



9. TOWNSHIP OF FREDON

This jurisdictional annex to the Sussex County Hazard Mitigation Plan (HMP) provides information to assist public and private sectors in the Township of Fredon with reducing losses from future hazard events. This annex is not guidance of what to do when a disaster occurs; its focus is on actions that can be implemented prior to a disaster to reduce or eliminate damage to property and people. The annex presents a general overview of Fredon, describes who participated in the planning process, assesses Fredon's risk, vulnerability, and capabilities, and outlines a strategy for achieving a more resilient community.

9.1 HAZARD MITIGATION PLANNING TEAM

The Township of Fredon identified primary and alternate HMP points of contact and developed this plan over the course of several months, with input from many Township departments. The Emergency Management Coordinator represented the community on the Sussex County HMP Planning Partnership and supported the local planning process by securing input from persons with specific knowledge to enhance the plan. 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.

Table 9-1 summarizes Township officials who participated in the development of the annex and in what capacity. Additional documentation of the Township's planning activities through Planning Partnership meetings is included in Volume I.

Table 9-1. Hazard Mitigation Planning Team

Primary Point of Contact	Alternate Point of Contact
Name/Title: Keith Fiesta / OEM Coordinator Address: 443 Rt. 94, Newton, NJ 07860 Phone Number: (516) 456-1374 Email: Firecop1534@gmail.com	Name/Title: Carl Lazzaro / Deputy OEM Coordinator Address: 443 Rt. 94, Newton, NJ 07860 Phone Number: (973) 464-5030 Email: Cfl1@ptd.net
National Flood Insurance Program Floodplain Administrator	
Name/Title: Harold Pellow / Engineer Address: 17 Plains Rd, Augusta, NJ 07822 Phone Number: (973) 948-6463 Email: hpellow@hpellow.com	
Additional Contributors	
Name/Title: Keith Fiesta / OEM Coordinator Method of Participation: Provided key information to the development of the jurisdictional annex. Reviewed and approved final draft of annex signed signature page	
Name/Title: Carl Lazzaro / Deputy OEM Coordinator Method of Participation: Provided key information to the development of the jurisdictional annex. Reviewed and approved final draft of annex signed signature page	
Name/Title: Harold Pellow / Engineer Method of Participation: Provided key information to the development of the jurisdictional annex. Reviewed and approved final draft of annex signed signature page	
Name/Title: Brad Moxen / Enforcement Official Method of Participation: Reviewed and approved final draft of annex signed signature page	
Name/Title: Glen Deitz / Mayor Method of Participation: Reviewed and approved final draft of annex signed signature page	



Primary Point of Contact	Alternate Point of Contact
Name/Title: Matthew Lambert / Public Works Supervisor Method of Participation: Reviewed and approved final draft of annex signed signature page	
Name/Title: Suzanne Boland / Municipal Clerk Method of Participation: Reviewed and approved final draft of annex signed signature page	
Name/Title: Jessica Caldwell / Planner Method of Participation: Reviewed and approved final draft of annex signed signature page	

9.2 COMMUNITY PROFILE

The Township of Fredon was incorporated in 1904. The Township is located in southwestern Sussex County and has a total land area of 17.65 square miles. It is bordered to the north by Hampton Township, to the south by Green Township, to the east by Andover Township and Newton, and to the west by Stillwater Township and Warren County. The Pequest River, Paulins Kill, and Bear Brook all flow through the Township. In addition, numerous ponds and lakes are located throughout the Township. According to the U.S. Census, the 2020 population for Fredon was 3,235, a 5.8-percent decrease from the 2010 Census.

Research has shown that some populations are at greater risk from hazard events because of decreased resources or physical abilities. These populations can be more susceptible to hazard events based on a number of factors including their physical and financial ability to react or respond during a hazard, and the location and construction quality of their housing. Data from the 2021 American Community Survey 5-Year Population Estimates indicates that 2-percent of the population is 5 years of age or younger, 2.5-percent is 65 years of age or older, 1.5-percent is non-English speaking, 2.4-percent is below the poverty threshold, and 1.9-percent is considered disabled.

The Steering Committee also identified households that are above the Federal Poverty Level, but earn less than the basic cost of living as socially vulnerable. For the Township of Fredon, 18-percent of households earn less than the basic cost of living and are considered socially vulnerable.

Communities must deploy a support system that enables all populations to safely reach shelters or to quickly evacuate a hazard area.

9.3 JURISDICTIONAL CAPABILITY ASSESSMENT AND INTEGRATION

Fredon performed an inventory and analysis of existing capabilities, plans, programs, and policies that enhance its ability to implement mitigation strategies. Volume I describes the components included in the capability assessment and their significance for hazard mitigation planning. The jurisdictional assessment for this annex includes analyses of the following:

- Planning and regulatory capabilities
- Development and permitting capabilities
- Administrative and technical capabilities
- Fiscal capabilities
- Education and outreach capabilities
- Classification under various community mitigation programs
- Adaptive capacity to withstand hazard events



For a community to succeed in reducing long-term risk, hazard mitigation must be integrated into day-to-day local government operations. As part of the hazard mitigation analysis, planning and /policy documents were reviewed and each jurisdiction was surveyed to obtain a better understanding of their progress toward plan integration. Development of an updated mitigation strategy provided an opportunity for Fredon to identify opportunities for integrating mitigation concepts into ongoing Township procedures.

9.3.1 Planning and Regulatory Capability and Integration

Table 9-2 summarizes the planning and regulatory tools that are available to Fredon.

Table 9-2. Planning and Regulatory Capability and Integration

	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of plan, date of enactment or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department or Agency
CODES, ORDINANCES, & REGULATIONS				
Building Code	Yes	International Building Code – New Jersey Edition, 2018, NJAC 5:24-3.14 Adopted 9/3/2019; Chapter 200-State Uniform Construction Code Act (N.J.S. 52:27D-119 et seq.)	State	NJDCA
How has or will this be integrated with the HMP and how does this reduce risk? The Township of Fredon, pursuant to N.J.S.A. 52.27D-124 and N.J.A.C. 5:23-4.3, hereby relinquishes its jurisdiction of the administration and enforcement of the Uniform Construction Code and transfers jurisdiction for the administration and enforcement of the Uniform Construction Code to the Department of Community Affairs of the State of New Jersey.				
Zoning/Land Use Code	Yes	NJ Municipal Land Use Law (MLUL) L. 1975, s. 2, efficient 8/1/1976, 40-55D-62: 49. Powe; Chapter 550-Zoning	Federal & Local	Zoning Department
How has or will this be integrated with the HMP and how does this reduce risk? <i>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.</i>				
Subdivision Code	Yes	P.L.1975, c.291 (C.40:55D-47): 40:55D-37; Fredon Township Ordinance 2021-03, Amending Chapter 457 Stormwater Management, February 2021; Chapter 550-Zoning; Chapter 470 Subdivision of Land	Federal & Local	Planning and Zoning Department
How has or will this be integrated with the HMP and how does this reduce risk? <i>The filing of such plats with the county recording officer and approval of site plans by resolution of the planning board as a condition for the issuance of a permit for any development, except that subdivision or individual lot applications for detached one or two dwelling-unit buildings shall be exempt from such site plan review and approval; provided that the resolution of the board of adjustment shall substitute for that of the planning board whenever the board of adjustment has jurisdiction over a subdivision or site plan pursuant to subsection 63b. of this act . Dictated by the Municipal Land Use Law. NJ Statute 40:27-6.2 - the board of commissioners of any county having a county planning board shall provide for the review of all subdivisions of land within the county by said county planning board and for the approval of those subdivisions affecting county road or drainage facilities as set forth and limited hereinafter in this section.</i>				



	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of plan, date of enactment or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department or Agency
Site Plan Code	Yes	Municipal Land Use Law, NJ Statute 40:27-6.2; Chapter 424 – Site Plan Review	Local	Planning and Zoning Department

How has or will this be integrated with the HMP and how does this reduce risk?

The board of commissioners of any county having a county planning board shall provide for the review of all subdivisions of land within the county by said county planning board and for the approval of those subdivisions affecting county road or drainage facilities as set forth and limited hereinafter in this section. 40:27-6.10 In order that county planning boards shall have a complete file of the planning and zoning ordinances of all municipalities in the county, each municipal clerk shall file with the county planning board a copy of the planning and zoning ordinances of the municipality in effect on the effective date of this act and shall notify the county planning board of the introduction of any revision or amendment of such an ordinance which affects lands adjoining county roads or other county lands, or lands lying within 200 feet of a municipal boundary, or proposed facilities or public lands shown on the county master plan or official county map. Such notice shall be given to the county planning board at least 10 days prior to the public hearing thereon by personal delivery or by certified mail of a copy of the official notice of the public hearing together with a copy of the proposed ordinance.

Stormwater Management Code	Yes	Title 7 of the NJ Administrative Code, N.J.A.C. 7:8; Chapter 457-Stormwater Control; Fredon Township Ordinance 2021-03, amending Chapter 457 Stormwater Management, February 2021	Federal & Local	Planning and Zoning Department
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How has or will this be integrated with the HMP and how does this reduce risk?

The purpose of this chapter is to establish minimum stormwater management requirements and controls for major development including nonresidential major developments, aspects of residential major developments that are not preempted by the Residential Site Improvement Standards at N.J.A.C. 5:21 and is applicable to all major developments undertaken by the Township of Fredon. Development approvals issued pursuant to this chapter are to be considered an integral part of development approvals and do not relieve the applicant of the responsibility to secure required permits or approvals for activities regulated by any other applicable code, rule, act, or ordinance. In their interpretation and application, the provisions of this chapter shall be held to be the minimum requirements for the promotion of the public health, safety, and general welfare.

Post-Disaster Recovery/ Reconstruction Code	No	-	-	-
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How has or will this be integrated with the HMP and how does this reduce risk?

Real Estate Disclosure Requirements	Yes	Senate Bill 3110; P. L. 2023, c. 93, July 3, 2023	State	Sellers and Landlords of commercial or residential property
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How has or will this be integrated with the HMP and how does this reduce risk?

For leases, the law amends the New Jersey Truth-in-Renting Act, N.J.S.A. 46:8-43 et seq., to require every landlord to notify in writing each of the landlord's tenants, prior to lease signing or renewal, whether the property is located in the Federal Emergency Management Agency (FEMA) Special Flood Hazard Area ("100-year floodplain") or Moderate Risk Flood Hazard Area ("500-year floodplain") and if the landlord has actual knowledge that the rental premises or any portion of the parking areas of the real property containing the rental premises has been subjected to flooding. The law does not apply to (1) landlords who lease commercial space or residential dwellings for less than one month, (2) residential dwellings in a premises containing not more than two units, (3) owner-occupied premises containing not more than three units, or (4) hotels, motels, or other guest houses serving transient or seasonal guests for a period of less than 120 days.

The model notice is to contain the heading "Flood Risk" and questions for the landlord to answer regarding the landlord's actual knowledge of past flooding of the property. The questions regarding the property being in a FEMA Special or Moderate Risk Flood Hazard Area shall not contain the option for "unknown." To determine how the



	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of plan, date of enactment or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department or Agency
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questions are to be answered, FEMA's current flood insurance rate maps for the leased premises area must be consulted. The landlord will be required to answer whether the rental premises or any portions of the parking areas of the real property containing the rental premises ever experienced any flood damage, water seepage, or pooled water due to a natural flood event and, if so, the number of times that has occurred.

The notice to residential tenants must also indicate that flood insurance may be available to renters through FEMA's National Flood Insurance Program to cover their personal property and contents in the event of a flood and that standard renter's insurance does not typically cover flood damage.

For sales, the law also amends the New Jersey Consumer Fraud Act, N.J.S.A. 56:8-1 et seq., to require sellers of real property to disclose, on the property condition disclosure statement, whether the property is located in the FEMA Special or Moderate Risk Flood Hazard Area and any actual knowledge of the seller concerning flood risks of the property to the purchaser before the purchaser becomes obligated under any contract for the purchase of the property.

