9.8-10. National Flood Insurance Program Compliance

Criterion	Response
What local department is responsible for floodplain management?	Construction Department
Who is your floodplain administrator? (department/position)	Construction Official
Are any certified floodplain managers on staff in your jurisdiction?	No
What is the date that your flood damage prevention ordinance was last amended?	2014
Does your floodplain management program meet or exceed minimum requirements?	Meets
<input type="checkbox"/> If exceeds, in what ways?	n/a
When was the most recent Community Assistance Visit or Community Assistance Contact?	Unknown
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed?	No
<input type="checkbox"/> If so, state what they are.	n/a
Are any RiskMAP projects currently underway in your jurisdiction?	No
<input type="checkbox"/> If so, state what they are.	n/a
Do your flood hazard maps adequately address the flood risk within your jurisdiction?	Yes
<input type="checkbox"/> If no, state why.	n/a
Does your floodplain management staff need any assistance or training to support its floodplain management program?	No
<input type="checkbox"/> If so, what type of assistance/training is needed?	n/a
Does your jurisdiction participate in the Community Rating System (CRS)?	No
<input type="checkbox"/> If yes, is your jurisdiction interested in improving its CRS Classification?	n/a
<input type="checkbox"/> If no, is your jurisdiction interested in joining the CRS program?	No
How many flood insurance policies are in force in your jurisdiction?*	16
<input type="checkbox"/> What is the insurance in force?	\$428,1000
<input type="checkbox"/> What is the premium in force?	\$15,808
How many total loss claims have been filed in your jurisdiction?*	2
<input type="checkbox"/> How many claims are still open or were closed without payment?	0 open and 1 closed without payment
<input type="checkbox"/> What were the total payments for losses?	\$,5161.94
Do you maintain a list of properties that have been damaged by flooding?	No
Do you maintain a list of property owners interested in flood mitigation?	No



**According to FEMA statistics as of 9/30/2018 (Policies and Claims from <https://bsa.nfipstat.fema.gov/reports/1011.htm> and <https://bsa.nfipstat.fema.gov/reports/1040.htm> as of 09/30/2018)*

ADDITIONAL AREAS OF EXISTING INTEGRATION

- The Township has a Forest Management Plan that was last updated in 2000 for only certain of our Open Spaces: Tiger Brook Park and the MacGregor Preserve. More recently, the Township created an Emerald Ash Borer Response Plan for the following open spaces: Tiger Brook Park, Highlands Ridge Park, MacGregor Preserve, Evans Preserve, and Tannersbrook Preserve. This plan was completed in 2018 and was posted on the Township website.
- The Township's Master Plan includes a Circulation Element which addresses location, condition, and availability of existing and proposed road systems and transportation facilities.
- The Township Planning Board and ZBA considers natural hazard risk when evaluating development applications.
- The current Chester Township Master Plan (2000 Master Plan) was adopted by the Planning Board pursuant to Article 3 of the MLUL (N.J.S.A. 40:55D-28) on October 23, 2001. A Reexamination Report was adopted on October 23, 2007. Subsequent to adoption of the 2000 Master Plan, the Planning Board adopted amendments to the Master Plan in April of 2004, April of 2005, April of 2004, November of 2005 and May of 2010, affecting the following Master Plan Elements, respectively: Environmental Plan and Utility Plan; Land Use Plan; Housing Plan and Fair Share Plan; and Housing Plan and Fair Share Plan. The Reexamination Report and amendments are available for review at the Chester Township Municipal Building in the office of the Planning/Zoning Administrator.
- The Town contracts with Ferriero Engineering to support engineering and regulatory compliance, including floodplain management.
- The Township has opted into the Highlands Master Plan, which includes additional regulatory structures to protect sensitive natural resources and preserve open space which may include floodplains.
- The Township has been investigating consolidation options and their fiscal and/or operational impacts.
- The Township has an extensive website, which includes information and sign-up for their Emergency Notification Alert System on the home page. The Office of Emergency Management page includes preparedness and mitigation information, and further links to the Township's social media outlets.
- Natural Resource Inventory: Chester Township is the second town, first in Morris County, to be approved for conformance with the Highlands Regional Master Plan, a component of which is an NRI. The Highlands Council Regional Master Plan requires that the NRI be considered in land use matters. Chester Township's conformance with the Highlands Regional Master Plan is in excess of the requirements of this action in land use and planning, and that the Highlands Council approved Chester Township's documentation of using its NRI in land use decisions. Updates to the Natural Resource Inventory are a part of the Highlands Element Master Plan Update. It is the responsibility of the Municipal Planner with the assistance of the Chester Township Environmental Commission to update the Highlands Master Plan every 10 years. The link to the ERI is here:
http://www.sustainablejersey.com/fileadmin/media/Actions_and_Certification/Municipal_Documents/Cheste
- Forging a Public/Private Partnership to Protect Chester Township Ash Trees: There are approximately 1,000 ash trees in Chester Township. With very limited financial and technical resources available to protect these beautiful trees, the Chester Township Environmental Commission took an innovative approach to save a select group of ash trees in one of Chester's most popular green space, Chubb Park. By forming a unique and beneficial alliance between the Chester Township Department of Public Works and a local farmer, the Chester Township Environmental Commission helped facilitate a



treatment plan to save 19 beautiful ash trees from infestation of the emerald ash borer by proactively treating the trees with a restricted pesticide that requires a special license to apply. This select group of trees are in high visibility areas in the park. Infestation of the ash tree is almost inevitable unless the emerald ash borer is destroyed, or the ash trees are proactively treated with an insecticide. The tree survival rate using this material has been documented to have a 90% to 100% success rate for ash trees in good condition and not showing signs of sickness or infestation. The Environmental Commission placed signs on each of the 19 trees to inform visitors how and why the trees were treated. During other commission events, including our tree give away and sponsorship of the school science fair, members of the commission share information about this project whenever possible to raise awareness about invasive species and other important environmental issues. In addition to being covered by local media, the Town Council discussed this project at a subsequent meeting. The Chester Township Environmental Commission, the DPW and Alstede Farms commit to honoring this public/private partnership to treat these 19 trees for years to come.

