

19. TOWNSHIP OF SANDYSTON

This jurisdictional annex to the Sussex County Hazard Mitigation Plan (HMP) provides information to assist public and private sectors in the Township of Sandyston 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 Sandyston, describes who participated in the planning process, assesses Sandyston's risk, vulnerability, and capabilities, and outlines a strategy for achieving a more resilient community.

19.1 HAZARD MITIGATION PLANNING TEAM

The Township of Sandyston 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 19-1 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 19-1. Hazard Mitigation Planning Team

Primary Point of Contact	Alternate Point of Contact
Name/Title: Kevin Pumphrey / EMC	Name/Title: Amanda Lobban / Municipal Clerk
Address: 133 Route 645. Sandyston, NJ 07826	Address: 133 Route 645. Sandyston, NJ 07826
Phone Number: (973) 948-3520 ext. 301	Phone Number: (973) 948-3520 ext. 200
Email: oem@sandystontownship.com	Email: clerk@sandystontownship.com

National Flood Insurance Program Floodplain Administrator

Name/Title: Robert Huber / Construction Official Address: 133 Route 645. Sandyston, NJ 07826 Phone Number: (973) 948-3520 ext. 201 Email: deputyclerk@sandystontownship.com

Additional Contributors

Name/Title: Kevin Pumphrey / EMC

Method of Participation: Assisted in the completion of municipal worksheets. Reviewed and approved final draft annex.

Name/Title: Amanda Lobban / Municipal Clerk

Method of Participation: Assisted in the completion of municipal worksheets. Reviewed and approved final draft annex.

Name/Title: Robert Huber / Construction Official

Method of Participation: Assisted in the completion of municipal worksheets. Reviewed and approved final draft annex.

Name/Title: Harold E. Pellow / Engineer

Method of Participation: Assisted in the completion of municipal worksheets.

Name/Title: Jessica Caldwell / Planner

Method of Participation: Assisted in the completion of municipal worksheets.

Name/Title: George Harper, Jr. / Mayor

Method of Participation: Reviewed and approved final draft annex.





Name/Title: Roy C. McClain, CPWM / Road Foreman

Method of Participation: Assisted in the completion of municipal worksheets. Reviewed and approved final draft annex.

Name/Title: Michael Johnson / Code Enforcement

Method of Participation: Assisted in the completion of municipal worksheets.

19.2 COMMUNITY PROFILE

Sandyston Township is a small rural township located in the northwestern portion of Sussex County. It has a total area of 43.3 square miles. The Township is bordered to the north by Montague Township, to the south by Frankford, Walpack, and Hampton Townships, to the east by Wantage and Frankford Townships, and to the west by Pennsylvania. The Delaware River makes up the entire western border of the Township. Big Flat Brook, Little Flat Brook, and Tuttles Corner Brook are all streams located within the Township. The following unincorporated communities are located within the Township: Shaytown, Hainesville, Abertown, Layton, Bevans, Tuttles Corner, and Normanook.

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 1.7-percent of the population is 5 years of age or younger, 1.3-percent is 65 years of age or older, 0-percent is non-English speaking, 1-percent is below the poverty threshold, and 1.4-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 Sandyston, 24-percent of households earn less than the basic cost of living and are considered socially vulnerable.

19.3 JURISDICTIONAL CAPABILITY ASSESSMENT AND INTEGRATION

Sandyston 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 Sandyston to identify opportunities for integrating mitigation concepts into ongoing Township procedures.



Building Department



19.3.1 Planning and Regulatory Capability and Integration

Table 19-2 summarizes the planning and regulatory tools that are available to Sandyston.

Table 19-2. 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, & REGU	CODES, ORDINANCES, & REGULATIONS					
Building Code	Yes	Chapter 45 – Building Construction	State & Local	Construction Official		
How has or will this be integrated with the HMP and how does this reduce risk? The State Uniform Construction Code, building subcode, is hereby adopted and incorporated as fully as if set forth at length herein. The provisions shall be controlling in the construction, alteration, renovation, rehabilitation, maintenance, occupancy, and use of all buildings and structures therein contained within the corporate limits of the Township. The Construction Official is the chief administrator of the enforcing agency.						
Zoning/Land Use Code	Yes	Chapter 150 - Zoning	Local	Zoning Department		
How has or will this be integrated with the HMP and how does this reduce risk? The code enables where appropriate, flexibility of design and development of land in such a manner as to preserve its natural and scenic qualities, protect areas of meaningful ecological value, reduce flood hazards, facilitate the adequate and economical provision of streets and utilities, minimize negative environmental impacts, improve the aesthetic quality of new residential developments, encourage the conservation of energy, increase recreational opportunities, and otherwise promote the planned and environmentally desirable use of land.						

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

Yes

Land to be subdivided shall be of such character that it can be used safely for building or development purposes without danger to health or peril from fire, flood, or other menace, and without resulting in significant damage to the ecology of the area in which it is located. Land subject to fire, flood or other hazards shall not be subdivided nor developed for residential purposes, nor for such other uses as may increase danger to health, life, or property, or aggravate a flood hazard, but such land may be set aside for uses as shall not involve such danger nor produce unsatisfactory living conditions.

Chapter 137 – Subdivision

and Site Plan Review

Local

Site Plan Code	Yes	Chapter 137 – Subdivision	Local	Building Department
		and Site Plan Review		

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

Approval of a site plan is required for a) the development or redevelopment of any building, structure or lot or portion thereof for a new use; b) the expansion or relocation of any existing use; or c) any change of use of a building, structure or lot or portion thereof. The Planning Board sets forth appropriate conditions and safeguards which are in harmony with several identified purposes, including drainage. Per the ordinance, a proposed stormwater drainage system shall be adequate to prevent any increase in the rate of surface runoff or otherwise contribute to downstream flooding during a storm of any magnitude, up to and including a one-hundred-year frequency storm.

Stormwater Management Code	Yes	Chapter 138 Stormwater	Local	Department of Public
		Control		Works

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

It is the purpose of this chapter to establish minimum stormwater management requirements and controls for major development.

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

19-3



Subdivision Code



	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of plan, date of enactment or plan adoption)		
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

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 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.





	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	
Growth Management	No	-	-	-	
How has or will this be integrated with the HMP and how does this reduce risk?					
Environmental Protection Ordinance(s)	Yes	Chapter 85 Hazardous Wastes, Chapter 100 Littering, and Chapter 141 Trees	Local	Volunteer Fire Department, Planning Board	

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

- Chapter 85 Hazardous Wastes: This chapter identified which parties may be held responsible for the supplies, material and other types of response expenses associated with a hazardous materials incident.
- Chapter 100 Littering: This chapter identifies the Township's definition of litter and what repercussions an individual may face for littering.
- Chapter 141 Trees: This chapter is intended to control and regulate the indiscriminate or excessive removal, large-scale clear-cutting, and destruction of trees and to control, regulate and prevent conditions which cause an increase in stormwater runoff, decrease aquifer recharge, impair the ambiance or physical appearance of an individual property or neighborhood or unreasonably and/or unnecessarily diminish the natural vegetative screening or natural landscape viewscapes.

Flood Damage Prevention	Yes	Chapter 75 - Flood Damage	Federal, State	Construction Official
Ordinance		Prevention	& Local	

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

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:

- A. Protect human life and health;
- B. Minimize expenditure of public money for costly flood control projects;
- C. Minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;
- D. Minimize prolonged business interruptions;
- E. Minimize damage to public facilities and utilities, such as water and gas mains, electric, telephone and sewer lines, streets and bridges located in areas of special flood hazard;
- F. Help maintain a stable tax base by providing for the sound use and development of areas of special flood hazard so as to minimize future flood blight areas;
- G. Ensure that potential buyers are notified that property is in an area of special flood hazard; and
- H. Ensure that those who occupy the areas of special flood hazard assume responsibility for their actions.

Wellhead Protection	Yes	Chapter 150 Zoning, Article IV	Local	Zoning Department
		General Regulations and		
		Standards		

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

This aquifer protection and well testing section is adopted to ensure the adequacy of potable groundwater supply for residential and commercial development in areas not served by public water supply and to ensure that such water is safe for human consumption and use. Abandoned and faulty wells may cause pollutants to reach the aquifer, creating risk to life safety of residents drawing water from that source. These provisions are established to promote the health, safety, and welfare of the citizens of the Township of Sandyston.