The disclosure statement must contain the heading "Flood Risk" and ask the seller the following questions:

- Is any or all of the property in the Special Flood Hazard Area ("100-year floodplain") or a Moderate Risk Flood Hazard Area ("500-year floodplain") according to FEMA's current flood insurance rate maps?
- Is the property subject to any requirement under federal law to obtain and maintain flood insurance on the property? Properties in the Special Flood Hazard Area with mortgages from federally regulated or insured lenders are required to obtain and maintain flood insurance.
- Have you ever received assistance from, or are you aware of any previous owners receiving assistance from FEMA, the U.S. Small Business Administration, or any other federal disaster flood assistance for flood damage on the property? For properties that have received flood disaster assistance, the requirement to obtain flood insurance passes down to all future owners.
- Is there flood insurance on the property? A standard homeowner's insurance policy typically does not cover flood damage.
- Is there a FEMA elevation certificate available for the property? If so, it must be shared with the buyer. An elevation certificate is a FEMA form, completed by a licensed surveyor or engineer, that provides critical information about the flood risk of the property and is used by flood insurance providers to determine the appropriate insurance rating for the property.
- Have you ever filed a claim for flood damage to the property with any insurance provider? If the claim was approved, what was the amount received?
- Has the property experienced any flood damage, water seepage, or pooled water due to a natural flood event, such as heavy rainfall, coastal storm surge, tidal inundation, or river overflow? If so, how many times?

Not all provisions of this law have become effective at the time of the writing of this plan.

Growth Management	Yes	Zoning Ordinance; Plan Endorsement Process via the State Development & Redevelopment Plan	Local	Planning and Zoning Department
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How has or will this be integrated with the HMP and how does this reduce risk?

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.

Environmental Protection Ordinance(s)	Yes	Zoning Ordinance (Chapter 550)	State	Zoning Officer
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How has or will this be integrated with the HMP and how does this reduce risk?

Land Use Board applications require NJDEP Environmental Impact Statement if required. The Zoning Ordinance (Chapter 550) includes the following purposes related to environmental protection: To preserve agricultural lands and open space, and to ensure that any future development of farmland that does occur includes a component of preservation and is designed to minimize any visual and environmental impacts that may occur; To preserve large tracts of land for open space and farmland by encouraging the development of new residential subdivisions in a cluster design; To protect areas constrained by steep slopes, wetlands, Category 1 streams, flood-prone areas, forested areas and areas with threatened or endangered habitat.



	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of plan, date of enactment or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department or Agency
Flood Damage Prevention Ordinance	Yes	NJ State Law Flood Area Control Act (N.J.S.A. 58:16A-52; National Flood Control Act of 1968 (NFIP); Chapter 270-Flood Control, last amended February 2021	Local	Engineer

How has or will this be integrated with the HMP and how does this reduce risk?

The NJ State Law Flood Area Control Act (N.J.S.A. 58:16A-52) and the National Flood Control Act of 1968 (NFIP) are state and federal acts to support minimization of flood losses. They do not require local adoption but as enforced by the NJDEP, the floodplain ordinances of each municipality must be reviewed for compliance with these regulations. In addition, participation in the NFIP requires a floodplain ordinance. Regulations for the Flood Control Hazards Act were adopted in 2007 and amended effective June 20, 2016.

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

Wellhead Protection	No	-	-	-
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How has or will this be integrated with the HMP and how does this reduce risk?

Emergency Management Ordinance	No	-	-	-
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How has or will this be integrated with the HMP and how does this reduce risk?

Climate Change Ordinance	No	-	-	-
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How has or will this be integrated with the HMP and how does this reduce risk?

Other: Soil Erosion and Sediment Control	Yes	Chapter 441-Soil Erosion and Sediment Control	Local	Planning and Zoning Department
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How has or will this be integrated with the HMP and how does this reduce risk?

The purpose of this chapter is to control soil erosion and sediment damages and related environmental damage by requiring adequate provisions for surface water retention and drainage and for the protection of exposed soil surfaces in order to promote the public health, safety, convenience and general welfare of the community.

Other: Genetically Engineered Microorganisms	Yes	Chapter 290, Genetically Engineered Microorganisms	Local	Township Committee
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How has or will this be integrated with the HMP and how does this reduce risk?

The Township Committee shall adopt, by resolution, such rules and regulations which shall, in its discretion, be deemed reasonable and necessary governing the application for permission to release any genetically engineered microorganism into the outdoor environment of the Township, including, but not limited to, regulations requiring completion of appropriate applications; submission of a plan for environmental protection, containment and disposal; submission of a plan insuring the health, safety and welfare of the public; submission of approvals by appropriate state and federal governmental agencies; payment of fees and costs to the Township; survey and location of the release site and affected areas; and posting of appropriate sureties or other insurances to guarantee against liability for damage or loss.



	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of plan, date of enactment or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department or Agency
Other: Hazardous Materials	Yes	Chapter 300-Hazardous Materials	Local	Township Committee

How has or will this be integrated with the HMP and how does this reduce risk?
Deals with the emergency response and cost recovery of hazardous materials.

PLANNING DOCUMENTS

General/Comprehensive Plan	Yes	Township of Fredon Master Plan, 2007	Local	Planning Board
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How has or will this be integrated with the HMP and how does this reduce risk?

The county planning board shall make and adopt a master plan for the physical development of the county. The master plan of a county, with the accompanying maps, plats, charts, and descriptive and explanatory matter, shall show the county planning board's recommendations for the development of the territory covered by the plan, and may include, among other things, the general location, character, and extent of streets or roads, viaducts, bridges, waterway and waterfront developments, parkways, playgrounds, forests, reservations, parks, airports, and other public ways, grounds, places and spaces; the general location and extent of forests, agricultural areas, and open-development areas for purposes of conservation, food and water supply, sanitary and drainage facilities, or the protection of urban development, and such other features as may be important to the development of the county. The county planning board shall encourage the co-operation of the local municipalities within the county in any matters whatsoever which may concern the integrity of the county master plan and to advise the board of chosen commissioners with respect to the formulation of development programs and budgets for capital expenditures. Per State of NJ Municipal Land Use Law (MLUL) L. 1975, s. 2, eff Aug 1, 1976 40:55D-28 provides the required components of a municipal Master Plan and requires that each municipality prepare a master plan and update it every 6 years. Further, all zoning ordinances must be consistent with the Master Plan or will not be benefitted from a presumption of validity.

Capital Improvement Plan	Yes	CIP adopted in 2015.	Local	Township Committee
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How has or will this be integrated with the HMP and how does this reduce risk?

Township entities will submit desired capital projects to the Township Committee with project titles, descriptions, and anticipated costs. The submitted projects may include those with relevance to hazard mitigation, including stormwater management or making facilities more sustainable.

Disaster Debris Management Plan	Yes	Fredon Township Office of Emergency Management Emergency Operations Plan October 2018; Fredon Township Ordinance 2021-03: Amending Chapter 457-16 Stormwater Management February 2021.	Local	Office of Emergency Management; Department of Public Works
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How has or will this be integrated with the HMP and how does this reduce risk?

The Disaster Debris Management Plan establishes procedures and guidelines for managing disaster debris in a coordinated, environmentally responsible, and cost-effective manner.

Floodplain Management or Watershed Plan	No	-	-	-
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How has or will this be integrated with the HMP and how does this reduce risk?

Stormwater Management Plan	No	-	-	-
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How has or will this be integrated with the HMP and how does this reduce risk?

Stormwater Pollution Prevention Plan	No	-	-	-
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How has or will this be integrated with the HMP and how does this reduce risk?



	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of plan, date of enactment or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department or Agency
Open Space Plan	Yes	Township of Fredon Master Plan, Open Space and Recreation Element, 2007	Local	Planning Board
How has or will this be integrated with the HMP and how does this reduce risk? <i>This element of the Master Plan seeks to protect areas constrained by steep slopes, wetlands, category-one streams, flood prone areas, forested areas, and areas with threatened or endangered habitat by enforcing the Township's environmental regulations and establishing new regulations to address unregulated elements; minimize the visual impact of future development on the rural landscape and scenic corridors. And within this context, ensure that new development is located in the appropriate areas and that it provides the appropriate buffers necessary to protect the environment and minimize the visual impact; and encourage renewable energy in appropriate locations would be appropriate.</i>				
Urban Water Management Plan	No	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Habitat Conservation Plan	No	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Economic Development Plan	No	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Shoreline Management Plan	No	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Community Wildfire Protection Plan	No	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Community Forest Management Plan	No	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Transportation Plan	Yes	Township of Fredon Master Plan, Circulation Element, 2007	Local	Planning Board
How has or will this be integrated with the HMP and how does this reduce risk? <i>The goal of the study is to develop strategies to address transportation needs in the coming years. The plan identifies challenges and issues that have both resulted from the study process and represent challenges that will be faced during the implementation period for the plan; presents the study steps and the key findings that have resulted from the overall process; and presents the recommended steps that should be taken by the Township.</i>				
Agriculture Plan	Yes	Township of Fredon Master Plan, Agricultural Preservation Element, 2007	Local	Planning Board
How has or will this be integrated with the HMP and how does this reduce risk? <i>The Township of Fredon realizes the importance of preserving its farmers as well its farmland. In cooperation with local schools, organizations, and research institutions, the Township has undertaken a number of initiatives that help to promote the economic well-being of local farmers.</i>				



	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of plan, date of enactment or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department or Agency
Climate Action/ Resilience/Sustainability Plan	No	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Tourism Plan	No	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Business/ Downtown Development Plan	No	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Other: Stream Corridor Management Plan	Yes	Township of Fredon Master Plan, 2007	Local	Land Use Board
How has or will this be integrated with the HMP and how does this reduce risk? <i>In compliance with the Master Plan.</i>				
RESPONSE/RECOVERY PLANNING				
Emergency Operations Plan	Yes	Fredon Township Office of Emergency Management Emergency Operations Plan October 2018	Local	Office of Emergency Management
How has or will this be integrated with the HMP and how does this reduce risk? <i>Each county and municipality in the State shall prepare a written Emergency Operations Plan with all appropriate annexes necessary to implement the plan. Each Emergency Operations Plan shall be adopted no later than one year after the State Emergency Planning Guidelines have been adopted by the State Office of Emergency Management and shall be evaluated at such subsequent scheduled review of the State Emergency Operations Plan. L. 1989, c.222, s.19.</i>				
Continuity of Operations Plan	Yes	Fredon Township Office of Emergency Management Emergency Operations Plan October 2018	Local	Office of Emergency Management
How has or will this be integrated with the HMP and how does this reduce risk? <i>The Continuity of Operations Plan (COOP) is a policy and guidance document that ensures that essential functions for an agency or organization are continued in the event of an emergency. The COOP addresses emergencies from an all-hazards approach, including natural, manmade, or technological disasters. The Township's COOP is located within its EOP.</i>				
Substantial Damage Response Plan	No	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Threat and Hazard Identification and Risk Assessment	No	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Post-Disaster Recovery Plan	No	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk?				



	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of plan, date of enactment or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department or Agency
Public Health Plan	No	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Other	No	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk?				

9.3.2 Development and Permitting Capability

Table 9-3 summarizes the capabilities of Fredon to oversee and track development.

Table 9-3. Development and Permitting Capability

	Yes/No	Comment
Do you issue development permits? <ul style="list-style-type: none"> If you issue development permits, what department is responsible? If you do not issue development permits, what is your process for tracking new development? 	No	The Building / Construction Department for Fredon is run by the NJ State Department of Community Affairs (DCA).
Are permits tracked by hazard area? (For example, floodplain development permits.)	No	-
Do you have a buildable land inventory? <ul style="list-style-type: none"> If you have a buildable land inventory, please describe 	No	-
Describe the level of buildout in your jurisdiction.	N/A	There is space available for build-out within the Township

9.3.3 Administrative and Technical Capability

Table 9-4 summarizes potential staff and personnel resources available to Fredon and their current responsibilities that contribute to hazard mitigation.