9.8.5 Hazard Event History Specific to the Jurisdiction

Morris County has a history of hazard events, as detailed in Section 4 (Risk Assessment) of this plan. A summary of historical events is provided in each of the hazard profiles in Section 4.4 (Hazard Profiles) and includes a chronology of events that affected Morris County and its jurisdictions. The Township of Chester’s history of federally-declared (as presented by FEMA) and significant hazard events (as presented in NOAA-NCEI) is consistent with that of Morris County. Table 9.8-11 provides details regarding municipal-specific loss and damages the Township experienced during hazard events. Information provided in the table below is based on reference material or local sources.

Table 9.8-11. Hazard Event History

Date(s) of Event	Event Type (disaster declaration if applicable)	Morris County Designated?	Summary of Event	Summary of Local Damages and Losses
January 21-24, 2016	Severe Winter Storm and Snowstorm (DR-4264)	Yes	An impulse from the west coast traversed the midsection of the country, then developed into a low pressure system as it tracked across the Gulf states before intensifying along the Carolina coast into a major nor'easter, producing record snowfall in parts of New Jersey on January 23rd. It then moved out to sea after passing by the mid-Atlantic coast early on January 24th. Wind gusts up to 60 MPH produced blizzard conditions as visibilities dropped to one-quarter mile or less in spots. Snow began during the evening hours on the 22nd, then continued, heavy at times through the 23rd before ending early on the 24th. Snowfall totals	Snow and debris removal. Power outages. The town spent \$43,985.67 and was reimbursed by FEMA 75/25 share.



Date(s) of Event	Event Type (disaster declaration if applicable)	Morris County Designated?	Summary of Event	Summary of Local Damages and Losses
			included 30.0 inches in Long Valley, 29.0 inches in Madison, 26.0 inches in Budd Lake, 25.3 inches in Green Pond, 22.5 inches in Butler, and 21.0 inches in Chatham. At one point during the storm, up to 270,000 customers were without power.	
March 6-7, 2018	Severe Winter Storm and Snowstorm (DR-4368)	Yes	Precipitation gradually overspread the region during the overnight hours of March 6th to the 7th. 12 to 24 inches was observed across large parts of Morris County. The snow contained large amounts of liquid, making it heavy and wet. This resulted in downed trees, limbs, and wires, leading to numerous power outages across portions of New Jersey, especially where the heaviest snow was reported. Many customers were still without power from the previous storm when this storm struck. Governor Murphy estimated about 350,000 customers state-wide lost power as a result of this second storm. Governor Phil Murphy declared a state of emergency which went into effect at 8 PM Tuesday March 6th.	Snow and debris removal. Power outages. The town spent \$58,360.36 and was reimbursed by FEMA 75/25 share.

9.8.6 Jurisdiction-Specific Vulnerabilities and Hazard ranking

The hazard profiles in Section 4 (Risk Assessment) provide detailed information regarding each plan participant's vulnerability to the identified hazards. Table 9.8-12 summarizes the Township of Chester's risk assessment results and data used to determine the hazard ranking.

A gradient of certainty was developed to summarize the confidence level regarding the input used to populate the hazard ranking. A certainty factor of high, medium or low was selected and assigned to each hazard to provide a level of transparency and create increased understanding of the data used to support the resulting ranking. The following scale was used to assign a certainty factor to each hazard:

- High—Defined scenario/event to evaluate; probability calculated; evidenced-based/quantitative assessment to estimate potential impacts through hazard modeling.
- Moderate—Defined scenario/event or only a hazard area to evaluate; estimated probability; combination of quantitative (exposure analysis, no hazard modeling) and qualitative data to estimate potential impacts.



- Low—Scenario or hazard area is undefined; there is a degree of uncertainty regarding event probability; majority of potential impacts are qualitative.



Table 9.8-12. Risk Assessment

Hazard of Concern	Hazard/ Scenario Area Evaluated	Population		Buildings		Economy (Loss)		Certainty Factor
Dam Failure	Partial or complete failure of a dam There are 16 dams in the Township, according to NJDEP.	Population impacted is dependent on the capacity of the dam, the extent of the dam failure inundation area and the severity of the failure.		The number of building impacted is dependent on the capacity of the dam, the extent of the dam failure inundation area and the severity of the failure.		Economic impacts include dam/building/infrastructure repairs; debris removal/disposal; utility impacts.		Low
Disease Outbreak	Disease Outbreaks which include: Mosquito-Borne Diseases, Tick-Borne Diseases, Campylobacteriosis, Influenza, Mumps, Ebola	Population impacted is dependent on the disease and severity of the outbreak; in some cases immuno-compromised persons are more vulnerable.		Structural impacts due to disease outbreak would be limited.		Economic losses can include County financial impacts to monitor/address outbreaks; lost wages or commercial interruptions; depends on the severity and type of disease outbreak.		Low
Drought	Prolonged drought event - The County is serviced by water supplies who primarily get water from groundwater sources; some surface water sources.	Entire population exposed. Population on surface water supplies may be impacted first; water restrictions/contamination; increased wildfire risk.		Droughts are not expected to cause direct damage to buildings.		Losses include aesthetic, landscape/nursery/agricultural industry impacts.		Low
Earthquake	"100, 500-, 2,500-Year Mean Return Period (MRP) Events evaluated NEHRP Soils D&E (soft soils that amplify ground shaking are present in the County"	NEHRP D&E:	175	NEHRP D&E:	70	100-year Loss:	\$0	High
		Liquefaction Class 4:	3	Liquefaction Class 4:	4	500-year Loss:	\$1,508,797	
						2,500-year Loss:	\$24,818,363	
Extreme Temperature	Extreme temperature event (heat or cold)	Over 65 Population:	1,092	Physical impacts due to extreme temperatures would be limited.		Loss of business function is possible due to unexpected repairs (i.e. pipes bursting) or power failures.		Low
		Population Below Poverty Level:	262					
Flood	100- and 500-Year Mean Return Period Event	100-year	3	100-year	7	100-year Loss:	\$5,334,258	High
		500-year	8	500-year	9			