Emergency Management Ordinance	No	-	-	-	
How has or will this be integrated with the HMP and how does this reduce risk?					
Climate Change Ordinance	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
Other	No	-	-	-
How has or will this be integrated	with the HMP a	and how does this reduce risk?		
PLANNING DOCUMENTS				
General/Comprehensive Plan	Yes	Master Plan 2008; Re- examined November 2018	Local	Township Committee
How has or will this be integrated The Township seeks to retain its r conserve its natural resources; material housing for its citizens; and provious the state and federal land manage resources tourism.	rural and small- aintain a high q le a feeling of p	town character, agricultural cor quality, active life for its citizens; purpose, place, and belonging fo	provide adequa or its citizens; an	te and affordable nd, in cooperation with
Capital Improvement Plan	No	-	-	-
How has or will this be integrated	with the HMP	and how does this reduce risk?		
Disaster Debris Management Plan	No		-	-
How has or will this be integrated	with the HMP	and how does this reduce risk?		
Floodplain Management or Watershed Plan	No	-	-	-
		and how does this reduce risk?	-	-

The plan addresses groundwater recharge, stormwater quantity, and stormwater quality impacts by incorporating stormwater design and performance standards for new major development, defined as projects that disturb one or more acre of land. These standards are intended to minimize the adverse impact of stormwater runoff on water quality and water quantity and the loss of groundwater recharge that provides baseflow in receiving water bodies. The plan describes long-term operation and maintenance measures for existing and future stormwater facilities. The plan also addresses the review and update of existing ordinances and other planning documents to allow for project designs that include low impact development techniques. The final component of this plan is a mitigation strategy for when a variance or exemption of the design and performance standards is sought.

Stormwater Pollution Prevention Plan	Yes	Stormwater Pollution Prevention Plan, 2005	Local	Department of Public Works	
How has or will this be integrated with the HMP and how does this reduce risk? The Stormwater Pollution Prevention Plan is used to identify all potential pollution sources that could come into contact with stormwater leaving a site.					
Open Space Plan	Yes	Master Plan 2008; Re- examined November 2018	Local	Township Committee	

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

The Township continues to recognize the importance of preserved lands, in relation to both the proper functioning of local ecosystems and the Township's economic development, as evidenced by the focus on recreational tourism in the Sandyston Township Vision Statement from July 2010. With the area's long history of evictions, federal and state land acquisition, and the economic benefits of recreational tourism, the Township is paying close attention to National Park Service proposals to combine the Delaware Water Gap National Recreation Area and the Middle Delaware National Scenic and Recreational River into one Delaware Valley National Park and Preserve.





	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
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	Yes	Master Plan 2008; Re- examined November 2018	Local	Township Committee
How has or will this be integrated The goal of this plan element is to complement rather than destroy o and manmade resources; and to e general welfare of neighboring mu encompasses applicable elements relationship to the tri-state area.	provide oppo r negatively in ensure that the inicipalities, is	rtunities for growth and developin pact the Township's significant e development within the Towns consistent with the Sussex Cou	and diverse natu hip complements nty Strategic Gro	ural, historical, cultural, s the vision and owth Plan,
Shoreline Management Plan	No	-	-	-
How has or will this be integrated	with the HMP	and how does this reduce risk?		
Community Wildfire Protection Plan	Yes	Community Wildfire Protection Plan, 2020	Local	Fire Department
The plan has goals to reduce the wildland-urban interface areas, redevelopment, increase community the public concerning the same, dipartnerships to reduce the wildfire	duce excessiv / awareness o levelop cohesi	re wildland fuel accumulations in If wildfire issues in New Jersey a	and around area	as of human ortunities to educate
	mazaras.			па аечеюр
	No		- -	
Management Plan	No	and how does this reduce risk?	- -	
Management Plan How has or will this be integrated	No	and how does this reduce risk?	- -	
Management Plan How has or will this be integrated	No with the HMP	-	- -	
Management Plan How has or will this be integrated Transportation Plan How has or will this be integrated	No with the HMP	-	- -	
Management Plan How has or will this be integrated Transportation Plan How has or will this be integrated Agriculture Plan	No with the HMP No with the HMP	and how does this reduce risk?	- -	
Community Forest Management Plan How has or will this be integrated Transportation Plan How has or will this be integrated Agriculture Plan How has or will this be integrated Climate Action/ Resilience/Sustainability Plan	No with the HMP No with the HMP	and how does this reduce risk?	- - -	a develop - - -
Management Plan How has or will this be integrated Transportation Plan How has or will this be integrated Agriculture Plan How has or will this be integrated Climate Action/	No with the HMP No with the HMP No with the HMP	and how does this reduce risk? - and how does this reduce risk? -	- -	a develop - - -
Management Plan How has or will this be integrated Transportation Plan How has or will this be integrated Agriculture Plan How has or will this be integrated Climate Action/ Resilience/Sustainability Plan	No with the HMP No with the HMP No with the HMP	and how does this reduce risk? - and how does this reduce risk? -	- -	a develop - - - -
Management Plan How has or will this be integrated Transportation Plan How has or will this be integrated Agriculture Plan How has or will this be integrated Climate Action/ Resilience/Sustainability Plan How has or will this be integrated	No with the HMP No with the HMP No with the HMP No with the HMP	and how does this reduce risk? and how does this reduce risk? and how does this reduce risk? - and how does this reduce risk?	- - -	a develop - - - -
Management Plan How has or will this be integrated Transportation Plan How has or will this be integrated Agriculture Plan How has or will this be integrated Climate Action/ Resilience/Sustainability Plan How has or will this be integrated Tourism Plan	No with the HMP No with the HMP No with the HMP No with the HMP	and how does this reduce risk? and how does this reduce risk? and how does this reduce risk? - and how does this reduce risk?	- - -	a develop - - - - -





	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	No	-	-	-
How has or will this be integrated v	with the HMP	and how does this reduce risk?		
RESPONSE/RECOVERY PLANN	ING			
Emergency Operations Plan	Yes	Sandyston Township EOP, October 2023	Local	Office of Emergency Management
How has or will this be integrated with the HMP and how does this reduce risk? The Emergency Operations Plan aims to assess the Township's ability to respond to emergency and identifies recommendations to improve its capacity to prepare and respond to future events. The plan address both short- and long-term recovery.				
Continuity of Operations Plan	No	-	-	-
How has or will this be integrated v	with the HMP	and how does this reduce risk?		
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?				
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 v	with the HMP	and how does this reduce risk?		

19.3.2 Development and Permitting Capability

Table 19-3 summarizes the capabilities of Sandyston to oversee and track development.

Table 19-3. Development and Permitting Capability

	Yes/No	Comment
Do you issue development permits?	Yes	Building Department
 If you issue development permits, what department is responsible? If you do not issue development permits, what is your process for tracking new development? 		





	Yes/No	Comment
Are permits tracked by hazard area? (For example, floodplain development permits.)	Yes	Floodplain development permits
Do you have a buildable land inventory?	No	-
 If you have a buildable land inventory, please describe 		
Describe the level of buildout in your jurisdiction.	N/A	Sandyston Township is unique in its large proportion of permanently preserved open space, approximately 70 percent of the municipality, which primarily contains lands owned by State or Federal entities. The residential and commercial villages of Layton and Hainesville are essentially surrounded on four sides by the Delaware Water Gap National Recreation Area, the Flatbrook Fish and Wildlife Management Area, and Stokes State Forest.

19.3.3 Administrative and Technical Capability

Table 19-4 summarizes potential staff and personnel resources available to Sandyston and their current responsibilities that contribute to hazard mitigation.

Table 19-4. Administrative and Technical Capabilities

Resources	Available? (Yes/No)	Comment (available staff, responsibilities, support of hazard mitigation)
ADMINISTRATIVE CAPABILITY		
Planning Board	Yes	The Sandyston Township Planning Board consists of nine members and two alternate members, as appointed by the Mayor and Township Committee. The Planning Board is authorized to adopt bylaws governing its procedural operation. The Planning Board exercises, to the same extent and subject to the same restrictions, all the powers given to Zoning Boards of Adjustment and Planning Boards, by the Municipal Land Use Law.
Zoning Board of Adjustment	No	-
Planning Department	Yes	Contracted to J. Caldwell and Associates
Mitigation Planning Committee	No	-
Environmental Board/Commission	No	-
Open Space Board/Committee	No	-
Economic Development Commission/Committee	No	-
Public Works/Highway Department	Yes	Roads Department
Construction/Building/Code Enforcement Department	Yes	The Construction Department is tasked with enforcing the State Uniform Construction Code and the issuance of construction permits. The Department consists of a plumbing, building, electrical, and fire inspector, the construction officials, and the secretary to the Construction Official.