Table 9-4. Administrative and Technical Capabilities

Resources	Available? (Yes/No)	Comment (available staff, responsibilities, support of hazard mitigation)
ADMINISTRATIVE CAPABILITY		
Planning Board	Yes	The Land Use Board, comprised of nine regular and four alternate members, is responsible for developing, preserving, and improving the Land Use Master Plan of Fredon Township. The Board reviews and acts on applications for subdivisions and site plans. It also interprets the zoning ordinance and zoning map in order to determine if a variance, from the bulk and dimensional requirements of the ordinance or from a specifically permitted use in the zone, should be granted. The Board,



Resources	Available? (Yes/No)	Comment (available staff, responsibilities, support of hazard mitigation)
		along with its' professional consultants, continues to gather, organize and distribute data respecting land use and the Township Master Plan and reviews, revises, recommends and interprets land use ordinances to the Township Committee for adoption consideration.
Zoning Board of Adjustment	No	-
Planning Department	No	-
Mitigation Planning Committee	Yes	Fredon Township Committee
Environmental Board/Commission	Yes	<p>Environmental Commission. The Fredon Township Environmental Commission is the focal point for environmental issues affecting the Township. The Commission's area of interest and activities include preservation of natural resources, conservation of open space, inventory of natural resources, water quality, environmental education, enhancement of the quality of life in the Township, solicitation of grants and historical preservation. Anything that may adversely affect or enhance the Township's environment is of interest to the Commission.</p> <p>The Commission is an advisory body to the Planning Board. The Commission reviews applications for development submitted to the Board and reports on elements that may have a negative impact on the environment.</p>
Open Space Board/Committee	Yes	Open Space Commission. In an effort to preserve Fredon's rural character, the Open Space Commission was formed in the spring of 2006. The mission of this group is to identify and prioritize land parcels for preservation, make recommendation to the township committee, and develop partnerships with allied organizations. The group focuses on land that preserves agriculture, scenic views, water quality, wildlife, and passive/active recreation. The funds to support the purchases or preservation of land are generated by the Open Space Tax. In 2008, the Township Committee reduced the Open Space Tax from 2 cents to 1 cent per \$100,000 of the revised assessed value of a home, and it was reduced again to 1/2 a cent in 2009.
Economic Development Commission/Committee	No	-
Public Works/Highway Department	Yes	<p>The Road Department is responsible for all the roads that are owned by the Township of Fredon, which does NOT include County Road and State Highways. During the year, the Department conducts routine maintenance on roads, storm drains, and municipally owned buildings.</p> <p>In the winter, the Department is always busy with removal of snow and ice from the roadways. The Department trims brush in the Township right of ways, mows Township owned property, and provides maintenance of Township owned buildings. While the road department will clear roads of fallen trees, they will not handle trees that have fallen on</p>



Resources	Available? (Yes/No)	Comment (available staff, responsibilities, support of hazard mitigation)
		wires, that is the responsibility of the utility company which owns the lines.
Construction/Building/Code Enforcement Department	Yes	The Building / Construction Department for Fredon is run by the NJ State Department of Community Affairs. Code Enforcement is run by the Township through Code Enforcement and Zoning.
Emergency Management/Public Safety Department	Yes	The Township has an Office of Emergency Management.
Maintenance programs to reduce risk (stormwater maintenance, tree trimming, etc.)	Yes	Tree trimming, stormwater catch basin maintenance
Mutual aid agreements	Yes	Verbal agreements
Human Resources Manual - Do any job descriptions specifically include identifying or implementing mitigation projects or other efforts to reduce natural hazard risk?	No	-
Other	No	-
TECHNICAL/STAFFING CAPABILITY		
Planners or engineers with knowledge of land development and land management practices	Yes	Pellow Engineering
Engineers or professionals trained in building or infrastructure construction practices	Yes	State
Planners or engineers with an understanding of natural hazards	Yes	Pellow Engineering and State
Staff with expertise or training in benefit/cost analysis	No	-
Professionals trained in conducting damage assessments	Yes	State Building Inspector
Personnel skilled or trained in GIS and/or Hazus applications	No	-
Staff that work with socially vulnerable populations or underserved communities	No	-
Environmental scientists familiar with natural hazards	No	Township planner
Surveyors	No	-
Emergency manager		
Grant writers	No	-
Resilience Officer	No	-
Other (this could include stormwater engineer, environmental specialist, etc.)	Yes	Stormwater Engineer – Pellow Engineering



9.3.4 Fiscal Capability

Table 9-5 summarizes financial resources available to Fredon.

Table 9-5. Fiscal Capabilities

Financial Resources	Accessible or Eligible to Use? (Yes/No)
Community Development Block Grants (CDBG, CDBG-DR)	No
Capital improvement project funding	Yes
Authority to levy taxes for specific purposes	Yes
User fees for water, sewer, gas, or electric service	No
Impact fees for homebuyers or developers of new development/homes	No
Stormwater utility fee	Yes
Incur debt through general obligation bonds	Yes
Incur debt through special tax bonds	Yes
Incur debt through private activity bonds	No
Withhold public expenditures in hazard-prone areas	No
Other federal or state funding programs	Yes
Open Space Acquisition funding programs	Yes
Other (for example, Clean Water Act 319 Grants [Nonpoint Source Pollution])	No

9.3.5 Education and Outreach Capability

Table 9-6 summarizes the education and outreach resources available to Fredon.

Table 9-6. Education and Outreach Capabilities

Outreach Resources	Available? (Yes/No)	Comment
Public information officer or communications office	Yes	Township Committee
Personnel skilled or trained in website development	Yes	Contracted
Hazard mitigation information available on your website	No	-
Social media for hazard mitigation education and outreach	No	-
Citizen boards or commissions that address issues related to hazard mitigation	No	-
Warning systems for hazard events	No	Utilizes the County Swift911™
Natural disaster/safety programs in place for schools	Yes	Fire prevention programs are conducted annually at schools.
Organizations that conduct outreach to socially vulnerable populations and underserved populations	No	-
Public outreach mechanisms / programs to inform citizens on natural hazards, risk, and ways to protect themselves during such events	Yes	Township website capable of messaging. The Township also utilizes social media.



9.3.6 Community Classifications

Table 9-7 summarizes classifications for community programs available to Fredon.

Table 9-7. Community Classifications

Program	Participating? (Yes/No)	Classification	Date Classified
Community Rating System (CRS)	No	-	-
Building Code Effectiveness Grading Schedule (BCEGS)	No	-	-
Public Protection (ISO Fire Protection Classes 1 to 10)	Yes	5	2014
National Weather Service StormReady Certification	No	-	-
Firewise Communities classification	No	-	-
New Jersey Sustainable Jersey Community	No	-	-
Other: Organizations with mitigation focus (advocacy group, non-government)	No	-	-

N/A = Not applicable

— = Unavailable

9.3.7 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 2022). Each jurisdiction has a unique combination of capabilities to adjust to, protect from, and withstand a future hazard event, future conditions, and changing risk. Table 9-8 summarizes the adaptive capacity for each identified hazard of concern and the Township’s capability to address related actions using the following classifications:

- Strong: Capacity exists and is in use.
- Moderate: Capacity might exist; but is not used or could use some improvement.
- Weak: Capacity does not exist or could use substantial improvement

Table 9-8. Adaptive Capacity

Hazard	Adaptive Capacity - Strong/Moderate/Weak
Dam Failure	Moderate
Disease Outbreak	Moderate
Drought	Moderate
Earthquake	Moderate
Flood	Moderate
Geological Hazards	Moderate
Hazardous Materials	Moderate
Hurricane	Moderate
Infestation	Moderate
Nor’easter	Moderate
Severe Weather	Moderate
Severe Winter Weather	Moderate



Hazard	Adaptive Capacity - Strong/Moderate/Weak
Wildfire	Moderate

9.4 NATIONAL FLOOD INSURANCE PROGRAM COMPLIANCE

This section provides specific information on the management and regulation of the regulatory floodplain, including current and future compliance with the National Flood Insurance Program (NFIP). The floodplain administrator listed in Table 9-1 is responsible for maintaining this information.

9.4.1 NFIP Statistics

Table 9-9 summarizes the NFIP policy and claim statistics for Fredon.

Table 9-9. Fredon NFIP Summary of Policy and Claim Statistics

# Policies	2
# Claims (Losses)	2
Total Loss Payments	\$6,936.73
# Repetitive Loss Properties (NFIP definition)	0
# Repetitive Loss Properties (FMA definition)	0
# Severe Repetitive Loss Properties	0

NFIP Definition of Repetitive Loss: The NFIP defines a repetitive loss property as any insurable building for which two or more claims of more than \$1,000 were paid by the NFIP within any rolling 10-year period since 1978.

FMA Definition of Repetitive Loss: FEMA's Flood Mitigation Assistance (FMA) program defines a repetitive loss property as any insurable building that has incurred flood-related damage on two occasions, in which the cost of the repair, on average, equaled or exceeded 25 percent of the market value of the structure at the time of each such flood event.

Definition of Severe Repetitive Loss: A residential property covered under an NFIP flood insurance policy and: (a) That has at least four NFIP claim payments over \$5,000 each, and the cumulative amount of such claims payments exceeds \$20,000; or (b) For which at least two separate claims payments have been made with the cumulative amount of the building portion of such claims exceeding the market value of the building. At least two of the claims must have occurred within any 10-year period, more than 10 days apart.

Source: FEMA Region 2 2024

9.4.2 Flood Vulnerability Summary

Table 9-10 provides a summary of the NFIP program in Fredon.

Table 9-10. NFIP Summary

NFIP Topic	Comments
Flood Vulnerability Summary	
Describe areas prone to flooding in your jurisdiction.	Flooding in the Township occurs within the SFHA.
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



NFIP Topic	Comments
How many homeowners and/or business owners are interested in mitigation (elevation or acquisition)?	Unknown
Are any RiskMAP projects currently underway in your jurisdiction? If so, state what projects are underway.	No
How do you make Substantial Damage determinations?	Unknown
How many Substantial Damage determinations were declared for recent flood events in your jurisdiction?	Unknown
How many properties have been mitigated (elevation or acquisition) in your jurisdiction? If there are mitigation properties, how were the projects funded?	Unknown
Do your flood hazard maps adequately address the flood risk within your jurisdiction? If not, state why.	Yes
NFIP Compliance	
What local department is responsible for floodplain management?	Engineer
Are any certified floodplain managers on staff in your jurisdiction?	No
Do you have access to resources to determine possible future flooding conditions from climate change?	Yes, online FEMA, State, and regional resources.
Does your floodplain management staff need any assistance or training to support its floodplain management program? If so, what type of assistance/training is needed?	No
Provide an explanation of NFIP administration services you provide (e.g., permit review, GIS, education/outreach, inspections, engineering capability)	Permit review
How do you determine if proposed development on an existing structure would qualify as a substantial improvement?	If the value of the proposed development would increase the structure's value by at least 50 percent.
What are the barriers to running an effective NFIP program in the community, if any?	Staff and funding
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? If so, state the violations.	No
When was the most recent Community Assistance Visit (CAV) or Community Assistance Contact (CAC)?	December 7, 1994
What is the local law number or municipal code of your flood damage prevention ordinance?	Chapter 270 - Flood Control
What is the date that your flood damage prevention ordinance was last amended?	February 2021
Does your floodplain management program meet or exceed minimum requirements? If exceeds, in what ways?	Meets N.J.S.A. 40-48-1 et seq
Are there other local ordinances, plans or programs (e.g., site plan review) that support floodplain management and meeting the NFIP requirements? For instance, does the planning board or zoning board consider efforts to reduce flood risk when reviewing variances such as height restrictions?	The Land Use Board considers efforts to reduce flood risk when reviewing variances such as height restrictions. The Township has subdivision and site plan ordinances.



NFIP Topic	Comments
Does your community plan to join the CRS program or is your community interested in improving your CRS classification?	No

9.5 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 appreciating a jurisdiction's overall risk to its hazards of concern. Recent and expected future development trends, including major residential/commercial development and major infrastructure development, are summarized in Table 9-11 through Table 9-13.

Table 9-11. Number of Building Permits for New Construction Issued Since the Previous HMP

	New Construction Permits Issued			
	Single Family	Multi-Family	Other (commercial, mixed-use, etc.)	Total
2019				
Total Permits	0	0	0	0
Permits within SFHA	0	0	0	0
2020				
Total Permits	0	0	0	0
Permits within SFHA	0	0	0	0
2021				
Total Permits	0	0	0	0
Permits within SFHA	0	0	0	0
2022				
Total Permits	0	0	0	0
Permits within SFHA	0	0	0	0
2023				
Total Permits	0	0	0	0
Permits within SFHA	0	0	0	0

SFHA = Special Flood Hazard Area (1% flood event)

Table 9-12. Recent Major Development and Infrastructure from 2019 to Present

Property or Development Name	Type of Development	# of Units / Structures	Location (address and/or block and lot)	Known Hazard Zones*	Description / Status of Development
The Township had no recent major development or infrastructure between 2019 to present.					