Hazard of Concern	Hazard/ Scenario Area Evaluated	Population		Buildings		Economy (Loss)		Certainty Factor
Geological	High Landslide Susceptibility Areas and Areas developed over carbonate rock	Class A:	3	Class A:	0	Class A:	853072.0904	Moderate
		Class B:	65	Class B:	0	Class B:	\$16,388,570	
		Carbonate Bedrock:	538	Carbonate Bedrock:	266	Carbonate Bedrock:	\$238,625,868	
Harmful Algal Bloom	Any body of water or area adjacent that is susceptible to harmful algal bloom.	Population in contact (e.g., swimming) or drinking water from surface water impacted can result in a range of health effects		General building stock impacts due to harmful algal bloom are not anticipated. Critical facilities (i.e., water treatment plants) could lead to plant closures.		Economic impacts range from recreational closure of impacted waterbodies; cost to sample/monitor/remediate.		Low
Hazardous Substance	Release of a hazardous substance from a fixed site.	Population impacted will depend on the type of material and scale of the incident. May include population within small radii of site.		The degree of damages to a building depends on the scale of the incident.		The degree of damages depends on the scale of the incident.		Low
Infestation	Infestation including: Insects [e.g. Gypsy Moth, Mosquitoes, Spotted Lanternfly, Emerald Ash Borer], White-Tailed Deer, Rodents	Population impacted will depend on the type and severity of infestation and may cause an increased risk for disease outbreak.		Physical impacts will be limited to indirect impacts from invasive species which affect crops and vegetation.		Economic impact will depend on the type and severity of infestation and may cause an increased risk for disease outbreak.		Low
Severe Weather	Severe Weather Event	Entire population exposed; The degree of impact to the population depends on the scale of the incident.		Entire building stock is exposed; The degree of impact depends on the scale of the incident.		Annualized Loss:	\$31,682	High
						100 -Year Loss:	\$1,040,181	
						500-year Loss:	\$6,021,590	
Severe Winter Weather	Severe Winter Weather Event	All residents/commuters/visitors are exposed; socially-vulnerable populations may be at increased risk.		All buildings are exposed; the degree of impact depends on the scale of the incident.		The cost of snow and ice removal and repair of roads/infrastructure can impact operating budgets.		Low
Wildfire	Wildfire Fuel Hazard areas (High, Very High, Extreme)	Wildfire:	183	Wildfire:	80	Wildfire:	\$45,685,277	Moderate



REPETITIVE FLOOD LOSSES

The following summarizes the repetitive and severe repetitive flood losses in the Township of Chester.

- Number of repetitive loss (RL) properties: 0
- Number of severe repetitive loss (SRL) properties: 0
- Number of RL/SRL properties that have been mitigated: *Not applicable.*

CRITICAL FACILITIES

There are no critical facilities located in the floodplain.

ADDITIONAL IDENTIFIED VULNERABILITIES

The jurisdiction has identified the following vulnerabilities within their community:

- Trees present the most significant risk to the populous as they are vulnerable to wind events, vulnerable to failure during wind storms and create secondary impacts resulting in loss of power and in potential loss of life. Trees contribute to the risk for the severe storm hazard, severe winter storm hazard, and the infestation hazard. Infestation of the emerald ash borer results in dead and dying trees which are an imminent threat to the life safety of residents and create power interruptions upon failure.
- Spotted lantern fly has been identified in the borough

HAZARD AREA EXTENT AND LOCATION

Hazard area extent and location maps were generated for the Township of Chester 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 adequate for planning purposes. Maps have been generated only for those hazards that can be clearly identified using mapping techniques and technologies and for which the Township of Chester has significant exposure. Refer to Figures 9.8-1 and 9.8-2.

HAZARD RANKING

This section includes the community specific identification of the primary hazard concerns based on identified problems, impacts and the results of the risk assessment as presented in Section 5 (Risk Assessment). The ranking process involves an assessment of the likelihood of occurrence for each hazard; its potential impacts on people, property, and the economy; community capability and changing future climate conditions. This input supports the mitigation action development to target those hazards with highest level of concern.

As discussed in Section 4.3 (Hazard Ranking), each plan participant may have differing degrees of risk exposure and vulnerability compared to Morris County as a whole. Therefore, each jurisdiction ranked the degree of risk to each hazard as it pertains to their community factoring in their capabilities to withstand impacts and rebound after the event. The table below summarizes the hazard rankings of potential natural hazards for the Township of Chester. The Township of Chester has reviewed the Morris County hazard ranking table, as well as its individual results, to reflect the relative risk of the hazards of concern to the community.

During the review of the hazard ranking, the Township of Chester indicated the following:

- Geologic Hazard has been adjusted to Low, as steep slope issues are isolated in a small portion of the Township and do not present a hazard to roads or structures or life safety.



- Hazardous Substances has been adjusted to Medium as there is limited risk for the industrial release of hazardous substances. In general, the risk of hazardous substances is in transit on Route 206.
- Infestation has been adjusted to High due to the imminent threat of hazards and cascading effects of the emerald ash borer.

Table 9.8-13. Township of Chester Hazard Ranking Input

Dam Failure	Drought	Earthquake	Extreme Temperature	Flood	Geological Hazard
Medium	Medium	Medium	Medium	Low	Low

Harmful Algal Bloom	Severe Storm	Severe Winter Storm	Wildfire	Hazardous Substances	Disease Outbreak	Infestation
Low	High	High	Low	Medium	High	High

9.8.7 Mitigation Strategy and Prioritization

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

PAST MITIGATION INITIATIVE STATUS

The following table summarizes the jurisdiction’s progress on their mitigation strategy identified in the 2015 HMP. 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 can also be found under ‘Capability Assessment’ presented previously in this annex.