		Comment
Resources	Available? (Yes/No)	Comment (available staff, responsibilities, support of hazard mitigation)
Emergency Management/Public Safety Department	Yes	The Office of Emergency Management plans for and responds to any emergency within the Township. It is responsible for coordinating the response of local, County, and State offices during an emergency.
Maintenance programs to reduce risk (stormwater maintenance, tree trimming, etc.)	No	-
Mutual aid agreements	Yes	Surrounding communities
Human Resources Manual – Do any job descriptions specifically include identifying or implementing mitigation projects or other efforts to reduce natural hazard risk?	Yes	No job descriptions specifically include identifying or implementing mitigation projects or other efforts to reduce natural hazard risk.
Other	No	-
TECHNICAL/STAFFING CAPABILITY		
Planners or engineers with knowledge of land development and land management practices	Yes	Harold Pellow Associates
Engineers or professionals trained in building or infrastructure construction practices	Yes	J. Caldwell and Associates
Planners or engineers with an understanding of natural hazards	Yes	Harold Pellow Associates
Staff with expertise or training in benefit/cost analysis	No	-
Professionals trained in conducting damage assessments	Yes	As per need, Bids for Prof. Services.
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	-
Surveyors	Yes	Daniel Kent Inc.
Emergency manager	Yes	Township Emergency Management Coordinator
Grant writers	No	-
Consider the following: Are data and maps from the HMP used to support documentation in grant applications?		
Resilience Officer	No	-
Other (this could include stormwater engineer, environmental specialist, etc.)	No	-





19.3.4 Fiscal Capability

Table 19-5 summarizes financial resources available to Sandyston.

Table 19-5. Fiscal Capabilities

Financial Resources	Accessible or Eligible to Use? (Yes/No)
Community Development Block Grants (CDBG, CDBG-DR)	Yes
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	Yes
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

19.3.5 Education and Outreach Capability

Table 19-6 summarizes the education and outreach resources available to Sandyston.

Table 19-6. Education and Outreach Capabilities

Outreach Resources	Available? (Yes/No)	Comment
Public information officer or communications office	Yes	Municipal Clerk
Personnel skilled or trained in website development	Yes	Municipal Clerk
Hazard mitigation information available on your website	Yes	Emergency information is posted
Social media for hazard mitigation education and outreach	Yes	A Facebook page; also share information from the Sheriff's page.
Citizen boards or commissions that address issues related to hazard mitigation	No	-
Warning systems for hazard events	Yes	Utilizes system provided by Sussex County
Natural disaster/safety programs in place for schools	No	-
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	Bi-annual newsletters, social media, Township website, community events



19.3.6 Community Classifications

Table 19-7 summarizes classifications for community programs available to Sandyston.

Table 19-7. 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	Fire Department – 10	25 plus years ago.
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

19.3.7 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 19-8 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 19-8. 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



Hazard	Adaptive Capacity – Strong/Moderate/Weak
Severe Winter Weather	Moderate
Wildfire	Moderate

19.4 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 19-1 is responsible for maintaining this information.

19.4.1 NFIP Statistics

Table 19-9 summarizes the NFIP policy and claim statistics for Sandyston.

Table 19-9. Sandyston NFIP Summary of Policy and Claim Statistics

# Policies	5
# Claims (Losses)	5
Total Loss Payments	\$209,805.75
# Repetitive Loss Properties (NFIP definition)	1
# 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 II 2024

19.4.2 Flood Vulnerability Summary

Table 19-10 provides a summary of the NFIP program in Sandyston.

Table 19-10. 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





NFIP Topic	Comments
Do you maintain a list of property owners interested in flood	No
mitigation?	
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?	Construction
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, various federal, state, and regional online 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?	The FPA would welcome continuing education and certification training on floodplain management.
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)?	January 27, 1994
What is the local law number or municipal code of your flood damage prevention ordinance?	Chapter 75 – Flood Damage Prevention
What is the date that your flood damage prevention ordinance was last amended?	November 2013
Does your floodplain management program meet or exceed minimum requirements? If exceeds, in what ways?	The program meets the minimum set by FEMA and the State.





NFIP Topic	Comments
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 Planning Board considers efforts to reduce flood risk when reviewing variances such as height restrictions. The Township has subdivision and site plan ordinances.
Does your community plan to join the CRS program or is your community interested in improving your CRS classification?	The Township does not currently participate but would consider joining and would attend a CRS seminar if offered.

19.5 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 19-11 through Table 19-13.

Table 19-11. 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	1	0	0	1				
Permits within SFHA	0	0	0	0				
2023								
Total Permits	2	0	0	2				
Permits within SFHA	0	0	0	0				

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

Table 19-12. 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	
No identified recent major development or infrastructure were identified by the Township within the past five years.						





* Only location-specific hazard zones or vulnerabilities identified.

Table 19-13. 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		
No known or anticipated major development and infrastructure was indicated by the Township.							

19.6 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 Sandyston's risk assessment results and data used to determine the hazard ranking. Key local risk assessment information is presented below.

19.6.1 Hazard Area

Hazard area maps provided below illustrate the probable hazard areas impacted within the Township are shown in Figure 19-1 through Figure 19-3. 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 Sandyston has significant exposure. The maps show the location of potential new development, where available.





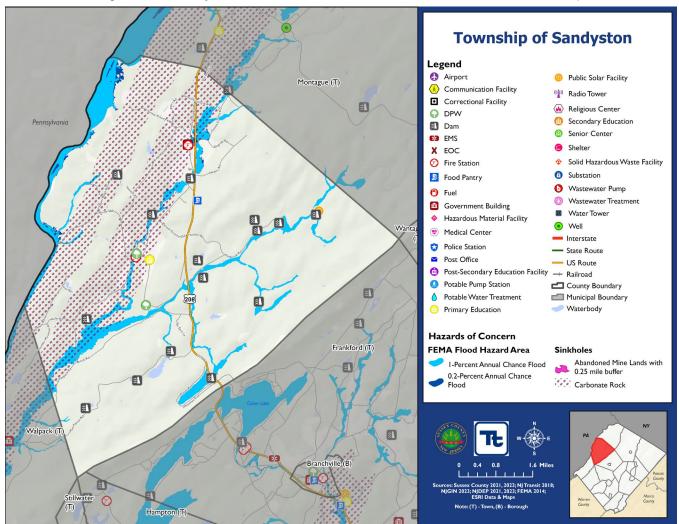


Figure 19-1. Sandyston Flood and Sinkhole Hazard Area Extent and Location Map





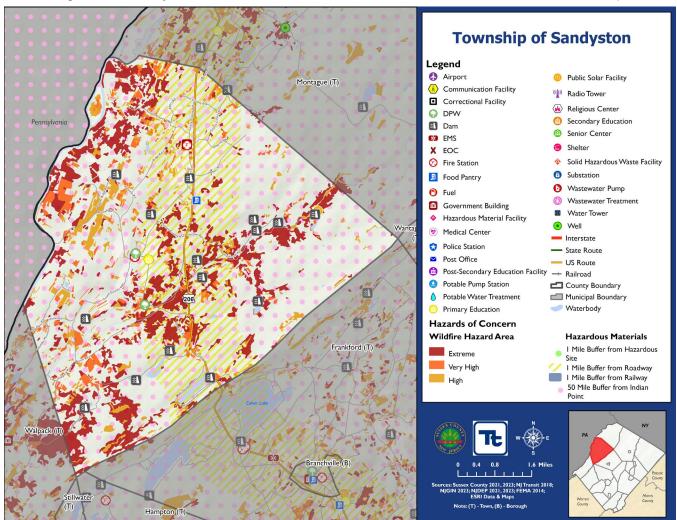


Figure 19-2. Sandyston Hazardous Materials and Wildfire Hazard Area Extent and Location Map





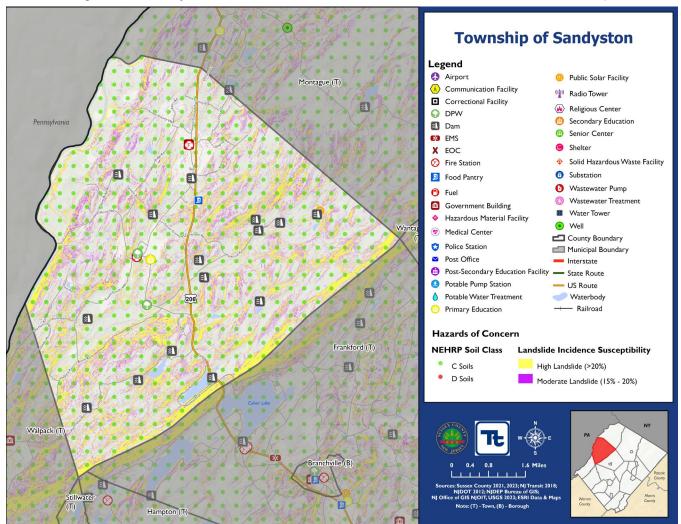


Figure 19-3. Sandyston Landslide and NEHRP Soils Hazard Area Extent and Location Map





19.6.2 Hazard Event History

The history of natural and non-natural hazard events in Sandyston is detailed in Volume I, where each hazard profile includes a chronology of historical events that have affected the County and its municipalities. Table 19-14 provides details on loss and damage in Sandyston during hazard events since the last hazard mitigation plan update.