* Only location-specific hazard zones or vulnerabilities identified.



Table 9-13. Known or Anticipated Major Development and Infrastructure in the Next Five Years

Property or Development Name	Type of Development	# of Units / Structures	Location (address and/or block and lot)	Known Hazard Zones*	Description / Status of Development
There are no known or anticipated major development or infrastructure in the next five years.					

9.6 JURISDICTIONAL RISK ASSESSMENT

The hazard profiles in Volume I provide detailed information regarding each planning partner's vulnerability to the identified hazards, including summaries of Fredon's risk assessment results and data used to determine the hazard ranking. Key local risk assessment information is presented below.

9.6.1 Hazard Area

Hazard area maps provided below illustrate the probable hazard areas impacted within the Township are shown in Figure 9-1 through Figure 9-3. 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 are provided only for hazards that can be identified clearly using mapping techniques and technologies and for which Fredon has significant exposure. The maps show the location of potential new development, where available.



Figure 9-1. Fredon Flood and Sinkhole Hazard Area Extent and Location Map

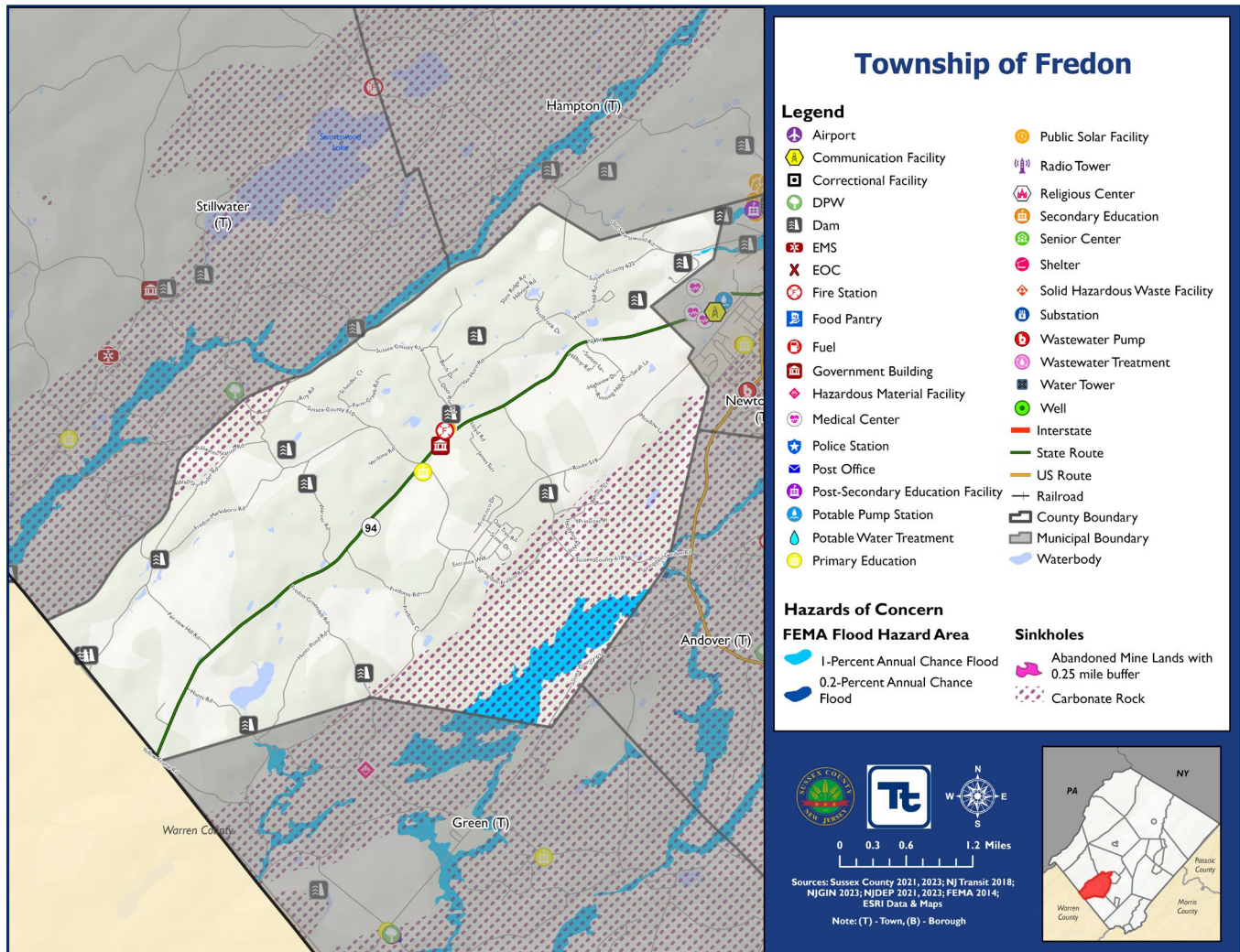


Figure 9-2. Fredon Hazardous Materials and Wildfire Hazard Area Extent and Location Map

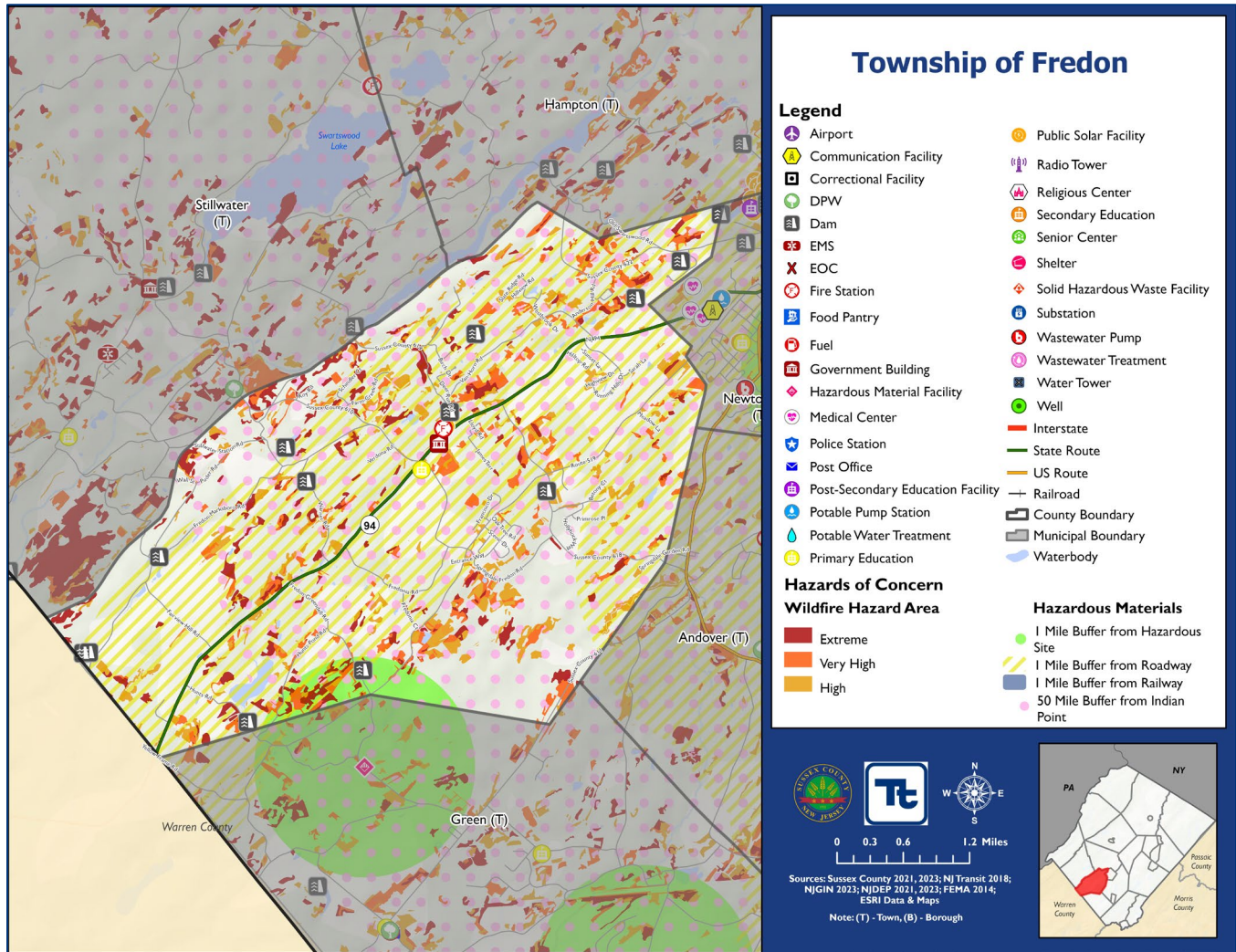
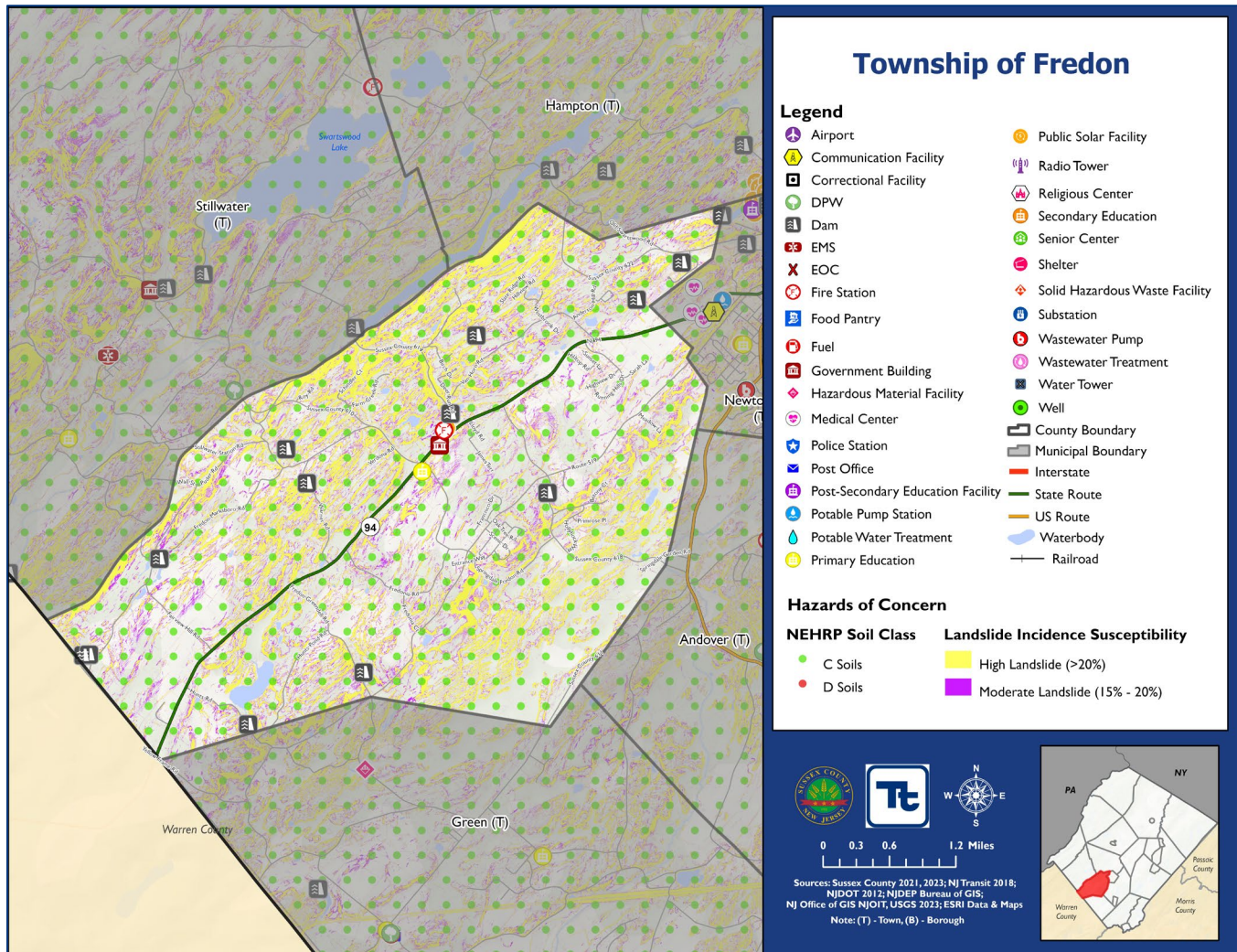


Figure 9-3. Fredon Landslide and NEHRP Soils Hazard Area Extent and Location Map





9.6.2 Hazard Event History

The history of natural and non-natural hazard events in Fredon is detailed in Volume I, where each hazard profile includes a chronology of historical events that have affected the County and its municipalities. Table 9-14 provides details on loss and damage in Fredon during hazard events since the last hazard mitigation plan update.