Table 9.8-14. Status of Previous HMP Mitigation Actions

2015 Action Number Action Description	Responsible Party	Status (In Progress, No Progress, Ongoing Capability, or Completed)	Include in the 2020 HMP Update?	
			Check if Yes	Enter 2020 HMP Action #
Chester Twp-1: Apply engineering study measures on Peapack-Gladstone Reservoir Dam.	Engineering; Public Works	No progress. Minimal risk due to dam.	Yes	Chester Township-005
Chester Twp-2: Develop all-hazards public education and outreach program for hazard mitigation and preparedness.	Township Administration and OEM	Ongoing.	No, keep as ongoing capability	
Chester Twp-3: Upgrade/Replace old undersized generator at Black River Middle School, designated shelter	Township Administrator; OEM	In progress. Have cost estimate from Board of Education. Must apply for grant.	Yes	Chester Township-003
Chester Twp-4: Town wide Storm Sirens. Current fire siren barely covers 20% of town and folks are used to hearing it, so it doesn't draw their attention. Need a different type.	OEM	No progress. Will address with current administration. Need redundant alert system in case of technological outage.	Yes	Chester Township-002
Chester Twp-5: Expand fuel storage capacity for Municipal/Emergency Vehicle use. There is only one gas station	OEM, Engineer, DPW	Complete.	No	



2015 Action Number Action Description	Responsible Party	Status (In Progress, No Progress, Ongoing Capability, or Completed)	Include in the 2020 HMP Update?	
			Check if Yes	Enter 2020 HMP Action #
in the Township, so fuel reserves are limited.				
Chester Twp-6: Funds to upgrade/fit out new Joint Borough/Township Emergency Operations Center and renovate decontamination showers	OEM	Complete.	No	
Chester Twp-7: Tannersbrook Road drainage/culverts/raise road bed	Engineering/DPW	No progress. Must assess feasibility.	Yes	Chester Township-006

PROPOSED HAZARD MITIGATION INITIATIVES FOR THE PLAN UPDATE

Although the Township of Chester did not participate in the risk assessment workshop, the planning consultant provided detailed information about assets exposed to the hazards of concern and an explanation of risk during an individual local meeting on January 27, 2020. In addition, the Township of Chester participated in a mitigation action workshop in March 2020 and was provided a Mitigation Toolbox that included a mitigation catalog developed specifically for Morris County and its hazards of concerns; challenges and opportunities identified during the capability and risk assessments; and 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). Section 6 (Mitigation Strategy) and Appendix F (Mitigation Strategy Supplement) provide a more complete description of the Mitigation Toolbox and its resources.

Table 9.8-16 summarizes the comprehensive range of specific mitigation initiatives the Township of Chester would like to pursue in the future to reduce the effects of hazards. Some of these initiatives might be previous actions carried forward for this HMP update. Initiatives are dependent upon available funding (grants and local match availability) and can 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 (Mitigation Strategy), 14 criteria were used to evaluate each action, including an evaluation of the benefits and costs. For each new mitigation action, a numeric rank was assigned (-1, 0, or 1) for each of the 14 evaluation criteria. The results of this evaluation, in addition to input from the jurisdiction, were then used to prioritize the mitigation initiatives as ‘High’, ‘Medium’, or ‘Low.’ Table 9.8-17 summarizes the evaluation of each mitigation initiative and the resulting priority, listed by Action Number.



Table 9.8-15. Proposed Hazard Mitigation Initiatives and Associated Priority

Initiative Number	Mitigation Initiative Name	Description of the Problem	Description of the Solution	New or Existing Assets?	Hazard(s) to be Mitigated	Goals Met	Lead and Support Agencies	Potential Funding Sources	Estimated Benefits	Estimated Cost	Timeline	Priority	Mitigation Category	CRS Category
2020-Chester Township-001	Ash Tree Removal/Trimming	Infestation of the emerald ash borer is resulting in the die-off of the prolific population of ash trees in the township causing imminent life safety and utility interruption hazards.	Implement Ash tree removal based on Township Tree Inventory	Not Applicable	Infestation, Severe Storm, Severe Winter Storm	3G, 5A, 5D	Township Administrator, Township DPW	Operating Budget, NJ Urban and Community Forestry Program (NJUCF)	High	Low	Short	Medium	LPR	PR, NRP
2020-Chester Township-002	Town-Wide Siren System	Town wide Storm Sirens. Current fire siren barely covers 20% of town and folks are used to hearing it, so it doesn't draw their attention. Need a different type	OEM to specify system requirements for town-wide system, work with Administrator to prepare a request for bid, review bids, and select vendor to install system.	Existing	Severe Storm, Dam Failure	1A, 3G	OEM	Operating Budget,	High	Medium	Short	High	PR, EAP	PI, ES
2020-Chester Township-003	Back-up Generator for Primary Shelter	Primary Shelter requires adequate back-up power.	Upgrade/Replace old undersized generator at Black River Middle School, designated shelter	Existing	Severe Storm, Severe Winter Storm	3G, 5D	Township Administrator; OEM	Operating Budget, HMGP Grant	High	Low	Short	High	SIP	PP, ES
2020-Chester Township-004	Emerald Ash Borer and Spotted Lanternfly Education All Hazards Outreach Project	Emerald Ash Borer and Spotted Lanternfly infestation are attacking trees and crops in the town.	Develop and disseminate clear information and guidance to the public and businesses in the town to identify and eliminate these invasive species and provide information on all hazards as needed.	N/A	All	1A, 2B	Township Administration and OEM	Operating Budget, NJ Urban and Community Forestry Program (NJUCF), HMGP grant, NJ Highlands Grant	Medium	Medium		High	EAP	PI