Table 19-14. Hazard Event History in Sandyston

		•				
Dates of Event	Event Type (Disaster Declaration)	County Designated?	Summary of Event	Summary of Damage and Losses in Sandyston		
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
DB Maior Dispets Declaration (FEMA)

DR = Major Disaster Declaration (FEMA)

N/A = Not applicable

19.6.3 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 Sandyston.





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. Sandyston 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:

• The Wildfire hazard should be increased from Medium to High due to roughly 70 percent of areas impacted by wildfires are under Federal or State jurisdiction. There has been no known mitigation measures performed by the appropriate government agencies.

Table 19-15 shows Sandyston's final hazard rankings for identified hazards of concern. Mitigation action development uses the ranking to target hazards with the highest risk.

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 High

Table 19-15. Hazard Ranking

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 19-16 identifies critical facilities in the community located in the 1 percent and 0.2 percent annual chance floodplains.



Table 19-16. Critical Facilities Flood Vulnerability

		Vulne	rability		
Name	Туре	1% Annual Chance Event	0.2% Annual Chance Event	Addressed by Proposed Action	Already Protected to 0.2% Flood Level (describe protections)
Harper Dam	Dam	Yes	Yes	2025-SandystonTwp-11, 2025-SandystonTwp-12	-
Kittatinny Lake Dam	Dam	Yes	Yes	2025-SandystonTwp-11, 2025-SandystonTwp-12	-
Lance Mill Dam	Dam	Yes	Yes	2025-SandystonTwp-11, 2025-SandystonTwp-12	-
Sandyston Township Building	Post Office	No	Yes	2025-SandystonTwp-11	-
Skellinger Lake Dam	Dam	Yes	Yes	2025-SandystonTwp-11, 2025-SandystonTwp-12	-
Stony Lake Dam	Dam	Yes	Yes	2025-SandystonTwp-11, 2025-SandystonTwp-12	-

Source: NJGIN 2023; Sussex County 2021, 2023

In addition to critical facilities that are exposed to flooding, the following high hazard dams are located in Sandyston:

Robert Rooke Dam

19.6.4 Identified Issues

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

- Dams in the municipality and have been found to have either a poor or unsatisfactory safety rating based
 on their most recent inspections. 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 Township lacks a Disaster Debris Management Plan to address post disaster cleanup. Without a plan
 in place, there are no identified resources in place to properly address debris and do not have identified
 locations for debris storage.
- The jurisdiction has identified the community experiences frequently downed trees due to severe storms.
 The Township does not have a tree maintenance program. Utility companies are responsible for the maintenance of those on or near utility lines. Private homeowners must ensure trees on private property are not threatening power availability/interruption.
- The Township does not have any organizations that conduct outreach to socially vulnerable populations and underserved populations. Identifying, communicating, and educating vulnerable populations can increase the resiliency of the Township. Furthermore, emergency responders will be able to prioritize assistance, when feasible, in an emergency to help those who need it most.
- Frequent flooding events have resulted in damages to residential properties. These properties have been
 repetitively flooded as documented by paid NFIP claims. The Township has one repetitive loss property,
 but other properties may be impacted by flooding as well. Scattered privately-owned homesites are located
 along the Delaware River. Some of these properties are located in the Special Flood Hazard Area, with
 development requiring floodproofing.





- 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.
- 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.
- Although the Township has flood exposure, the Township does not participate in the Community Rating System (CRS) program. By participating in the CRS program, the Township can reduce and avoid flood damage to insurable property, strengthen and support the insurance aspects of the National Flood Insurance Program, and foster comprehensive floodplain management. Township residents which have flood insurance through the NFIP may see a decrease in flood insurance rates.
- Critical facilities located in the floodplain are not only susceptible to flood damage but also create
 unnecessary complications for the municipality during an emergency event and post-disaster recovery. The
 Township has multiple critical facilities in the floodplain, including Harper Dam, Kittatinny Lake Dam, Lance
 Mill Dam, Skellinger Lake Dam, Stony Lake Dam, the Sandyston Township Building.
- The Harper Dam, Kittatinny Lake Dam, Lance Mill Dam, Skellinger Lake Dam, and Stony Lake Dam, all
 critical infrastructures, are located in the 1- and 0.2-percent flood hazard areas. The Township also has a
 high-hazard potential dam, the Robert Rooke Dam, within its jurisdiction. These structures have the
 potential to impact those living nearby.
- Little Flat Brook crosses Degroat Road just east of the road's intersection with Route 206. The Brook
 experiences occasional riverine 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 lack of forest management on federal and private lands has increased fire risk for residents of Sandyston. Many residents reside along the border of forested areas, where a wildfire could directly impact their homes and properties. Overgrown vegetative growth provides fuel to potential fires.
- Lake communities in Sandyston face snow removal issues owing to a lack of suitable land on which snow can be cleared from roads and placed. Snow-covered roadways can impact evacuation routes, prevent emergency responders from reaching a location, and impede on necessary medical appointments or needs for vulnerable populations.
- Sandyston Township has an early warning siren for hazard events. The sirens are located at Fire Stations #1 and #2. Fire Station #1 is located near the Sandyston Township Municipal Building along CR-645 and Fire Station #2 is located in Layton on CR-560/Tuttles Corner-Dingmans Ferry Road. Station #2's early warning siren is broken and is no longer functional, thereby limiting a source of emergency communications for residents in the northern portion of the Township.
- The Sandyston-Walpack School building is not designed to withstand high wind. High wind associated with severe winter weather, severe weather, hurricanes, and nor'easters have the potential to damage the roof, which may cause injury to the individuals inside of the building.
- Sandyston Township is a largely rural and wooded community. Roads in the Township are narrow, and brush fires require a quick response by the Department. Additionally, a large portion of Sandyston is preserved open space associated with the Delaware Water Gap. The high amount of visitation and tourism associated with the recreation facilities magnifies the importance of emergency response from the Township, though it has limited resources to acquire equipment and vehicles.





- Sandyston Township experiences cable outages that impact phone lines during severe storm events.
 Maintaining these lines of communication is pertinent as reverse notification systems may be tied to landlines and cable provides the population with hazard notifications, warnings, and integral hazard-related information.
- The Dingman's Ferry bridge is the primary access road between the Township and Pennsylvania. The
 Bridge is privately owned and vulnerable to flooding. Failure of bridges or causeways could result in loss to
 life and limitations to emergency access.
- The Township had participated in the Firewise program between 2014-2019. The Township seeks to reenter the Firewise program one it is reintroduced by the State. The Firewise program helps the entire community become more prepared, and ultimately resilient, to the wildfire hazard through connections with local firefighters and state professionals, understanding fire fuel and how to dispose and prevent it, and learning how to protect property from wildfires.
- The Township has not adopted NJDEP's Code Coordinated Ordinance. 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.
- The municipality 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 municipality is in need
 of a formal process and plan to provide a framework for conducting such inspections and determinations.
- Robert Rooke Dam is a Class I High Hazard Dam that is located on Lake Robert Rooke. The dam is owned
 by the YMCA of Newark. Failure of the dam could result in inundation of populated areas, forested areas,
 recreational areas, and local roadways including Flatbrook Road and State Route 206. Although the dam
 was last inspected in 2024 and found to be in satisfactory condition, the risk of dam failure warrants an
 engineering evaluation to determine if retrofits of the dam would result in safer conditions.

19.7 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.

19.7.1 Past Mitigation Action Status

Table 19-17 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.