Table 9-14. Hazard Event History in Fredon

Dates of Event	Event Type (Disaster Declaration)	County Designated?	Summary of Event	Summary of Damage and Losses in Fredon
January 20, 2020 – May 11, 2023	Covid-19 Pandemic (EM-3451-NJ, DR-4488-NJ)	Yes	Sussex County accounted for 37,642 positive cases of COVID-19 in the State of New Jersey, and 425 of the reported deaths. A total of 277,542 vaccinations were delivered in the County to both residents and non-residents.	The Township implemented masking and social distancing mandates. Non-emergent personnel were permitted to work from home.
August 4, 2020	Tropical Storm Isaias (DR-4574-NJ)	Yes	Tropical Storm Isaias brought high winds and heavy rain to Sussex County; there were numerous reports of downed trees and power lines. Observations from surrounding areas suggest sustained tropical storm force winds likely occurred.	Downed trees and power lines. Public Works officials assisted in the clean-up on Township maintained roadways and properties.
January 31 – February 2, 2021	Severe Winter Storm (DR-4597-NJ)	Yes	Heavy precipitation developed producing areas of extreme snowfall rates of 2 to 4 inches per hour in northern New Jersey. Numerous reports of 24 to 32 inches were received from across the County.	Heavy snowfall and high snow accumulations impacted the Township. No damages or losses occurred to Township property. Public Works officials assisted in the clean-up on Township maintained roadways and properties.
September 1-3, 2021	Remnants of Hurricane Ida (EM-3573-NJ, DR-4614-NJ)	Yes	The remnants of Hurricane Ida produced heavy rainfall and flash floods. Widespread flash flooding occurred in Sussex County with numerous road closures.	Flash flooding resulted in road closures. Public Works officials assisted in the clean-up on Township maintained roadways and properties.

EM = Emergency Declaration (FEMA)

FEMA = Federal Emergency Management Agency

DR = Major Disaster Declaration (FEMA)

N/A = Not applicable

9.6.3 Hazard Ranking and Vulnerabilities

The hazard profiles in Volume I have detailed information regarding each planning partner's vulnerability to the identified hazards. The following presents key risk assessment results for Fredon .



Hazard Ranking

The participating jurisdictions have differing degrees of vulnerability to the hazards of concern, so each jurisdiction ranked its own degree of risk to each hazard. The community-specific hazard ranking is based on problems and impacts identified by the risk assessment presented in Volume I. The ranking process involves an assessment of the likelihood of occurrence for each hazard; the potential impacts of the hazard on people, property, and the economy; community capabilities to address the hazard; and changing future climate conditions. Fredon reviewed the County hazard ranking and individual results to assess the relative risk of the hazards of concern to the community. During the review of the hazard ranking, the Township indicated the following hazard rankings were accurate.

Table 9-15 shows Fredon's final hazard rankings for identified hazards of concern. Mitigation action development uses the ranking to target hazards with the highest risk.

Table 9-15. Hazard Ranking

Hazard	Rank
Dam Failure	Low
Disease Outbreak	Low
Drought	Low
Earthquake	Low
Flood	Medium
Geological Hazards	Medium
Hazardous Materials	Medium
Hurricane	Medium
Infestation	Low
Nor'easter	High
Severe Weather	High
Severe Winter Weather	High
Wildfire	Medium

Note: The scale is based on the hazard rankings established in Volume I, modified as appropriate based on review by the jurisdiction

Critical Facilities

Table 9-16 identifies critical facilities in the community located in the 1 percent and 0.2 percent annual chance floodplains.

Table 9-16. Critical Facilities Flood Vulnerability

Name	Type	Vulnerability		Addressed by Proposed Action	Already Protected to 0.2% Flood Level (describe protections)
		1% Annual Chance Event	0.2% Annual Chance Event		
Fredon does not have any identified critical facilities located in the 1- or 0.2-percent annual chance floodplains.					



Source: NJGIN 2023; Sussex County 2021, 2023

9.6.4 Identified Issues

After review of Fredon's hazard event history, hazard rankings, hazard location, and current capabilities, Fredon identified the following vulnerabilities within the community:

- Dams with poor or unsatisfactory safety ratings have deficiencies that could potentially make dam failure more likely to occur or the consequences of dam failure more significant. The following dam is located in the municipality and have been found to have either a poor or unsatisfactory safety rating based on their most recent inspections:
 - J.A. Little Farm Pond Dam (poor)
- Backup power sources are necessary to maintain critical services for critical facilities. The Township Civic Center, located at 436 State Route 94 S, requires a backup power source. The site also houses the fire house and EMS. The Township and County have plans to establish the Civic Center as an emergency shelter. High winds associated with hurricanes, nor'easters, severe weather, and severe winter weather are known to cause power outages, which would impact the continuity of operations at both critical facilities.
- The Greendell Road and Long Hill catch basin is in need of replacement in order to improve stormwater. Flooded roadways can impact evacuation routes, prevent emergency responders from reaching a location, and impede on necessary medical appointments or needs for vulnerable populations.
- Deer Run requires installation of a storm drain to allow for proper stormwater management and to reduce risk of flooding. Flooded roadways can impact evacuation routes, prevent emergency responders from reaching a location, and impede on necessary medical appointments or needs for vulnerable populations.
- The Township does not have any organizations that conduct outreach to socially vulnerable populations and underserved populations. The Township has struggled with identifying where socially vulnerable populations are located at within the jurisdiction. Identifying and educating these populations can increase resiliency in the Township and potentially reduce the number of emergency calls during hazardous events.
- The Township does not have any certified floodplain managers (CFM) on staff. Becoming a CFM increases the depth of understanding when dealing with FEMA floodplains. The certifications ensures those that bare it understand the regulatory requirements and procedures needed to make floodplain management work effectively and efficiently at the community level.
- The Township does not have a Substantial Damage Management Plan in place, nor do they have a formal process in place when conducting substantial damage determinations. The Township is in need of a formal process and plan to provide a framework for conducting such inspections and determinations.
- The Township does not have a formalized list of damaged properties or property owners which may be interested in flood mitigation measures, such as elevation or acquisition. Maintaining these lists can assist the Township in identifying and prioritizing properties to mitigate.
- A recent audit of New Jersey's model ordinances by FEMA for conformance with NFIP, resulted in a review of existing local flood damage prevention ordinances. Based upon FEMA's review, specific language related to NFIP regulations was not consistent. Additionally, it was determined that better coordination was needed between the three sets of regulations that regulate development and construction in the floodplain.

* This issue was identified as a specific area of concern based on resident response to the Sussex County Hazard Mitigation Citizen survey.



9.7 MITIGATION STRATEGY AND PRIORITIZATION

This section discusses the status of mitigation actions from the previous HMP, describes proposed hazard mitigation actions, and prioritizes actions to address over the next five years.

9.7.1 Past Mitigation Action Status

Table 9-17 indicates progress on the Township's mitigation strategy identified in the 2021 HMP. Actions that are still recommended but not completed or that are in progress are carried forward and combined with new actions as part of the mitigation strategy for this plan update. Previous actions that are now ongoing programs and capabilities are indicated as such and are presented in the capability assessment earlier in this annex.

9.7.2 Additional Mitigation Efforts

Fredon did not identify any additional mitigation efforts completed since the last HMP.



Table 9-17. Status of Previous Mitigation Actions

Project Number	Project Name	Hazard(s) Addressed	Responsible Party	Brief Summary of the Original Problem and the Solution (Project)	Action Review 1. Status (In Progress, Ongoing Capability, No Progress, Complete) 2. Provide a narrative to describe progress or obstacles that have prevented implementation	Next Steps 1. Project to be included in the 2025 HMP or Discontinue 2. If including action in the 2025 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
2020-Fredon-001	Civic Center Emergency Shelter	All Hazards	OEM, FEMA, Sussex County OEM, American Red Cross	<p>Problem: The Township would like to utilize the Civic Center at 436 NJ-94, Newton, NJ 07860 for emergency housing, use as a warming shelter, etc. However, the building will require upgrades. In addition, the shelter would require staffing as staffing from the Township is limited.</p> <p>Solution: The Township will work with FEMA to identify what upgrades are needed to the facility to meet sheltering guidelines. Expected upgrades needed include cots, potential showering locations, etc. The Township will work with Sussex County OEM and the American Red Cross to establish sheltering staffing agreements.</p>	1. Complete 2. In working with the County, it was indicated the Civic Center is prepared to be utilized as a sheltering location but will require a generator to maintain needed electrical power.	1. Discontinue 2. Not applicable 3. Project completed
2020-Fredon-002	Civic Center Backup Power	Severe Storm, Severe Winter Storm, Hurricane, Nor'easter	Engineer, OEM	<p>Problem: Backup power sources are necessary to maintain critical services for critical facilities. The Township Civic Center requires a backup power source. The site also houses the fire house and EMS. The Township has plans to establish the Civic Center as an emergency shelter.</p> <p>Solution: The Engineer will research what size generator is</p>	1. No Progress 2. Progress on this action has been delayed due to financial constraints.	1. Include in update 2. Not applicable 3. Not applicable



Project Number	Project Name	Hazard(s) Addressed	Responsible Party	Brief Summary of the Original Problem and the Solution (Project)	Action Review 1. Status (In Progress, Ongoing Capability, No Progress, Complete) 2. Provide a narrative to describe progress or obstacles that have prevented implementation	Next Steps 1. Project to be included in the 2025 HMP or Discontinue 2. If including action in the 2025 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
				needed to power the Civic Center. The Township will then purchase and install the selected generator and necessary electrical components to supply backup power to the Municipal Building.		
2020-Fredon-003	Greendell Road	Flood, Severe Weather	Engineer, DPW	Problem: The Greendell Road and Long Hill catch basin is in need of replacement in order to improve stormwater. Solution: The Township Engineer will design the replacement catch basin. The DPW will install the catch basin designed by the Engineer.	1. No Progress 2. Progress on this action has been delayed due to financial constraints.	1. Include in update 2. Not applicable 3. Not applicable
2020-Fredon-004	Storm Drain and Maintain Easement Deer Run Installation	Flood, Severe Weather	Engineer, DPW	Problem: Deer Run requires installation of a storm drain to allow for proper stormwater management and to reduce risk of flooding. Solution: The Township will secure an easement and design and construct a storm drain at Deer Run.	1. No Progress 2. Progress on this action has been delayed due to financial constraints.	1. Include in update 2. Not applicable 3. Not applicable



9.7.3 Proposed Hazard Mitigation Actions for the HMP Update

Fredon participated in the mitigation strategy workshop for this HMP to identify appropriate actions to include in a local hazard mitigation strategy. Its comprehensive consideration of all possible activities to address hazards of concern included review of the following FEMA documents:

- FEMA 551 “Selecting Appropriate Mitigation Measures for Floodprone Structures” (March 2007)
- FEMA “Mitigation Ideas—A Resource for Reducing Risk to Natural Hazards” (January 2013).

The action worksheets included at the end of this annex list the mitigation actions that Fredon would like to pursue in the future to reduce the effects of hazards. The actions 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 Township priorities.

Table 9-18 indicates the range of proposed mitigation action categories. The four FEMA mitigation action categories and the six CRS mitigation action categories are listed in the table to further demonstrate the wide range of activities and mitigation measures selected.