Initiative Number	Mitigation Initiative Name	Description of the Problem	Description of the Solution	New or Existing Assets?	Hazard(s) to be Mitigated	Goals Met	Lead and Support Agencies	Potential Funding Sources	Estimated Benefits	Estimated Cost	Timeline	Priority	Mitigation Category	CRS Category
2020-Chester Township-005	Peapack-Gladstone Reservoir Dam Mitigation	Viability and condition of this critical asset must be assessed.	Apply engineering study measures on Peapack-Gladstone Reservoir Dam.	Existing	Flood, Dam Failure	1A, 3G, 5D	Engineering ; Public Works	Operating Budget	High – reduced risk of property and infrastructure damage; potential life safety.	Medium	Short	High	SIP	PP
2020-Chester Township-006	Tannersbrook Road drainage project	Localized flooding occurs on Tannersbrook road creating access issues for local residence.	Tannersbrook Road drainage/culverts/rise road bed	Existing	Flood and Severe Storm	5D	Engineering /DPW	Operating Budget	Low	Medium	Short	Low	SIP	PP
2020-Chester Township-007	Township Debris Management Plan	The Township needs a plan to provide debris management procedures policy, and agreements to effectively manage debris generated by severe weather events.	Develop a debris management plan.	Not applicable	Severe Storm, Severe Winter Storm	3G, 5D	Engineering /DPW	Operating Budget	Medium	Low	Short	High	LPR	PR
2020-Chester Township-008	Update Flood Damage Prevention Ordinance	Current flood damage prevention ordinance does not include freeboard	Revise and adopt a new ordinance to align with NJDEP Model Ordinance to include on foot freeboard	Both	Flood	1B, 3A, 3C	Township Administrator	Operating Budget	Low	Low	Short	Medium	LPR	PR

Notes:

Acronyms and Abbreviations:

CAV Community Assistance Visit
 CRS Community Rating System
 DPW Department of Public Works
 FEMA Federal Emergency Management Agency

Potential FEMA HMA Funding Sources:

FMA Flood Mitigation Assistance Grant Program
 HMGP Hazard Mitigation Grant Program
 PDM Pre-Disaster Mitigation Grant Program

Timeline:

The time required for completion of the project upon implementation

Cost:

The estimated cost for implementation.





FPA Floodplain Administrator
HMA Hazard Mitigation Assistance
N/A Not applicable
NFIP National Flood Insurance Program
OEM Office of Emergency Management

Benefits:

A description of the estimated benefits, either quantitative and/or qualitative.

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 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. 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 preserve or restore the functions of natural systems. 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. 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 9.8-16. Summary of Evaluation and Action Priorities

Initiative Number	Mitigation Initiative Name	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
2020-Chester Township-001	Ash Tree Removal/Trimming	1	1	1	1	1	1	0	0	0	-1	1	1	1	0	9	High
2020-Chester Township-002	Town-Wide Siren System	1	1	1	1	1	1	0	1	1	0	1	1	1	0	11	High



Initiative Number	Mitigation Initiative Name	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
2020-Chester Township-003	Back-up Generator for Primary Shelter	1	0	1	1	1	1	-1	1	0	1	1	1	1	1	10	High
2020-Chester Township-004	Emerald Ash Borer and Spotted Lanternfly Education/Outreach Project	1	1	1	1	1	1	0	0	1	1	1	1	1	0	11	High
2020-Chester Township-005	Peapack-Gladstone Reservoir Dam Mitigation	1	1	1	1	1	0	1	0	1	1	0	1	0	0	9	High
2020-Chester Township-006	Tannersbrook Road drainage project	0	0	0	0	1	1	0	0	-1	1	1	0	0	0	3	Low
2020-Chester Township-007	Township Debris Management Plan	1	0	1	1	1	1	1	1	1	1	1	1	0	0	11	High
2020-Chester Township-008	Update Flood Damage Prevention Ordinance	1	0	1	1	1	1	1	0	1	0	0	1	0	0	8	Medium

Notes: Section 6 (Mitigation Strategy) conveys guidance on prioritizing mitigation actions.



Table 9.8-17. Analysis of Mitigation Actions by Hazard and Category

Hazard	Prevention	Property Protection	Public Education and Awareness	Natural Resource Protection	Emergency Services	Structural Projects	Climate Resilient	Community Capacity Building
Dam Failure	Chester Township-004, 2020-Chester Township-007	Chester Township-005	Chester Township-004		Chester Township-004			Chester Township-005
Disease Outbreak	Chester Township-004		Chester Township-004		Chester Township-004			
Drought			Chester Township-004		Chester Township-004			
Earthquake			Chester Township-004		Chester Township-004			
Extreme Temperature	Chester Township-003,		Chester Township-004		Chester Township-003, Chester Township-004			
Flood	Chester Township-005, Chester Township-008	Chester Township-005, Chester Township-006, Chester Township-008	Chester Township-004		Chester Township-004	Chester Township-006		Chester Township-008
Geological			Chester Township-004		Chester Township-004			
Harmful Algal Bloom			Chester Township-004		Chester Township-004			
Hazardous Substance			Chester Township-004		Chester Township-004			
Infestation	Chester Township-001,		Chester Township-004	Chester Township-001	Chester Township-004			Chester Township-001, Chester Township-004
Severe Weather	Chester Township-001, Chester Township-002, Chester Township-003, Chester Township-007	Chester Township-006	Chester Township-002, Chester Township-003, Chester Township-004		Chester Township-002, Chester Township-003, Chester Township-004			
Severe Winter Weather	Chester Township-003, Chester Township-007		Chester Township-004		Chester Township-003, Chester Township-004			
Wildfire			Chester Township-004		Chester Township-004			

Note: Section 6 (Mitigation Strategy) provides for an explanation of the mitigation categories.