19.7.2 Additional Mitigation Efforts

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





Table 19-17. 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.
2021- Sandyston- 001	Sandyston Early Warning Systems	Dam Failure, Disease Outbreak, Drought, Earthquake, Flood, Geologic, Hazardous Materials, Hurricane and Tropical Storm, Invasive Species, Nor'easter, Severe Weather, Severe Winter Weather, Wildfire	OEM	Problem: Sandyston Township has an early warning siren for hazard events. The sirens are located at Fire Stations #1 and #2. Fire Station #1 is located near the Sandyston Township Municipal Building along CR-645 and Fire Station #2 is located in Layton on CR-560/Tuttles Corner-Dingmans Ferry Road. Station #2's early warning siren is broken and is no longer functional, thereby limiting a source of emergency communications for residents in the northern portion of the Township. Solution: The Township proposes to replace and augment its early warning capabilities at the Fire Station with a siren with enhanced reach and functionality.	No Progress The Township prioritized other projects due to funding and staffing constraints.	Include Example 1. Include In
2021- Sandyston- 002	Sandyston- Walpack School Retrofits	Severe Weather; Severe Winter Weather	Sandyston- Walpack Board of Education	Problem: The Sandyston-Walpack School building is not protected from severe weather events. Solution: The Township and Board of Education propose to retrofit the school building to withstand hazard events such as snowfall.	No Progress The Township was not able to secure funding for this project	Include Example 1. Include Reep as is 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.
2021- Sandyston 003	Brush Truck - and Utility Truck - Acquisition	Earthquake, Flood, Geologic, Hazardous Materials, Hurricane and Tropical Storm, Nor'easter, Severe Weather, Severe Winter Weather, Wildfire	Fire Department	Problem: Sandyston Township is a largely rural and wooded community. Roads in the Township are narrow, and brush fires require a quick response by the Department. Additionally, a large portion of Sandyston is preserved open space associated with the Delaware Water Gap. The high amount of visitation and tourism associated with the recreation facilities magnifies the importance of emergency response from the Township, though it has limited resources to acquire equipment and vehicles. Solution: The Township proposes to purchase a brush truck and utility truck to augment the Township's response to fire and rescue incidents. The brush truck is the first line of defense in a brush fire and can traverse rough terrain. The utility truck will tow the Township's utility terrain vehicle in the case of emergency. The acquisition would enable enhanced response from the Township's fire department and greater capabilities during all types of hazard events. The Utility Truck will tow the UTV to emergency locations where traditional towing vehicles cannot navigate due to road size or terrain limitations.	1. No Progress 2. The Township purchased a 2023 GMC Utility truck in 2023.	Include Remove utility truck from action. 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.
2021- Sandyston- 004	Phone Service Retention	Dam Failure, Disease Outbreak, Drought, Earthquake, Flood, Geologic, Hazardous Materials, Hurricane and Tropical Storm, Invasive Species, Nor'easter, Severe Weather, Severe Winter Weather, Wildfire	Century Link; Optimum; PUC	Problem: Sandyston Township experiences cable outages that impact phone lines during severe storm events. Solution: The Township proposes to work with the PUC and FCC to enact regulations requiring phone providers to maintain phone service during loss of power.	No Progress The Township prioritized other projects due to funding and staffing constraints.	Include Reep as is Not applicable
2021- Sandyston- 005	Delaware River Bridge Retrofit	Flood, Geologic, Hazardous Materials, Hurricane and Tropical Storm, Nor'easter, Severe Weather, Severe Winter Weather	NJDEP; Sussex County;	Problem: The Dingman's Ferry bridge is the primary access road between the Township and Pennsylvania. The Bridge is privately owned and vulnerable to flooding. Solution: The Township proposes to protect the roadway crossing the Delaware River from damages and debris during hazard events. The Township will work with the bridge's owners, the County, and NJDEP to protect the bridge from debris during a flood.	No Progress The Township prioritized other projects due to funding and staffing constraints.	 Include Keep as is 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.
2021- Sandyston- 006	Disaster Debris Management Plan	Dam Failure, Drought, Earthquake, Flood, Geologic, Hazardous Materials, Hurricane and Tropical Storm, Nor'easter, Severe Weather, Severe Winter Weather, Wildfire	Private owners; Township Administration	Problem: The Township lacks a Disaster Debris Management Plan. Solution: The Township will develop and adopt a Disaster Debris Management Plan. The Plan will include any necessary mutual aid discussions to supplement the Township's capabilities.	1. No Progress 2. The Township prioritized other projects due to funding and staffing constraints.	 Include Keep as is Not applicable
2021- Sandyston- 007	Reverse 911	Dam Failure, Disease Outbreak, Drought, Earthquake, Flood, Geologic, Hazardous Materials, Hurricane and Tropical Storm, Invasive Species, Nor'easter, Severe Weather, Severe Winter Weather, Wildfire	Township OEM, Administration	Problem: The Township lacks a reverse 9-1-1 notification system to warn residents about hazard events. Solution: The Township proposes to acquire and implement a reverse 9-1-1 notification system to inform all residents of hazard events and make the Township safer.	The Township is able to utilize the County's reverse messaging system.	Not applicable The Township is able to utilize the County's reverse messaging system.





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.
2021- Sandyston- 008	Repetitive Loss Properties	Flood	Township OEM, Administration	Problem: Frequent flooding events have resulted in damages to residential properties. These properties have been repetitively flooded as documented by paid NFIP claims. The Township has 1 repetitive loss property, but other properties may be impacted by flooding as well. Solution: Conduct outreach to 30 flood-prone property owners, including RL/SRL property owners and provide information on mitigation alternatives. After preferred mitigation measures are identified, collect required property-owner information, and develop a FEMA grant application and BCA to obtain funding to implement acquisition/purchase/moving/elevating residential homes in the flood prone areas that experience frequent flooding (high risk areas).	No Progress The Township prioritized other projects due to funding and staffing constraints.	Include Example 1. Include In
2021- Sandyston- 009	Firewise Participation	Wildfire	NFIP Floodplain Administrator, supported by homeowners	Problem: The Township had participated in the Firewise program between 2014-2019, and the plan has now expired. The Township seeks to re-enter the Firewise program. Solution: The Township proposes to undertake the documentation and process necessary to re-enter the Firewise program and undertake associated mitigation activities.	No Progress The Township prioritized other projects due to funding and staffing constraints.	Include Reep as is Not applicable





19.7.3 Proposed Hazard Mitigation Actions for the HMP Update

Sandyston 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 Sandyston 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 19-18 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 19-19 provides a summary of the prioritization of all proposed mitigation actions for the HMP update.





Table 19-18. Analysis of Mitigation Actions by Hazard and Category

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

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 19-19. Summary of Prioritization of Actions

		Scores for Evaluation Criteria															
Project Number	Project Name	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	High / Medium / Low
2025-Sandyston-01	Dam Repair	1	1	1	1	1	0	1	1	1	1	1	1	1	0	12	High
2025-Sandyston-02	Disaster Debris Management Plan	0	1	1	1	1	1	1	0	1	1	1	1	0	1	11	High
2025-Sandyston-03	Tree Maintenance	0	1	1	1	1	1	1	1	1	1	0	1	0	0	10	Medium
2025-Sandyston-04	Socially Vulnerable Populations Outreach	1	0	1	1	1	1	0	1	1	1	1	1	1	1	12	High
2025-Sandyston-05	Repetitive Loss Properties	1	1	1	1	1	0	1	1	1	1	1	1	0	1	12	High
2025-Sandyston-06	Flood Mitigation Interest	1	1	1	1	1	1	1	1	1	0	1	1	1	1	13	High
2025-Sandyston-07	NFIP Training	1	1	1	1	1	1	0	1	1	1	1	1	0	1	12	High
2025-Sandyston-08	Community Rating System Program Participation	0	1	1	1	1	1	0	0	1	0	1	1	0	1	9	Medium
2025-Sandyston-09	Critical Facilities in the Floodplain	1	1	1	1	1	0	1	1	1	0	1	1	1	0	11	High
2025-Sandyston-10	Dam Owner Partnership	1	1	1	1	1	1	0	1	1	0	1	1	1	0	11	High
2025-Sandyston-11	Little Flat Brook Flood Mitigation	1	1	1	1	1	0	1	1	1	0	1	1	0	0	10	Medium
2025-Sandyston-12	Collaborative Fire Management Practices	1	1	1	1	0	0	1	1	1	0	1	1	0	0	9	Medium
2025-Sandyston-13	Severe Winter Weather Preparations	1	1	1	1	1	1	1	1	1	1	1	1	0	0	12	High
2025-Sandyston-14	Early Warning Systems	1	1	1	1	1	0	0	1	1	1	1	1	1	0	11	High
2025-Sandyston-15	Sandyston-Walpack School Retrofits	0	1	1	1	0	0	0	1	0	1	1	1	1	0	8	Medium
2025-Sandyston-16	Brush Truck Acquisition	1	1	1	1	1	0	1	1	1	0	1	1	1	0	11	High
2025-Sandyston-17	Phone Service Retention	1	0	1	1	0	0	0	1	0	1	0	1	1	0	7	Medium



	Scores for Evaluation Criteria																
Project Number	Project Name	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	High / Medium / Low
2025-Sandyston-18	Delaware River Bridge Retrofit	0	1	1	1	0	0	1	0	1	1	1	0	1	0	8	Medium
2025-Sandyston-19	Firewise Program Participation	1	1	1	1	1	1	1	1	1	0	1	1	0	0	11	High
2025-Sandyston-20	Code Coordinated Ordinance	1	1	1	1	1	1	1	1	1	0	1	1	0	0	11	High
2025-Sandyston-21	Substantial Damage Management Plan	0	1	1	1	1	1	0	1	1	1	1	1	1	0	11	High
2025-Sandyston-22	Robert Rooke Dam Rehab	1	1	1	1	0	0	1	1	1	0	1	1	1	1	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-SandystonTwp-01. Dam Repair