Volume I identifies 14 evaluation criteria for prioritizing the mitigation actions. To assist with rating each mitigation action as high, medium, or low priority, a numeric rank is assigned (-1, 0, or 1) for each of the evaluation criteria. Table 9-19 provides a summary of the prioritization of all proposed mitigation actions for the HMP update.



Table 9-18. Analysis of Mitigation Actions by Hazard and Category

Hazard	Actions That Address the Hazard, by Action Category									
	FEMA				CRS					
	LPR	SIP	NSP	EAP	PR	PP	PI	NR	SP	ES
Dam Failure	X	X		X	X		X		X	X
Disease Outbreak		X		X			X			X
Drought		X		X			X			X
Earthquake	X	X		X	X		X			X
Flood	X	X		X	X		X		X	X
Geological Hazards	X	X		X	X		X			X
Hazardous Materials	X	X		X	X		X			X
Hurricane	X	X		X	X		X			X
Infestation				X			X			
Nor'easter	X	X		X	X		X			X
Severe Weather	X	X		X	X		X			X
Severe Winter Weather	X	X		X	X		X			X
Wildfire	X	X		X	X		X			X

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 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

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 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 9-19. Summary of Prioritization of Actions

Project Number	Project Name	Scores for Evaluation Criteria															High / Medium / Low
		Life Safety	Property Protection	Cost-Effectiveness	Political	Legal	Fiscal	Environmental	Social Vulnerability	Administrative	Hazards of Concern	Climate Change	Timeline	Community Lifelines	Other Local Objectives	Total	
2025-FredonTwp-01	Dam Repair	1	1	1	1	1	0	1	1	1	1	1	1	1	0	12	High
2025-FredonTwp-02	Emergency Generators at Critical Facilities	1	1	1	1	1	0	0	1	1	1	0	1	1	0	10	Medium
2025-FredonTwp-03	Catch Basin Improvements	1	1	1	1	1	0	1	1	1	0	1	1	0	0	10	Medium
2025-FredonTwp-04	Deer Run Flood Mitigation	1	1	1	1	1	0	1	1	1	0	1	1	0	0	10	Medium
2025-FredonTwp-05	Socially Vulnerable Populations Outreach	1	0	1	1	1	1	0	1	1	1	1	1	1	1	12	High
2025-FredonTwp-06	Certified Floodplain Manager Training	1	1	1	1	1	1	0	1	1	1	1	1	0	1	12	High
2025-FredonTwp-07	Substantial Damage Management Plan	0	1	1	1	1	1	0	1	1	1	1	1	1	0	11	High
2025-FredonTwp-08	Flood Mitigation Interest	1	1	1	1	1	1	1	1	1	0	1	1	1	1	13	High
2025-FredonTwp-09	Code Coordinated Ordinance	1	1	1	1	1	1	1	1	1	0	1	1	0	0	11	High

Note: Volume I, Section 21 (Mitigation Strategy) conveys guidance on prioritizing mitigation actions. Low (0-6), Medium (7-10), High (11-14).



Action 2025-FredonTwp-01. Dam Repair

Lead Agency:	Engineer		
Supporting Agencies:	Dam Manager, NJDEP Bureau of Dam Safety, County Engineer		
Hazard(s) of Concern:	<input checked="" type="checkbox"/> Dam Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input checked="" type="checkbox"/> Flood <input type="checkbox"/> Geological Hazards <input type="checkbox"/> Hazardous Materials <input type="checkbox"/> Hurricane <input type="checkbox"/> Infestation <input type="checkbox"/> Nor'easter <input type="checkbox"/> Severe Weather <input type="checkbox"/> Severe Winter Weather <input type="checkbox"/> Wildfire		
Description of the Problem:	<p>Dams with poor or unsatisfactory safety ratings have deficiencies that could potentially make dam failure more likely to occur or the consequences of dam failure more significant. The following dams are located in the municipality and have been found to have either a poor or unsatisfactory safety rating based on their most recent inspections:</p> <ul style="list-style-type: none"> J.A. Little Farm Pond Dam (poor) 		
Description of the Solution:	<p>The municipal engineer will work with dam managers, the NJDEP Bureau of Dam Safety, and the County Engineer to review the most recent inspections of dams in the municipality that have resulted in a poor or unsatisfactory safety rating, identify the deficiencies, determine the necessary repairs and improvements necessary to address the deficiencies, identify available funding sources for the identified repairs/improvements, and implement the cost-effective repairs/improvements.</p>		
Estimated Cost:	Low for initial assessment of options, TBD for total cost based on mitigation actions selected		
Potential Funding Sources:	NJDEP, Annual Budget		
Implementation Timeline:	Within 5 years		
Goals Met:	1, 2, 3		
Benefits:	<p>Dam failure will be avoided, which will reduce the risk of harm to people and property downstream. Certain safety requirements will be met that can allow for funding to be received for further mitigation projects.</p>		
Impact on Socially Vulnerable Populations:	<p>The most vulnerable populations may live directly downstream of the dam and lack the ability to receive notifications of dam failure or evacuate when notified. Preventing dam failure allows those communities to remain intact and reduces the risk of loss of life and property in those areas.</p>		
Impact on Future Development:	Future development downstream of dams will also be protected from dam failure.		
Impact on Critical Facilities/Lifelines:	Critical roads and utilities will be protected from potential damage or loss from unintended dam releases.		
Impact on Capabilities:	Not applicable		
Climate Change Considerations:	<p>Climate change is resulting in an increase to annual precipitation. Much of this increase is in the form of heavy rainfall events. Consideration should be taken for increases in frequency and severity of rainfall events to ensure that the dam is designed to withstand these increases.</p>		
Mitigation Category	<input type="checkbox"/> Local Plans and Regulations (LPR) <input checked="" type="checkbox"/> Structure and Infrastructure Project (SIP) <input type="checkbox"/> Natural Systems Protection (NSP) <input checked="" type="checkbox"/> Education and Awareness Programs (EAP)		
CRS Category	<input type="checkbox"/> Preventative Measures (PR) <input type="checkbox"/> Property Protection (PP) <input checked="" type="checkbox"/> Public Information (PI) <input type="checkbox"/> Natural Resource Protection (NR) <input checked="" type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES)		
Priority	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives:	Action		Evaluation
	No Action		Risk of dam failure remains or increases over time
	Work without County Engineer involvement		Improvements made but may lack appropriate support from County, including data and potential funding access



	Remove all dams	Without proper analysis, dam removal may increase flooding risk
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Action 2025-FredonTwp-02. Emergency Generators at Critical Facilities

Lead Agency:	Engineering		
Supporting Agencies:	Civic Center, Sussex County, Emergency Management, Township Administration		
Hazard(s) of Concern:	<div style="display: flex; justify-content: space-between;"> <div> <input checked="" type="checkbox"/> Dam Failure <input checked="" type="checkbox"/> Disease Outbreak <input checked="" type="checkbox"/> Drought <input checked="" type="checkbox"/> Earthquake <input checked="" type="checkbox"/> Flood <input checked="" type="checkbox"/> Geological Hazards <input checked="" type="checkbox"/> Hazardous Materials </div> <div> <input checked="" type="checkbox"/> Hurricane <input type="checkbox"/> Infestation <input checked="" type="checkbox"/> Nor'easter <input checked="" type="checkbox"/> Severe Weather <input checked="" type="checkbox"/> Severe Winter Weather <input checked="" type="checkbox"/> Wildfire </div> </div>		
Description of the Problem:	Backup power sources are necessary to maintain critical services for critical facilities. The Township Civic Center, located at 436 State Route 94 S, requires a backup power source. The site also houses the fire house and EMS. The Township and County have plans to establish the Civic Center as an emergency shelter. High winds associated with hurricanes, nor'easters, severe weather, and severe winter weather are known to cause power outages, which would impact the continuity of operations at both critical facilities.		
Description of the Solution:	The Township's Engineer will assess the needs of the buildings to determine the capacity required for the generator. Following this determination, the generator and all necessary components and accessories will be installed at both the Township Civic Center, located at 436 State Route 94 S. The employees at the Civic Center will perform the needed maintenance for these generators.		
Estimated Cost:	Medium		
Potential Funding Sources:	HMGP, BRIC, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Annual Budget, County Budget		
Implementation Timeline:	Within 5 years		
Goals Met:	1, 2, 5, 6, 7		
Benefits:	This action protects public health and safety and ensures continued operation of a critical facility and its essential functions during a power outage.		
Impact on Socially Vulnerable Populations:	Protection of critical facilities provides an opportunity for first responders, utility workers, and emergency managers to stage and deploy resources to vulnerable and hazard prone areas. This facility has been elected as a sheltering location, which would serve vulnerable populations.		
Impact on Future Development:	This action results in protection of a critical facility that could support new populations from future development.		
Impact on Critical Facilities/Lifelines:	This action protects public health and safety and ensures continued operation of a critical facility and its essential functions during a power outage.		
Impact on Capabilities:	This action ensures continuity of operations to maintain capabilities.		
Climate Change Considerations:	Climate change is likely to increase severe weather events such as flooding, wind, and extreme temperatures that result in power failures. This action accounts for a likely increase in power failure events.		
Mitigation Category	<input type="checkbox"/> Local Plans and Regulations (LPR) <input checked="" type="checkbox"/> Structure and Infrastructure Project (SIP) <input type="checkbox"/> Natural Systems Protection (NSP) <input type="checkbox"/> Education and Awareness Programs (EAP)		
CRS Category	<input type="checkbox"/> Preventative Measures (PR) <input type="checkbox"/> Property Protection (PP) <input type="checkbox"/> Public Information (PI) <input type="checkbox"/> Natural Resource Protection (NR) <input type="checkbox"/> Structural Flood Control Projects (SP) <input checked="" type="checkbox"/> Emergency Services (ES)		
Priority	<input type="checkbox"/> High	<input checked="" type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives:	Action	Evaluation	
	No Action	Current problem remains	
	Microgrid	Costly and difficult to implement.	



	Solar panels and battery backup	Solar power is unlikely to be able to provide battery power for extended power failure events.
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Action 2025-FredonTwp-03. Catch Basin Improvements

Lead Agency:	Engineering		
Supporting Agencies:	Public Works, Township Administration, Emergency Management		
Hazard(s) of Concern:	<input type="checkbox"/> Dam Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input checked="" type="checkbox"/> Flood <input type="checkbox"/> Geological Hazards <input type="checkbox"/> Hazardous Materials <input type="checkbox"/> Hurricane <input type="checkbox"/> Infestation <input type="checkbox"/> Nor'easter <input type="checkbox"/> Severe Weather <input type="checkbox"/> Severe Winter Weather <input type="checkbox"/> Wildfire		
Description of the Problem:	The Greendell Road and Long Hill catch basin is in need of replacement in order to improve stormwater. Flooded roadways can impact evacuation routes, prevent emergency responders from reaching a location, and impede on necessary medical appointments or needs for vulnerable populations.		
Description of the Solution:	The Township Engineer will design the required improvements to the catch basin to reduce the risk of flooding. Cost effective measures will be implemented by the Department of Public Works.		
Estimated Cost:	High		
Potential Funding Sources:	FEMA BRIC, HMGP		
Implementation Timeline:	5 years		
Goals Met:	2		
Benefits:	This action would reduce the flooding impacts felt by the Township along Greendell Road and Long Hill.		
Impact on Socially Vulnerable Populations:	This action will assist socially vulnerable populations whose properties are impacted by flooding along Greendell Road and Long Hill. Furthermore, this action will assist in keeping roadways clear of flood waters for the populations which may need to attend medical appointments or require medical attention from first responders.		
Impact on Future Development:	Future development in the impacted area will be less likely to be flooded.		
Impact on Critical Facilities/Lifelines:	This action would assist in the reduction of roadway flooding along Greendell Road and Long Hill, permitting first responders to traverse the roadways safely.		
Impact on Capabilities:	Not applicable		
Climate Change Considerations:	A warmer atmosphere means storms have the potential to be more intense and occur more often, including increased periods of intense rain events. Heavy rain events make traversing roadways difficult, and often times unsafe.		
Mitigation Category	<input type="checkbox"/> Local Plans and Regulations (LPR) <input checked="" type="checkbox"/> Structure and Infrastructure Project (SIP) <input type="checkbox"/> Natural Systems Protection (NSP) <input type="checkbox"/> Education and Awareness Programs (EAP)		
CRS Category	<input type="checkbox"/> Preventative Measures (PR) <input type="checkbox"/> Property Protection (PP) <input type="checkbox"/> Public Information (PI) <input type="checkbox"/> Natural Resource Protection (NR) <input checked="" type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES)		
Priority	<input type="checkbox"/> High <input checked="" type="checkbox"/> Medium <input type="checkbox"/> Low		
Alternatives:	Action	Evaluation	
	No action	Current problem remains	
	Raise banks of stream to increase storage capacity	Cost prohibitive	
	Construct floodwall along stream	Cost prohibitive	