RED = high ranked hazard

ORANGE = medium ranked hazard

YELLOW = low ranked hazard



9.8.8 Staff and Local Stakeholder Involvement in Annex Development

The Township of Chester followed the planning process described in Section 2 (Planning Process). This annex was developed over the course of several months with input from many jurisdiction representatives. All departments were asked to contribute to the annex development through reviewing and contributing to the capability assessment, reporting on the status of previously identified actions, and participating in action identification and prioritization. The following table summarizes who participated and in what capacity. Additional documentation on the municipality's planning process through Planning Partnership meetings is included in Section 2 (Planning Process) and Appendix C (Meeting Documentation).

Table 9.8-18. Contributors to the Annex

Entity	Title	Method of Participation
Bruce Ellmann	Emergency Management Coordinator	1 st Annex Meeting, Critical Facilities review, Mitigation Strategy Workshop
Robin Collins	Clerk/Administrator	1 st Annex Meeting



Figure 9.8-1. Township of Chester Hazard Area Extent and Location Map

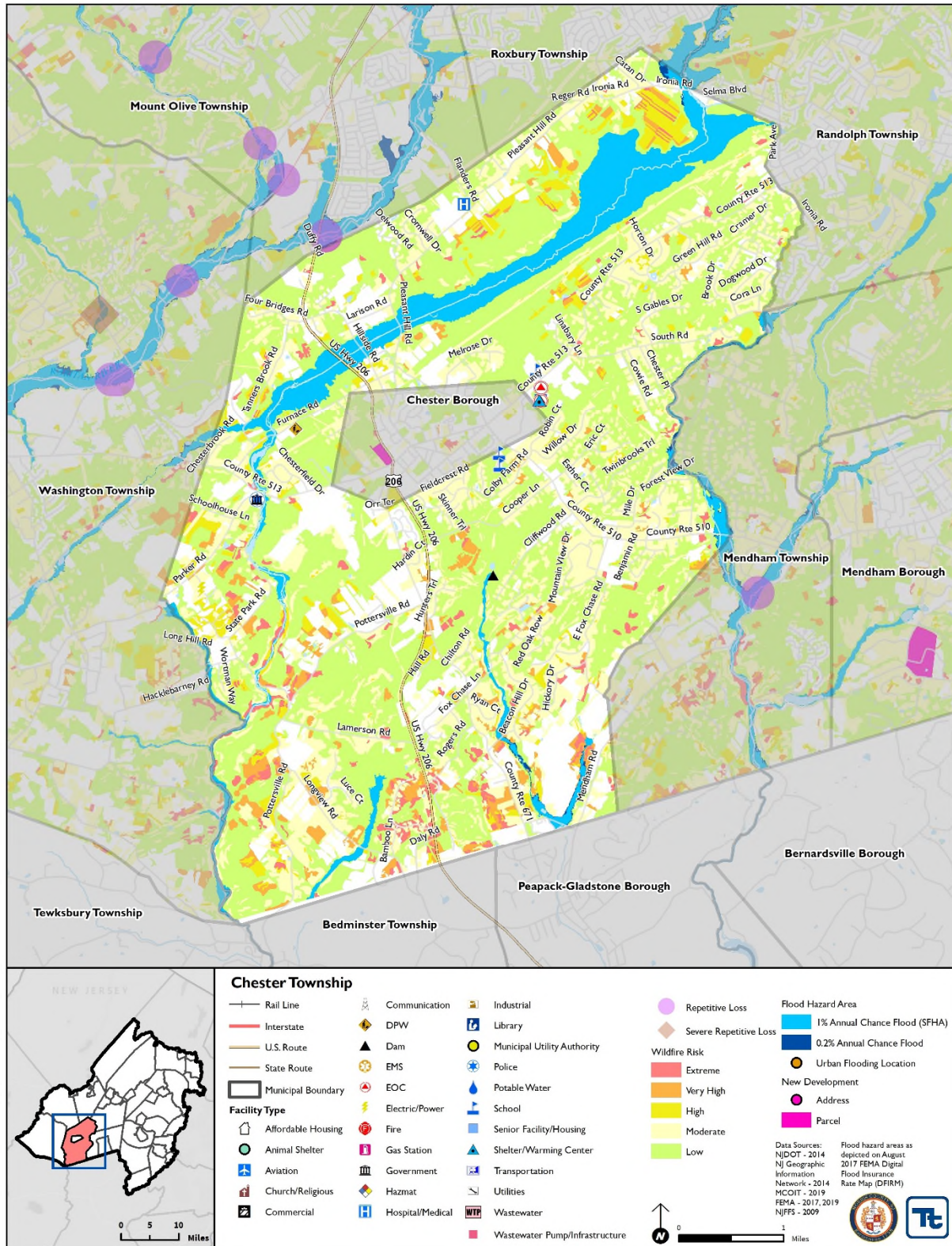
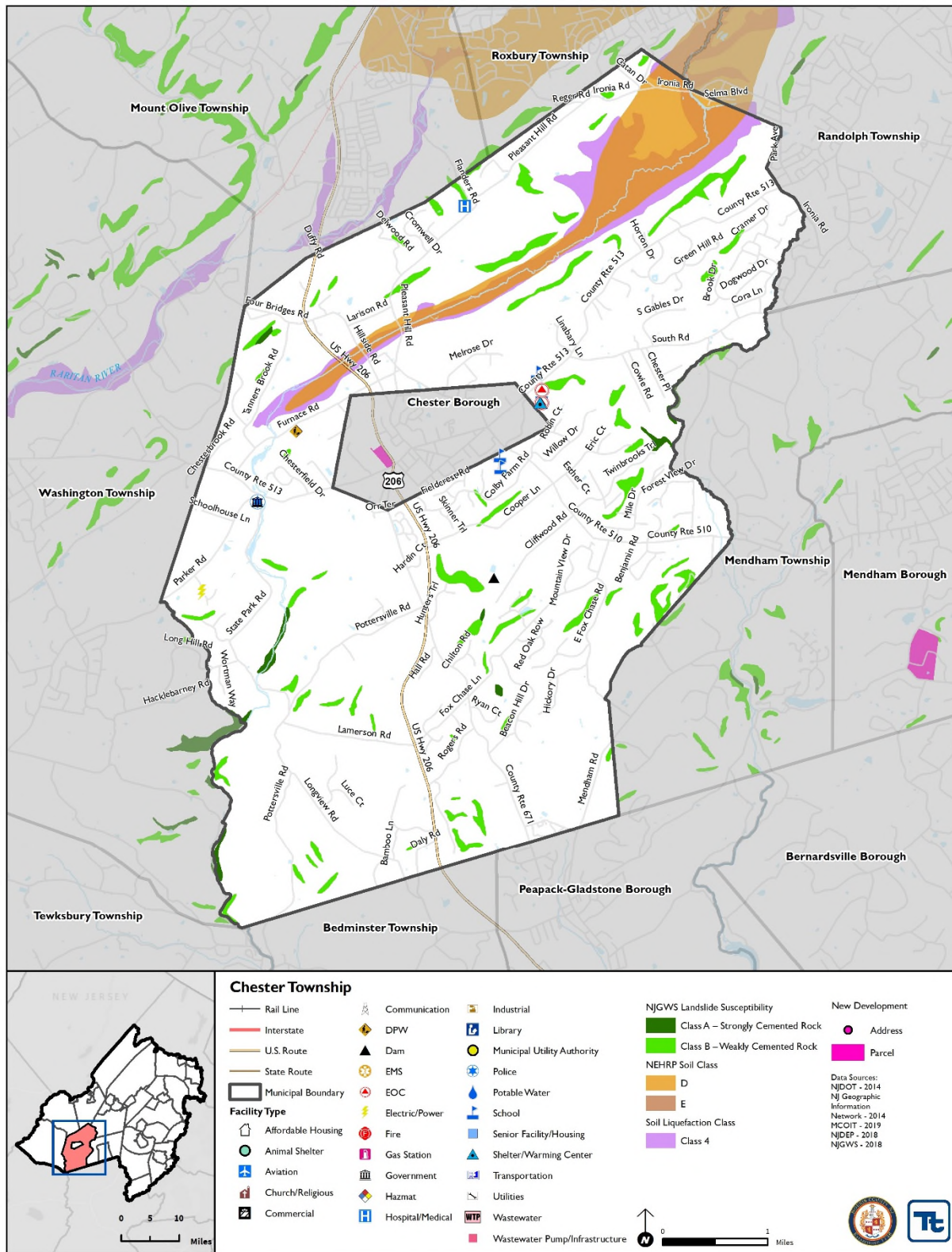