Lead Agency:	Engineer						
Supporting Agencies:	Dam Manager, NJDEP Bureau of Dam Safety, County Engineer						
Hazard(s) of Concern:	 ☑Dam Failure ☑Disease Outbreak ☑Drought ☑Earthquake ☑Flood ☐Geological Hazards ☐Hazardous Materials 		□Hurricane □Infestation □Nor'easter □Severe Weat □Severe Winte				
Description of the Problem:	The following dams are located in the municipality and have been found to have either or unsatisfactory safety rating based on their most recent inspections: Camp Niwauna Dam (poor) Skellinger Lake Dam (poor) Dams with poor or unsatisfactory safety ratings have deficiencies that could potentially dam failure more likely to occur or the consequences of dam failure more significant.						
Description of the Solution:	The municipal engineer will work with dam managers, the NJDEP Bureau of Dam Safety, a 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.						
Estimated Cost:	Low for initial assessment of op	tions, TBD for t	otal cost based	on mitigation actions selected			
Potential Funding Sources:	HMGP, BRIC, FMA, NJDEP, A	nnual Budget					
Implementation Timeline:	Within 5 years						
Goals Met:	1, 2, 3						
Benefits:	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.						
Impact on Socially Vulnerable Populations:	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.						
Impact on Future Development:	Future development downstrea	m of dams will a	also be protected	d from dam failure.			
Impact on Critical Facilities/Lifelines:	Critical roads and utilities will be dam releases.	e protected from	n potential dama	ge or loss from unintended			
Impact on Capabilities:	Not applicable						
Climate Change Considerations:	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.						
Mitigation Category	□ Local Plans and Regulations (LPR) ⊠ Structure and Infrastructure Project (SIP) □ Natural Systems Protection (NSP) ⊠ Education and Awareness Program						
CRS Category	□Preventative Measures (PR) □Property Protection (PP) ⊠Public Information (PI)		□ Natural Resource Protection (NR) Structural Flood Control Projects (SP) □ Emergency Services (ES)				
Priority	⊠High	□Medium		□Low			
Alternatives:	Action		Evaluation				
	No Action Risk of dam failure remains or i						



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





Action 2025-SandystonTwp-02. Disaster Debris Management Plan

Lead Agency:	Emergency Management							
Supporting Agencies:	Public Works, Township Adminis	stration						
Hazard(s) of Concern:	⊠Dam Failure □Disease Outbreak □Drought ⊠Earthquake ⊠Flood ⊠Geological Hazards ⊠Hazardous Materials		 ☑ Hurricane ☐ Infestation ☑ Nor'easter ☑ Severe Weather ☑ Severe Winter Weather ☑ Wildfire 					
Description of the Problem:	The Township currently does not have an adopted debris management plan. Without a plin place, there are no identified resources in place to properly address debris and do not identified locations for debris storage.							
Description of the Solution:	The municipality will develop a disaster debris management plan. This plan will establish procedures and guidelines for managing disaster debris in a coordinated, environmentally responsible, and cost-effective manner. The plan will identify responsibilities for execution of the plan. The plan will align with permitted temporary collection areas.							
Estimated Cost:	Staff time							
Potential Funding Sources:	Municipal budget							
Implementation Timeline:	Within 5 years							
Goals Met:	5							
Benefits:	The action will result in increased quicker and more efficient cleanup after disaster events.							
Impact on Socially Vulnerable Populations:	Not Applicable							
Impact on Future Development:	Not Applicable							
Impact on Critical Facilities/Lifelines:	Not Applicable							
Impact on Capabilities:	The action will result in increase	ed post disaster	capabilities.					
Climate Change Considerations:			e frequency and severity of weather-related apabilities to respond to these events.					
Mitigation Category	⊠Local Plans and Regulations (□Structure and Infrastructure P		□Natural Systems Protection (NSP) □Education and Awareness Programs (EAP)					
CRS Category	□Preventative Measures (PR) □Property Protection (PP) □Public Information (PI)		□Natural Resource Protection (NR) □Structural Flood Control Projects (SP) ⊠Emergency Services (ES)					
Priority	⊠High	□Medium	□Low					
Alternatives:	Action		Evaluation					
	No Action		Current problem remains					
	Rely on federal clear	nup	These services may or may not be available					
	Rely on state cleanu	up	These services may or may not be available					



Action 2025-SandystonTwp-03. Tree Maintenance

Lead Agency:	Public Works			
Supporting Agencies:	Utility Companies, Property Owne	ers		
Hazard(s) of Concern:	□Dam Failure □Disease Outbreak □Drought □Earthquake □Flood □Geological Hazards □Hazardous Materials		 ☑ Hurricane ☐ Infestation ☑ Nor'easter ☑ Severe Weather ☑ Severe Winter Weather ☐ Wildfire 	
Description of the Problem:	severe storms. The Township doe are responsible for the maintenant	es not have a nce of those o	xperiences frequently downed trees due to tree maintenance program. Utility companies n or near utility lines. Private homeowners hreatening power availability/interruption.	
Description of the Solution:			ies and programs to prevent trees from ity/interruption in conjunction with property	
Estimated Cost:	Low			
Potential Funding Sources:	Municipal Budget			
Implementation Timeline:	4 years			
Goals Met:	1, 2, 5, 7			
Benefits:	This action will result in the reduction of risk surrounding power outages by minimizing potential impacts from trees on utility lines.			
Impact on Socially Vulnerable Populations:	Some socially vulnerable population rely on power utilities for everyday care. If power outages are caused by a lack of tree maintenance, lives could potentially be at risk.			
Impact on Future Development:	This action assists in the protection of future development from impacts caused by tree collapses or branch falls as a result of severe weather, severe winter weather, hurricanes, and nor'easters.			
Impact on Critical Facilities/Lifelines:	Utility lines provide power to residencies, private businesses, government entities, and various providers. Not maintaining trees, tree limbs, or tree branches may impact the availability of power during severe weather and severe winter weather events.			
Impact on Capabilities:	The creation of a tree maintenance	ce program w	ould be a new capability for the Township.	
Climate Change Considerations:			e frequency and severity of weather-related or tree limbs/branches falling or impacting	
Mitigation Category	⊠Local Plans and Regulations (L □Structure and Infrastructure Pro	,	⊠Natural Systems Protection (NSP) □Education and Awareness Programs (EAP)	
CRS Category	⊠Preventative Measures (PR) □Property Protection (PP) □Public Information (PI)		Natural Resource Protection (NR)Structural Flood Control Projects (SP)□Emergency Services (ES)	
Priority	□High	Medium	□Low	
Alternatives:	Action		Evaluation	
	No Action		Municipal-owned trees will be maintained	
	Do not contact utility companies Do not contact property owners		Trees along utility lines may impact power during severe weather and severe winter weather events	
			Trees on private residencies may impact power during severe weather and severe winter weather events	



Action 2025-SandystonTwp-04. Socially Vulnerable Populations Outreach

Lead Agency:	Emergency Management				
Supporting Agencies:	Township Administration, Sussex County				
Hazard(s) of Concern:	 ☑Dam Failure ☑Disease Outbreak ☑Drought ☑Earthquake ☑Flood ☑Geological Hazards ☑Hazardous Materials 		 ⊠Hurricane ☑Infestation ☑Nor'easter ☑Severe Weather ☑Severe Winter Weather ☑Wildfire 		
Description of the Problem:	populations and underserved pulnerable populations can inc	oopulations. Ider rease the resilie	s that conduct outreach to socially vulnerable ntifying, communicating, and educating ncy of the Township. Furthermore, emergency, when feasible, in an emergency to help those		
Description of the Solution:	vulnerable populations. Methodonewsletters, social media, the	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.			
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.				
Climate Change Considerations:		ll inform residen	ty and frequency of many climate related ts and business owners of how to reduce risk acerbate those risks.		
Mitigation Category	□Local Plans and Regulations □Structure and Infrastructure	'	□Natural Systems Protection (NSP) ⊠Education and Awareness Programs (EAP)		
CRS Category	□Preventative Measures (PR) □Property Protection (PP) ⊠Public Information (PI)	□ Preventative Measures (PR) □ Natural Res □ Property Protection (PP) □ Structural F			
Priority	⊠High	□Medium	□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 fo	Using only a few methods of distribution may hinder socially vulnerable populations from receiving the guidance			