Action 2025-FredonTwp-04. Deer Run Flood Mitigation

Lead Agency:	Engineering		
Supporting Agencies:	Township Administration, Emergency Management, Public Works		
Hazard(s) of Concern:	<input type="checkbox"/> Dam Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input checked="" type="checkbox"/> Flood <input type="checkbox"/> Geological Hazards <input type="checkbox"/> Hazardous Materials <input type="checkbox"/> Hurricane <input type="checkbox"/> Infestation <input type="checkbox"/> Nor'easter <input type="checkbox"/> Severe Weather <input type="checkbox"/> Severe Winter Weather <input type="checkbox"/> Wildfire		
Description of the Problem:	Deer Run requires installation of a storm drain to allow for proper stormwater management and to reduce risk of flooding. Flooded roadways can impact evacuation routes, prevent emergency responders from reaching a location, and impede on necessary medical appointments or needs for vulnerable populations.		
Description of the Solution:	The Township Engineer will design a cost-effective easement to assist in minimizing or eliminating the flooding issues at Deer Run. The Department of Public Works will create the easement and install the properly sized storm drain.		
Estimated Cost:	High		
Potential Funding Sources:	FEMA BRIC, HMGP		
Implementation Timeline:	5 years		
Goals Met:	2		
Benefits:	This action would reduce the flooding impacts felt by the Township on Vernon Crossing Road.		
Impact on Socially Vulnerable Populations:	This action will assist socially vulnerable populations whose properties are impacted by flooding on Vernon Crossing Road. Furthermore, this action will assist in keeping roadways clear of flood waters for the populations which may need to attend medical appointments or require medical attention from first responders.		
Impact on Future Development:	Future development in the impacted area will be less likely to be flooded.		
Impact on Critical Facilities/Lifelines:	This action would assist in the reduction of roadway flooding on Vernon Crossing Road, permitting first responders to traverse the roadways safely.		
Impact on Capabilities:	Not applicable		
Climate Change Considerations:	A warmer atmosphere means storms have the potential to be more intense and occur more often, including increased periods of intense rain events. Heavy rain events make traversing roadways difficult, and often times unsafe.		
Mitigation Category	<input type="checkbox"/> Local Plans and Regulations (LPR) <input checked="" type="checkbox"/> Structure and Infrastructure Project (SIP) <input type="checkbox"/> Natural Systems Protection (NSP) <input type="checkbox"/> Education and Awareness Programs (EAP)		
CRS Category	<input type="checkbox"/> Preventative Measures (PR) <input type="checkbox"/> Property Protection (PP) <input type="checkbox"/> Public Information (PI) <input type="checkbox"/> Natural Resource Protection (NR) <input checked="" type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES)		
Priority	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives:	Action	Evaluation	
	No Action	Current problem remains	
	Raise banks of stream to increase storage capacity	Cost prohibitive	
	Construct floodwall along stream	Cost prohibitive	



Action 2025-FredonTwp-05. Socially Vulnerable Populations Outreach

Lead Agency:	Emergency Management		
Supporting Agencies:	Township Administration, Sussex County		
Hazard(s) of Concern:	<input checked="" type="checkbox"/> Dam Failure <input checked="" type="checkbox"/> Disease Outbreak <input checked="" type="checkbox"/> Drought <input checked="" type="checkbox"/> Earthquake <input checked="" type="checkbox"/> Flood <input checked="" type="checkbox"/> Geological Hazards <input checked="" type="checkbox"/> Hazardous Materials	<input checked="" type="checkbox"/> Hurricane <input checked="" type="checkbox"/> Infestation <input checked="" type="checkbox"/> Nor'easter <input checked="" type="checkbox"/> Severe Weather <input checked="" type="checkbox"/> Severe Winter Weather <input checked="" type="checkbox"/> Wildfire	
Description of the Problem:	The Township does not have any organizations that conduct outreach to socially vulnerable populations and underserved populations. The Township has struggled with identifying where socially vulnerable populations are located at within the jurisdiction. Identifying and educating these populations can increase resiliency in the Township and potentially reduce the number of emergency calls during hazardous events.		
Description of the Solution:	Create outreach materials, or utilize those from Sussex County, on hazard risks for socially vulnerable populations. Methods of distribution may include Township events, the Township newsletters, social media, the Township website, and having the materials on display for the public at Township libraries and offices. Consider hiring staff to work directly with socially vulnerable populations. Work with Sussex County to identify and create a list of socially vulnerable populations utilizing Register Ready.		
Estimated Cost:	Low		
Potential Funding Sources:	Township Budget, HMGP		
Implementation Timeline:	Within 3 years		
Goals Met:	1, 2, 3, 7		
Benefits:	This action will ensure there is an individual working to identify and work with the socially vulnerable populations in the Township. Furthermore, this action will create opportunities to educate and inform populations on hazard risks.		
Impact on Socially Vulnerable Populations:	Socially vulnerable populations in the Township will become educated on hazards risks. The Township will identify an individual to identify and work with these populations to ensure the most up to date information is being shared.		
Impact on Future Development:	Not applicable		
Impact on Critical Facilities/Lifelines:	Educating populations on hazard risk and how to mitigate the risks can decrease the demand on utilities and emergency services including health and medical, law enforcement, and search and rescue.		
Impact on Capabilities:	This action would build upon the Township's already existing public education and outreach program. It would also assist the Township in identifying where socially vulnerable populations are located in the jurisdiction.		
Climate Change Considerations:	Climate change is likely to increase the intensity and frequency of many climate related disaster events. This action will inform residents and business owners of how to reduce risk from hazards and how climate change may exacerbate those risks.		
Mitigation Category	<input type="checkbox"/> Local Plans and Regulations (LPR) <input type="checkbox"/> Structure and Infrastructure Project (SIP)	<input type="checkbox"/> Natural Systems Protection (NSP) <input checked="" type="checkbox"/> Education and Awareness Programs (EAP)	
CRS Category	<input type="checkbox"/> Preventative Measures (PR) <input type="checkbox"/> Property Protection (PP) <input checked="" type="checkbox"/> Public Information (PI)	<input type="checkbox"/> Natural Resource Protection (NR) <input type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES)	
Priority	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives:	Action	Evaluation	
	No action	Current methods remain the only ones used	
	Rely on state or federal resources	Resources may be generalized and not specific to the risks in the Township	



	Use only a few methods for distribution	Using only a few methods of distribution may hinder socially vulnerable populations from receiving the guidance
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Action 2025-FredonTwp-06. Certified Floodplain Manager Training

Lead Agency:	Floodplain Administrator																
Supporting Agencies:	Engineering, Building Department, Township Administration																
Hazard(s) of Concern:	<table><tr><td><input type="checkbox"/> Dam Failure</td><td><input type="checkbox"/> Hurricane</td></tr><tr><td><input type="checkbox"/> Disease Outbreak</td><td><input type="checkbox"/> Infestation</td></tr><tr><td><input type="checkbox"/> Drought</td><td><input type="checkbox"/> Nor'easter</td></tr><tr><td><input type="checkbox"/> Earthquake</td><td><input type="checkbox"/> Severe Weather</td></tr><tr><td><input checked="" type="checkbox"/> Flood</td><td><input type="checkbox"/> Severe Winter Weather</td></tr><tr><td><input type="checkbox"/> Geological Hazards</td><td><input type="checkbox"/> Wildfire</td></tr><tr><td><input type="checkbox"/> Hazardous Materials</td><td></td></tr></table>			<input type="checkbox"/> Dam Failure	<input type="checkbox"/> Hurricane	<input type="checkbox"/> Disease Outbreak	<input type="checkbox"/> Infestation	<input type="checkbox"/> Drought	<input type="checkbox"/> Nor'easter	<input type="checkbox"/> Earthquake	<input type="checkbox"/> Severe Weather	<input checked="" type="checkbox"/> Flood	<input type="checkbox"/> Severe Winter Weather	<input type="checkbox"/> Geological Hazards	<input type="checkbox"/> Wildfire	<input type="checkbox"/> Hazardous Materials	
<input type="checkbox"/> Dam Failure	<input type="checkbox"/> Hurricane																
<input type="checkbox"/> Disease Outbreak	<input type="checkbox"/> Infestation																
<input type="checkbox"/> Drought	<input type="checkbox"/> Nor'easter																
<input type="checkbox"/> Earthquake	<input type="checkbox"/> Severe Weather																
<input checked="" type="checkbox"/> Flood	<input type="checkbox"/> Severe Winter Weather																
<input type="checkbox"/> Geological Hazards	<input type="checkbox"/> Wildfire																
<input type="checkbox"/> Hazardous Materials																	
Description of the Problem:	The Township does not have any certified floodplain managers (CFM) on staff. Becoming a CFM increases the depth of understanding when dealing with FEMA floodplains. The certifications ensures those that bare it understand the regulatory requirements and procedures needed to make floodplain management work effectively and efficiently at the community level.																
Description of the Solution:	Provide training and/or certification for Township staff with NFIP regulations and floodplain management ordinances. Encourage staff to become Certified Floodplain Managers via the Association of State Floodplain Manager's CFM Certification Program.																
Estimated Cost:	Low																
Potential Funding Sources:	Township Budget																
Implementation Timeline:	Within 5 years																
Goals Met:	1, 2, 3, 5																
Benefits:	This action will increase the NFIP capabilities of the Township and assure the Township's NFIP program has enough staff to accomplish its goals and reach NFIP compliance.																
Impact on Socially Vulnerable Populations:	Officials that are up to date on flood risk are more likely to encourage development outside areas of high flood risk, which is where socially vulnerable populations have historically resided. Safer dwellings may be developed in a less vulnerable location.																
Impact on Future Development:	Officials that understand best practices in floodplain management will have the opportunity to influence future development and prevent unsafe building in flood hazard areas.																
Impact on Critical Facilities/Lifelines:	The opportunity will exist for leaders and operators of utilities and other essential services to attend training and provide direction on ways the prepare for, plan for, and prevent interruptions in service as a result of a flood.																
Impact on Capabilities:	This action will enhance the Township's current NFIP capabilities.																
Climate Change Considerations:	Climate change is likely to increase the intensity and frequency of many climate related disaster events. This action will educate staff on NFIP regulations to assist with the flood hazard.																
Mitigation Category	<table><tr><td><input type="checkbox"/> Local Plans and Regulations (LPR)</td><td><input type="checkbox"/> Natural Systems Protection (NSP)</td></tr><tr><td><input type="checkbox"/> Structure and Infrastructure Project (SIP)</td><td><input checked="" type="checkbox"/> Education and Awareness Programs (EAP)</td></tr></table>			<input type="checkbox"/> Local Plans and Regulations (LPR)	<input type="checkbox"/> Natural Systems Protection (NSP)	<input type="checkbox"/> Structure and Infrastructure Project (SIP)	<input checked="" type="checkbox"/> Education and Awareness Programs (EAP)										
<input type="checkbox"/> Local Plans and Regulations (LPR)	<input type="checkbox"/> Natural Systems Protection (NSP)																
<input type="checkbox"/> Structure and Infrastructure Project (SIP)	<input checked="" type="checkbox"/> Education and Awareness Programs (EAP)																
CRS Category	<table><tr><td><input type="checkbox"/> Preventative Measures (PR)</td><td><input type="checkbox"/> Natural Resource Protection (NR)</td></tr><tr><td><input type="checkbox"/> Property Protection (PP)</td><td><input type="checkbox"/> Structural Flood Control Projects (SP)</td></tr><tr><td><input checked="" type="checkbox"/> Public Information (PI)</td><td><input type="checkbox"/> Emergency Services (ES)</td></tr></table>			<input type="checkbox"/> Preventative Measures (PR)	<input type="checkbox"/> Natural Resource Protection (NR)	<input type="checkbox"/> Property Protection (PP)	<input type="checkbox"/> Structural Flood Control Projects (SP)	<input checked="" type="checkbox"/> Public Information (PI)	<input type="checkbox"/> Emergency Services (ES)								
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<input type="checkbox"/> Property Protection (PP)	<input type="checkbox"/> Structural Flood Control Projects (SP)																
<input checked="" type="checkbox"/> Public Information (PI)	<input type="checkbox"/> Emergency Services (ES)																
Priority	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low														
Alternatives:	Action	Evaluation															
	No Action	Current problem remains															
	Hire outside contractors for floodplain administration	Costly															
	Establish shared service agreements for floodplain administration from neighboring municipalities	Neighboring municipalities are unlikely to have the staff capacity to take on this role															