Figure 9.8-2. Township of Chester Hazard Area Extent and Location Map





Action Worksheet			
Project Name:	Ash Tree Removal/Trimming		
Project Number:	Chester Township - 001		
Risk / Vulnerability			
Hazard(s) of Concern:	Infestation, Severe Storm, Severe Winter Storm		
Description of the Problem:	Infestation of the emerald ash borer is resulting in the die-off of the prolific population of ash trees in the township causing imminent life safety and utility interruption hazards.		
Action or Project Intended for Implementation			
Description of the Solution:	Implement an ongoing tree removal program to target diseased trees.		
Is this project related to a Critical Facility or Lifeline?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Level of Protection:	Not applicable	Estimated Benefits (losses avoided):	Reduction or elimination of loss of life due to failure of dead and dying trees. Reduction or elimination of utility interruption due to dead or dying trees.
Useful Life:	Not applicable	Goals Met:	3G, 5A, 5G
Estimated Cost:	>\$150,000	Mitigation Action Type:	LPR
Plan for Implementation			
Prioritization:	Medium	Desired Timeframe for Implementation:	1 year
Estimated Time Required for Project Implementation:	Several years, Ongoing	Potential Funding Sources:	Operating Budget, FNJ Urban and Community Forestry Program (NJUCF), EMA HMA, local match
Responsible Organization:	Office of Emergency Management and Department of Public Works	Local Planning Mechanisms to be Used in Implementation if any:	Hazard Mitigation Plan, Tree City USA
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	
	Chemically treat/inoculate diseased tress	\$1,000 per tree bi-annually	Significant cost and not 100% effective.
	Close roads in affected areas to avoid life-safety issue and underground power lines in affected areas.	High cascading consequences	Infeasible as road closures would prohibit travel throughout the community and undergrounding lines is not cost effective.
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	Ash Tree Removal/Trimming	
Project Number:	Chester Township - 001	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Reduces potential loss of life.
Property Protection	1	Reduces potential property and infrastructure damage.
Cost-Effectiveness	1	This is more cost effective than treatment, which has a high failure rate.
Technical	1	Technically feasible.
Political	1	There is political support for this action.
Legal	1	Within the legal authority of the community.
Fiscal	0	
Environmental	0	
Social	1	Supports all sectors of the population.
Administrative	-1	Time consuming to manage the program
Multi-Hazard	1	Infestation, Severe Weather, all hazards.
Timeline	1	Short, ongoing
Agency Champion	1	OEM/DPW
Other Community Objectives	0	
Total	9	
Priority (High/Med/Low)	High	