Action 2025-SandystonTwp-05. Repetitive Loss Properties

Lead Agency:	Floodplain Administrator				
Supporting Agencies:	Sussex County				
Hazard(s) of Concern:	□Dam Failure □Disease Outbreak □Drought □Earthquake ⊠Flood □Geological Hazards □Hazardous Materials	□Hurricane □Infestation □Nor'easter □Severe Weather □Severe Winter Weather □Wildfire			
Description of the Problem:	Frequent flooding events have resulted in dam properties have been repetitively flooded as do has one repetitive loss property, but other properties are local properties are located in the Special Flood Halfloodproofing.	ocumented by paid NFIP claims. The Township perties may be impacted by flooding as well. and along the Delaware River. Some of these			
Description of the Solution:		is initiative would be funding, benefits versus			
Estimated Cost:	Medium				
Potential Funding Sources:	FEMA FMA, FMA SWIFT, Municipal Budget, (County Budget, Property Owners			
Implementation Timeline:	3 years				
Goals Met:	2, 3				
Benefits:	This action would foster comprehensive floodplain management by removing at risk properties from the flood hazard area or elevating properties to reduce the flood risk.				
Impact on Socially Vulnerable Populations:	Socially vulnerable populations may be able to have houses elevated or acquired when it would otherwise be unaffordable.				
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 enhance the Township's currer	nt NFIP capabilities.			
Climate Change Considerations:	A warmer atmosphere means storms have the often, including increased periods of intense ra				
Mitigation Category	□Local Plans and Regulations (LPR) ⊠Structure and Infrastructure Project (SIP)	□Natural Systems Protection (NSP) □Education and Awareness Programs (EAP)			
CRS Category	□Preventative Measures (PR) ⊠Property Protection (PP) □Public Information (PI)	□Natural Resource Protection (NR) Structural Flood Control Projects (SP) □Emergency Services (ES)			
Priority	⊠High □Medium	□Low			
Alternatives:	Action	Evaluation			
	No action	Current problem continues			
	Construct flood walls/barriers around vulnerable areas	Costly and can divert floodwaters to other areas			
	Deployable flood barriers for vulnerable areas	Requires a great deal of work to implement prior to each event			





Action 2025-SandystonTwp-06. Flood Mitigation Interest

Lead Agency:	Floodplain Administrator				
Supporting Agencies:	Planning Board, Township Administration				
Hazard(s) of Concern:	□Dam Failure □Disease Outbreak □Drought □Earthquake ⊠Flood □Geological Hazards □Hazardous Materials		☐ Hurricane ☐ Infestation ☐ Nor'easter ☐ Severe Weath ☐ Severe Winter ☐ Wildfire		
Description of the Problem:	The Township does not have a which may be interested in floor Maintaining these lists can assimitigate.	d mitigation me	asures, such as e	levation or acquisition.	
Description of the Solution:	The Floodplain Administration v damaged by flood events and p measures, such as elevation or	roperty owners			
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	⊠Local Plans and Regulations □Structure and Infrastructure F			ns Protection (NSP) I Awareness Programs (EAP)	
CRS Category	⊠Preventative Measures (PR) □Property Protection (PP) □Public Information (PI)		□ Natural Resource Protection (NR) □ Structural Flood Control Projects (SP) □ Emergency Services (ES)		
Priority	⊠High	□Medium		□Low	
Alternatives:	Action			Evaluation	
	No action		Curre	nt problem remains	
	Only share opportunities whe grant funding	en notified of		ugh time to garner interest or rite application	
	Wait for information from the State on flood- damaged properties		May b	pe a delay in notice	





Action 2025-SandystonTwp-07. NFIP Training

Lead Agency:	Floodplain Administrator			
Supporting Agencies:	Engineering, Building Department, Township Administration			
Hazard(s) of Concern:	□Dam Failure □Disease Outbreak □Drought □Earthquake ⊠Flood □Geological Hazards □Hazardous Materials		□ Hurricane □ Infestation □ Nor'easter □ Severe Weather □ Severe Winter Weather □ Wildfire	
Description of the Problem:	CFM increases the depth of unccertifications ensures those that	derstanding who t bare it underst	dplain managers (CFM) on staff. Becoming a en dealing with FEMA floodplains. The tand the regulatory requirements and ement work effectively and efficiently at the	
Description of the Solution:		urage staff to be	ip staff with NFIP regulations and floodplain ecome Certified Floodplain Managers via the M 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:			ry and frequency of many climate related n NFIP regulations to assist with the flood	
Mitigation Category	□Local Plans and Regulations □Structure and Infrastructure F		□Natural Systems Protection (NSP) ⊠Education and Awareness Programs (EAP)	
CRS Category	□Preventative Measures (PR) □Property Protection (PP) ⊠Public Information (PI)		□Natural Resource Protection (NR) □Structural Flood Control Projects (SP) □Emergency Services (ES)	
Priority	⊠High	□Medium	□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-SandystonTwp-08. Community Rating System Program Participation

Lead Agency:	Floodplain Administrator				
Supporting Agencies:	Township Administration, Emergency Management				
Hazard(s) of Concern:	□Dam Failure □Disease Outbreak □Drought □Earthquake ⊠Flood □Geological Hazards □Hazardous Materials		□ Hurricane □ Infestation □ Nor'easter □ Severe Weather □ Severe Winter Weather □ Wildfire		
Description of the Problem:	Community Rating System (CRS) p Township can reduce and avoid flo the insurance aspects of the Nation	program. By ood damage nal Flood Ins residents w	e Township does not participate in the participating in the CRS program, the to insurable property, strengthen and support surance Program, and foster comprehensive hich have flood insurance through the NFIP		
Description of the Solution:	The Township will evaluate the ber the Township will join the program requirements.	nefits and co and begin ir	osts of participating in CRS program. If feasible, implementing standards that exceed NFIP		
Estimated Cost:	Low				
Potential Funding Sources:	Municipal Budget				
Implementation Timeline:	2 years				
Goals Met:	2, 5				
Benefits:	The participation in the CRS benefits communities by offering discounted rates for flood insurance premiums, which addresses the three goals of the program: reduce and avoid flood damage to insurable property, strengthen and support the insurance aspects of the National Flood Insurance Program, and foster comprehensive floodplain management.				
Impact on Socially Vulnerable Populations:	The participation in the Community Rating System (CRS) benefits communities by offering discounted rates for flood insurance premiums, which may be more affordable for some socially vulnerable populations.				
Impact on Future Development:	Future development would need to adhere to any increased standards established as part of joining the CRS program such as increased freeboard and elevation certificate requirements.				
Impact on Critical Facilities/Lifelines:	Not applicable				
Impact on Capabilities:	This action would enhance the Tow	vnship's floo	dplain management capabilities.		
Climate Change Considerations:			potential to be more intense and occur more in events. These changes are likely to		
Mitigation Category	□Local Plans and Regulations (LP □Structure and Infrastructure Proje		□Natural Systems Protection (NSP) ⊠Education and Awareness Programs (EAP)		
CRS Category	□Preventative Measures (PR) □Property Protection (PP) ⊠Public Information (PI)		□Natural Resource Protection (NR) □Structural Flood Control Projects (SP) □Emergency Services (ES)		
Priority	□High ⊠N	Medium	□Low		
Alternatives:	Action		Evaluation		
	No action		-		
	Adopt aspects of the CRS progra floodplain management prog		Increased floodplain management capabilities but no reduction in flood insurance premiums		
	Abandon any floodplain management practices not required by NFIP		Reduction in floodplain management capabilities and increase in risk.		





Action 2025-SandystonTwp-09. Critical Facilities in the Floodplain

Lead Agency:	Facility Managers					
Supporting Agencies:	Emergency Management, Floodplain Administr	rator				
Hazard(s) of Concern:	□Dam Failure □Disease Outbreak □Drought □Earthquake ⊠Flood □Geological Hazards □Hazardous Materials	□ Hurricane □ Infestation □ Nor'easter □ Severe Weather □ Severe Winter Weather □ Wildfire				
Description of the Problem:	Critical facilities located in the floodplain are no create unnecessary complications for the muni disaster recovery. The Township has multiple of Harper Dam, Kittatinny Lake Dam, Lance Mill I the Sandyston Township Building.	cipality during an emergency event and post- critical facilities in the floodplain, including				
Description of the Solution:	Coordinate with the facility managers at the Sandyston Township Building, Harper Dam, Kittatinny Lake Dam, Lance Mill Dam, Skellinger Lake Dam, and Stony Lake Dam in the Township to support the mitigation of vulnerable structures via retrofit (e.g., elevation, flood-proofing) or relocation to protect structures from future damage. Phase 1: Identify most cost-effective mitigation option Phase 2: Work with facility manager to implement selected action based on available funding and local match ability.					
Estimated Cost:	Medium					
Potential Funding Sources:	FEMA BRIC, HMGP, Township Budget, Faciliti	es				
Implementation Timeline:	5 years					
Goals Met:	2	2				
Benefits:	This action will remove or reduce critical facility and community lifeline vulnerability to the flood hazard and remove or reduce safety risks for first responders.					
Impact on Socially Vulnerable Populations:	Retrofitting or relocating the identified structures will benefit socially vulnerable populations, as individuals within these populations rely on resources from various government facilities, transportation facilities, and medical and senior care facilities.					
Impact on Future Development:	Noting the number of facilities located within the flood hazard area may encourage the consideration of relocating critical facilities and lifelines from the flood hazard area and deter the development of any additional facilities in the flood hazard area.					
Impact on Critical Facilities/Lifelines:	Noting the number of facilities located within th consideration of relocating critical facilities and the development of any additional facilities in the	lifelines from the flood hazard area and deter				
Impact on Capabilities:	This action will enhance the Township's curren	t NFIP capabilities.				
Climate Change Considerations:	A warmer atmosphere means storms have the often, including increased periods of intense ra					
Mitigation Category	□Local Plans and Regulations (LPR) ⊠Structure and Infrastructure Project (SIP)	□Natural Systems Protection (NSP) □Education and Awareness Programs (EAP)				
CRS Category	□Preventative Measures (PR) ⊠Property Protection (PP) □Public Information (PI)	□Natural Resource Protection (NR) Structural Flood Control Projects (SP) □Emergency Services (ES)				
Priority	⊠High □Medium	□Low				
Alternatives:	Action	Evaluation				
	No Action	Current problem remains				
	Floodproof existing structures	May not necessarily reduce risk				
	Construct floodwalls to stop flood issues	Will most likely interrupt natural floodplain function				