Action 2025-FredonTwp-07. Substantial Damage Management Plan

Lead Agency:	Floodplain Administrator		
Supporting Agencies:	Emergency Management, Building Department		
Hazard(s) of Concern:	<div> <input checked="" type="checkbox"/> Dam Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input checked="" type="checkbox"/> Earthquake <input checked="" type="checkbox"/> Flood <input checked="" type="checkbox"/> Geological Hazards <input checked="" type="checkbox"/> Hazardous Materials </div> <div> <input checked="" type="checkbox"/> Hurricane <input type="checkbox"/> Infestation <input checked="" type="checkbox"/> Nor'easter <input checked="" type="checkbox"/> Severe Weather <input checked="" type="checkbox"/> Severe Winter Weather <input checked="" type="checkbox"/> Wildfire </div>		
Description of the Problem:	<p>Officials in NFIP-participating communities are responsible for regulating all development in SFHAs by issuing permits and enforcing local floodplain requirements, including Substantial Damage, for the repairs of damaged buildings. After any disaster event, they must:</p> <ul style="list-style-type: none"> Determine where the damage occurred within the community and if the damaged structures are in an SFHA. Determine what to use for "market value" and cost to repair; uniformly applying regulations will protect against liability and promote equitable administration. Determine if repairing plus improving the damaged structure equals or exceeds 50% of the structure's pre-damage value. Require permits for floodplain development. <p>The Township does not have a Substantial Damage Management Plan in place, nor do they have a formal process in place when conducting substantial damage determinations. The Township is in need of a formal process and plan to provide a framework for conducting such inspections and determinations.</p>		
Description of the Solution:	<p>The Township will develop a Substantial Damage Management Plan, following the six step planning process in 2021 Developing a Substantial Damage Management Plan (https://crsresources.org/files/500/developing_subst_damage_mgmt_plan.pdf). This plan will outline responsibilities for Substantial Damage determinations, determining market value, and permit approval processes following a disaster event.</p>		
Estimated Cost:	Low		
Potential Funding Sources:	Township budget		
Implementation Timeline:	Within 5 years to develop the plan; ongoing to maintain and update the plan		
Goals Met:	2, 5		
Benefits:	This plan will provide a process in making Substantial Damage Determinations and allow the municipality to make these determinations and meet NFIP requirements more quickly.		
Impact on Socially Vulnerable Populations:	Substantially damaged structures are required to be rebuilt to be compliance with current codes. Socially vulnerable populations may not have the financial means to make these improvements. This action may allow for the identification of potential resources to address substantial damages to structures owned by socially vulnerable populations.		
Impact on Future Development:	A Substantial Damage Management Plan would include all existing, current, and future development in the municipality.		
Impact on Critical Facilities/Lifelines:	A Substantial Damage Management Plan would include all critical facilities and lifelines in the municipality.		
Impact on Capabilities:	This action improves disaster recovery capabilities.		
Climate Change Considerations:	Climate change is likely to increase the intensity and frequency of many climate related disaster events. This action provides additional planning for disaster recovery.		
Mitigation Category	<div> <input checked="" type="checkbox"/> Local Plans and Regulations (LPR) <input type="checkbox"/> Structure and Infrastructure Project (SIP) </div> <div> <input type="checkbox"/> Natural Systems Protection (NSP) <input type="checkbox"/> Education and Awareness Programs (EAP) </div>		
CRS Category	<div> <input checked="" type="checkbox"/> Preventative Measures (PR) <input type="checkbox"/> Property Protection (PP) <input type="checkbox"/> Public Information (PI) </div> <div> <input type="checkbox"/> Natural Resource Protection (NR) <input type="checkbox"/> Structural Flood Control Projects (SP) <input checked="" type="checkbox"/> Emergency Services (ES) </div>		
Priority	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives:	Action	Evaluation	



	No Action	Current problem remains
	Rely on state or federal resources following disaster events	Resources may not be available during major widespread events
	Establish MOUs with outside agencies to conduct Substantial Damage Determinations	A plan outlining responsibilities is still necessary to prevent missing important requirements



Action 2025-FredonTwp-01. Flood Mitigation Interest

Lead Agency:	Floodplain Administrator																
Supporting Agencies:	Planning Board, Township Administration																
Hazard(s) of Concern:	<table><tr><td><input type="checkbox"/> Dam Failure</td><td><input type="checkbox"/> Hurricane</td></tr><tr><td><input type="checkbox"/> Disease Outbreak</td><td><input type="checkbox"/> Infestation</td></tr><tr><td><input type="checkbox"/> Drought</td><td><input type="checkbox"/> Nor'easter</td></tr><tr><td><input type="checkbox"/> Earthquake</td><td><input type="checkbox"/> Severe Weather</td></tr><tr><td><input checked="" type="checkbox"/> Flood</td><td><input type="checkbox"/> Severe Winter Weather</td></tr><tr><td><input type="checkbox"/> Geological Hazards</td><td><input type="checkbox"/> Wildfire</td></tr><tr><td><input type="checkbox"/> Hazardous Materials</td><td></td></tr></table>			<input type="checkbox"/> Dam Failure	<input type="checkbox"/> Hurricane	<input type="checkbox"/> Disease Outbreak	<input type="checkbox"/> Infestation	<input type="checkbox"/> Drought	<input type="checkbox"/> Nor'easter	<input type="checkbox"/> Earthquake	<input type="checkbox"/> Severe Weather	<input checked="" type="checkbox"/> Flood	<input type="checkbox"/> Severe Winter Weather	<input type="checkbox"/> Geological Hazards	<input type="checkbox"/> Wildfire	<input type="checkbox"/> Hazardous Materials	
<input type="checkbox"/> Dam Failure	<input type="checkbox"/> Hurricane																
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<input type="checkbox"/> Earthquake	<input type="checkbox"/> Severe Weather																
<input checked="" type="checkbox"/> Flood	<input type="checkbox"/> Severe Winter Weather																
<input type="checkbox"/> Geological Hazards	<input type="checkbox"/> Wildfire																
<input type="checkbox"/> Hazardous Materials																	
Description of the Problem:	The Township does not have a formalized list of damaged properties or property owners which may be interested in flood mitigation measures, such as elevation or acquisition. Maintaining these lists can assist the Township in identifying and prioritizing properties to mitigate.																
Description of the Solution:	The Floodplain Administration will develop a list for inventorying system, or properties damaged by flood events and property owners who are interested in flood mitigation measures, such as elevation or acquisition.																
Estimated Cost:	Staff time, Low																
Potential Funding Sources:	Township Budget																
Implementation Timeline:	Within 2 years																
Goals Met:	1, 2, 5																
Benefits:	Keeping a list of damaged properties and property owners interested in flood mitigation efforts may lead to the elimination of flood damage to homes and residences, which creating an open space for the municipality and increasing flood storage.																
Impact on Socially Vulnerable Populations:	Collecting data regarding homeowners that reside within flood prone areas provides an opportunity to introduce location-specific opportunities for assistance. Removing homes from the floodplain immediately removes the risk to life and property.																
Impact on Future Development:	Increased outreach to homeowners within a flood prone area will limit construction in areas that are prone to hazard events. Homes may be acquired, which will remove those structures from the floodplain and prevent future development on those sites.																
Impact on Critical Facilities/Lifelines:	Removing structures from the floodplain decreases the demand on utilities and emergency services including health and medical, law enforcement, and search and rescue.																
Impact on Capabilities:	This action will create a new Township capability, while enhancing its current NFIP capabilities.																
Climate Change Considerations:	A warmer atmosphere means storms have the potential to be more intense and occur more often, including increased periods of intense rain events. Areas experiencing flooding conditions may increase. Removing structures from the floodplain will reduce the response and recovery costs as a result of these events and decrease the loss of human life as a result of these events. Elevating structures will reduce the recovery costs as a result of these events.																
Mitigation Category	<table><tr><td><input checked="" type="checkbox"/> Local Plans and Regulations (LPR)</td><td><input type="checkbox"/> Natural Systems Protection (NSP)</td></tr><tr><td><input type="checkbox"/> Structure and Infrastructure Project (SIP)</td><td><input type="checkbox"/> Education and Awareness Programs (EAP)</td></tr></table>			<input checked="" type="checkbox"/> Local Plans and Regulations (LPR)	<input type="checkbox"/> Natural Systems Protection (NSP)	<input type="checkbox"/> Structure and Infrastructure Project (SIP)	<input type="checkbox"/> Education and Awareness Programs (EAP)										
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Action 2025-FredonTwp-09. Code Coordinated Ordinance

Lead Agency:	Floodplain Administrator								
Supporting Agencies:	Construction Official, Township Administration, NFIP State Coordinator, FEMA Regional Office								
Hazard(s) of Concern:	<div><input type="checkbox"/> Dam Failure</div> <div><input type="checkbox"/> Disease Outbreak</div> <div><input type="checkbox"/> Drought</div> <div><input type="checkbox"/> Earthquake</div> <div><input checked="" type="checkbox"/> Flood</div> <div><input type="checkbox"/> Geological Hazards</div> <div><input type="checkbox"/> Hazardous Materials</div> <div><input type="checkbox"/> Hurricane</div> <div><input type="checkbox"/> Infestation</div> <div><input type="checkbox"/> Nor'easter</div> <div><input type="checkbox"/> Severe Weather</div> <div><input type="checkbox"/> Severe Winter Weather</div> <div><input type="checkbox"/> Wildfire</div>								
Description of the Problem:	A recent audit of New Jersey's model ordinances by FEMA for conformance with NFIP, resulted in a review of existing local flood damage prevention ordinances. Based upon FEMA's review, specific language related to NFIP regulations was not consistent. Additionally, it was determined that better coordination was needed between the three sets of regulations that regulate development and construction in the floodplain. These regulations are the NFIP implemented by local floodplain administrators, the New Jersey Flood Hazard Area Control Act (FHACA) implemented at the State level by the NJDEP, and the Uniform Construction Code (UCC) implemented by the local Construction Official. NJDEP used this feedback to develop a model Code Coordinated Ordinance and continues to work with municipalities to update flood damage prevention ordinances to the Code Coordinated Ordinance.								
Description of the Solution:	After obtaining the appropriate review and concurrence by the NFIP State Coordinator and the FEMA Regional Office, the municipality will update and adopt the Code Coordinated Ordinance.								
Estimated Cost:	Staff time								
Potential Funding Sources:	Township budget								
Implementation Timeline:	Within 5 years								
Goals Met:	1, 2, 5,7								
Benefits:	The updated ordinance will improve floodplain management, meet NFIP requirements, and increase resilience of new and substantially improved structures in the floodplain.								
Impact on Socially Vulnerable Populations:	The action will result in better regulation of construction standards within the Special Flood Hazard Area where significant risk to socially vulnerable populations exists.								
Impact on Future Development:	The action will result in stronger regulation of construction standards for future development in the Special Flood Hazard Area.								
Impact on Critical Facilities/Lifelines:	Critical facilities and lifelines located in the Special Flood Hazard Area will be required to meet the same requirements as general building construction that are set forth in the ordinance.								
Impact on Capabilities:	This action will improve floodplain management capabilities through better outlining of responsibilities and administrative procedures.								
Climate Change Considerations:	The updated ordinance includes the State's higher standards that are in place to address heightened flood risk due to climate change such as those for floodway rise and mandatory freeboard have been incorporated in these new model ordinances.								
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	Leave NFIP	Residents lose flood insurance coverage
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