Action Worksheet			
Project Name:	Storm Siren System		
Project Number:	Chester Township -002		
Risk / Vulnerability			
Hazard(s) of Concern:	All hazards		
Description of the Problem:	Current single fire siren does not provide enough coverage (20% of community) to be used as a storm alarm.		
Action or Project Intended for Implementation			
Description of the Solution:	Design/install a system of different tone sirens that can be locally activated to provide impending storm alert to 2 municipalities (Chester Township and Chester Borough).		
Is this project related to a Critical Facility or Lifeline?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Level of Protection:	Not applicable	Estimated Benefits (losses avoided):	High/Life Safety
Useful Life:	30 years	Goals Met:	
Estimated Cost:	\$300,000+	Mitigation Action Type:	
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	One year after funding
Estimated Time Required for Project Implementation:	One year	Potential Funding Sources:	Operating Budget, Emergency Management Performance Grants (EMPG) Program
Responsible Organization:	Township Administrator, OEM, DPW	Local Planning Mechanisms to be Used in Implementation if any:	Hazard Mitigation Plan, Emergency Plan
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Problem continues.
	Use reverse 911 system	To be determined	
	Use mobile Public Address System	\$100,000	Will not provide full, simultaneous coverage and requires manual intervention.
Progress Report (for plan maintenance)			
Date of Status Report:	yes		
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	Storm Siren System	
Project Number:	Chester Township -002	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Improve alert capabilities
Property Protection	1	Provides warning to enable residents to prepare for an imminent threat.
Cost-Effectiveness	1	Cover both Township and Borough simultaneously
Technical	1	This is a feasible, long term solution.
Political	1	There is political will to support this.
Legal	1	Town has authority to implement.
Fiscal	0	Budgetary constraints
Environmental	1	Complies with environmental regulations.
Social	1	Action will not cause relocation of lower income people.
Administrative	0	
Multi-Hazard	1	Multi-Hazard
Timeline	1	Can be completed in less than 5 years
Agency Champion	1	OEM and Fire Department
Other Community Objectives	0	
Total	11	
Priority (High/Med/Low)	High	



Action Worksheet			
Project Name:	Back-up Generator for Primary Shelter		
Project Number:	Chester Township - 003		
Risk / Vulnerability			
Hazard(s) of Concern:	All hazards		
Description of the Problem:	The main shelter for the community has insufficient back-up power.		
Action or Project Intended for Implementation			
Description of the Solution:	Upgrade generator system to provide power to support shelter needs.		
Is this project related to a Critical Facility or Lifeline?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Level of Protection:	Not applicable	Estimated Benefits (losses avoided):	Ensures continuity of operations; provides a warming center for residents
Useful Life:	20 years	Goals Met:	1A, 3G
Estimated Cost:	\$300,000	Mitigation Action Type:	Structure and Infrastructure Projects (SIP)
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	Immediately after funding is received or about 1-2 years
Estimated Time Required for Project Implementation:	1-2 years	Potential Funding Sources:	FEMA HMA, local match
Responsible Organization:	Board of Education, OEM	Local Planning Mechanisms to be Used in Implementation if any:	Hazard Mitigation, Emergency Management
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues, vulnerable populations do not have access to safe areas.
	Build new heating/cooling center	\$1M	Cost prohibitive
	Install solar panels	\$100,000	Weather dependent; need large amount of space for installation; expensive if repairs needed
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	Back-up Generator for Primary Shelter	
Project Number:	Chester Township - 003	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Project will protect critical services of Community Center.
Property Protection	0	Project will protect shelter from power loss.
Cost-Effectiveness	1	
Technical	1	This is technically feasible.
Political	1	The town has the legal authority to complete the project.
Legal	1	The town has the legal authority to complete the project.
Fiscal	-1	Budgetary constraints
Environmental	1	
Social	0	This supports all segments of the population equally.
Administrative	1	This can be implemented using current resources
Multi-Hazard	1	All hazards
Timeline	1	1-2 years
Agency Champion	1	Board of Education/OEM
Other Community Objectives	1	Improves town's capabilities of supporting the needs of vulnerable populations
Total	10	
Priority (High/Med/Low)	High	



Action Worksheet			
Project Name:	Emerald Ash Borer and Spotted Lanternfly and all Hazards Educational Outreach		
Project Number:	Chester Township -004		
Risk / Vulnerability			
Hazard(s) of Concern:	All Hazards		
Description of the Problem:	Emerald Ash Borer and Spotted Lanternfly infestation are attacking and killing trees and crops in the town. There is a need for community education on these as well as all natural hazards with a potential to impact the community.		
Action or Project Intended for Implementation			
Description of the Solution:	Develop and disseminate clear information and guidance to the public and businesses in the town to identify and eliminate these invasive species and provide information on all hazards as needed.		
Is this project related to a Critical Facility or Lifeline?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Level of Protection:	Not applicable	Estimated Benefits (losses avoided):	High-Will reduce the impact of hazards on the community by providing guidance on how to minimize or avoid effects of natural hazards. In the instance of the emerald ash borer infestation, this will increase life safety and reduce interruption of power by increasing the awareness of removing diseased trees before they die off and fall on people, property or infrastructure.
Useful Life:	Not applicable	Goals Met:	1A, 2B
Estimated Cost:	\$10,000	Mitigation Action Type:	PI
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	One year
Estimated Time Required for Project Implementation:	One year	Potential Funding Sources:	Operating budget, NJ Urban and Community Forestry Program (NJUCF), HMGP grant, NJ Highlands Grant FEMA HMA, local match
Responsible Organization:	Township Administrator	Local Planning Mechanisms to be Used in Implementation if any:	Hazard Mitigation Plan, Municipal website and social media
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Problem continues.
	Create Education Outreach Program	\$10,000	Educate community and reduce impacts on life safety
	Create a primary school and secondary school curriculum to educate students regarding the effects and impacts of natural hazards events.	\$20,000	Longer time frame to implement and only reaches a segment of the population
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	Emerald Ash Borer and Spotted Lanternfly and all Hazards Educational Outreach	
Project Number:	Chester Township -004	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	This will save lives and prevent injuries.
Property Protection	1	This will reduce damages to infrastructure
Cost-Effectiveness	1	Cost is commensurate with benefits received.
Technical	1	This is technically feasible.
Political	1	There is political support for this project
Legal	1	Town has legal authority to implement this project.
Fiscal	0	
Environmental	0	
Social	1	This will not adversely impact a particular segment of the population.
Administrative	1	The town has the administrative capabilities to implement
Multi-Hazard	1	All hazard
Timeline	1	This can be done within 5 years
Agency Champion	1	Mayor and OEM supportive of this project.
Other Community Objectives	0	
Total	11	
Priority (High/Med/Low)	High	