Action 2025-SandystonTwp-10. Dam Owner Partnership

Lead Agency:	Township OEM			
Supporting Agencies:	NJDEP, Dam Owners			
Hazard(s) of Concern:	 ☑Dam Failure ☑Disease Outbreak ☑Drought ☑Earthquake ☑Flood ☑Geological Hazards ☑Hazardous Materials 		□Hurricane □Infestation □Nor'easter □Severe Weather □Severe Winter Weather □Wildfire	
Description of the Problem:	Lake Dam, all critical infrastruc	tures, are locate hazard potential	Mill Dam, Skellinger Lake Dam, and Stony of in the 1- and 0.2-percent flood hazard areas. dam, the Robert Rooke Dam, within its I to impact those living nearby.	
Description of the Solution:			dams to ensure inspections and safety ed by Township OEM and shared with the	
Estimated Cost:	Low			
Potential Funding Sources:	Municipal budget			
Implementation Timeline:	Within 5 years			
Goals Met:	1, 2, 3, 5, 7			
Benefits:	This action will improve the safety and security of those who live within the dam inundation areas of the dams and increase the resilience of responding agencies.			
Impact on Socially Vulnerable Populations:	The action will result in better preparedness within the Special Flood Hazard Area and inundation areas where significant risk to socially vulnerable populations exists.			
Impact on Future Development:	Future development near inundation areas will be more secure as safety procedures and inspections are regularly performed on the dams.			
Impact on Critical Facilities/Lifelines:	Dams are considered a critical facility. This action will create an understanding of the safety procedures in place for each identified dam.			
Impact on Capabilities:	This action will improve planning and response capabilities through the understanding of responsibilities and procedures.			
Climate Change Considerations:		tribute to the lik	e frequency and severity of weather-related elihood of a dam failure event. This action will vents.	
Mitigation Category	⊠Local Plans and Regulations □Structure and Infrastructure I	` '	□Natural Systems Protection (NSP) □Education and Awareness Programs (EAP)	
CRS Category	□Preventative Measures (PR) ☑Property Protection (PP) □Public Information (PI)		□Natural Resource Protection (NR) □Structural Flood Control Projects (SP) ⊠Emergency Services (ES)	
Priority	⊠High	□Medium	□Low	
Alternatives:	Action		Evaluation	
	No Action		Township will be unaware of any safety concerns for the dam or its condition	
	Utilize information from	NJDEP	Owners may not be required to submit a safety plan to the State	
	Utilize information from the Naton of Dams	tional Inventory	Not all dams are listed on the inventory	



Action 2025-SandystonTwp-11. Little Flat Brook Flood Mitigation

Lead Agency:	Engineering			
Supporting Agencies:	Township Administration, Eme	rgency Manager	ment	
Hazard(s) of Concern:	□Dam Failure □Disease Outbreak □Drought □Earthquake ⊠Flood □Geological Hazards □Hazardous Materials		□Hurricane □Infestation □Nor'easter □Severe Weather □Severe Winter Weather □Wildfire	
Description of the Problem:	The Brook experiences occasion evacuation routes, prevent emonecessary medical appointment	onal riverine floo ergency respond its or needs for v		
Description of the Solution:			ole mitigation measures to provide relief from k. Cost effective measures will be	
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 from the Little Flat Brook.			
Impact on Socially Vulnerable Populations:	This action will assist socially vulnerable populations whose properties are impacted by flooding from the Little Flat Brook. 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 imp	acted area will b	be less likely to be flooded.	
Impact on Critical Facilities/Lifelines:	This action would assist in the reduction of roadway flooding from the Little Flat Brook, permitting first responders to traverse the roadways safely.			
Impact on Capabilities:	Not applicable			
Climate Change Considerations:	A warmer atmosphere means often, including increased period		potential to be more intense and occur more in events.	
Mitigation Category		,	□Natural Systems Protection (NSP) □Education and Awareness Programs (EAP)	
CRS Category	□Preventative Measures (PR) ⊠Property Protection (PP) □Public Information (PI)		□Natural Resource Protection (NR) Structural Flood Control Projects (SP) □Emergency Services (ES)	
Priority	□High	⊠Medium	□Low	
Alternatives:	Action		Evaluation	
	No action		Current problem remains	
	Raise banks of brook to incr capacity	ease storage	Cost prohibitive	
	Construct floodwall alor	ng creek	Cost prohibitive	



Action 2025-SandystonTwp-12. Collaborative Fire Management Practices

Lead Agency:	Fire Department				
Supporting Agencies:	Sussex County, New Jersey Forest Fire Service, NJDEP, Private Land Owners				
Hazard(s) of Concern:	□Dam Failure □Disease Outbreak □Drought □Earthquake □Flood □Geological Hazards □Hazardous Materials		☐ Hurricane ☐ Infestation ☐ Nor'easter ☐ Severe Weat ☐ Severe Winte ☑ Wildfire		
Description of the Problem:	Lack of forest management of fe residents of Sandyston. Many re wildfire could directly impact thei provides fuel to potential fires.	sidents reside	along the borde	er of forested areas, where a	
Description of the Solution:	The Fire Department will work winder plans for maintenance of vegetal be encouraged to perform their control of the process of the perform their control of the performance o	tive growth alo	ng key access r		
Estimated Cost:	Medium				
Potential Funding Sources:	Land Owners, Municipal Budget,	County Budge	et, State Budget	:	
Implementation Timeline:	3 years				
Goals Met:	2				
Benefits:	This action will create clearer access to key access roads to federal, state, and private lands. Regular maintenance for these access roads will remove fire fuel and ensure roads are easily visible and drivable.				
Impact on Socially Vulnerable Populations:	Populations near forested areas will be better protected from the wildfire hazard.				
Impact on Future Development:	Future development near forested areas will be better protected from the wildfire hazard.				
Impact on Critical Facilities/Lifelines:	While not official evacuation routes, access roads often provide the only ingress and egress for emergency response. This action will maintain important pathways for emergency response.				
Impact on Capabilities:	This action will protect emergence	cy response ca	pabilities.		
Climate Change Considerations:	Climate change is likely to increadisaster events, which may caus				
Mitigation Category	⊠Local Plans and Regulations (□Structure and Infrastructure Pr	,		ems Protection (NSP) ad Awareness Programs (EAP)	
CRS Category	□Preventative Measures (PR) □Property Protection (PP) □Public Information (PI)			ource Protection (NR) and Control Projects (SP) Services (ES)	
Priority	□High	⊠Medium		□Low	
Alternatives:	Action			Evaluation	
	No action		Curre	ent problem remains	
	State agencies maintain	only	Maintenance may not occur as frequently as needed		
	Township maintains only		Maintenance r	nay not occur as frequently as needed	





Action 2025-SandystonTwp-13. Severe Winter Weather Preparations

Lead Agency:	Public Works				
Supporting Agencies:	-				
Hazard(s) of Concern:	□Dam Failure □Disease Outbreak □Drought □Earthquake □Flood □Geological Hazards □Hazardous Materials		□Hurricane □Infestation ⊠Nor'easter □Severe Weath ⊠Severe Winter □Wildfire		
Description of the Problem:	Lake communities in Sandystor which snow can be cleared fror evacuation routes, prevent emenecessary medical appointmen	n roads and pla ergency respond	ced. Snow-covered lers from reaching	ed roadways can impact g a location, and impede on	
Description of the Solution:	Prior to each anticipated accum surrounding the Sandyston lake salt the roadways will be develo	communities. I			
Estimated Cost:	Low, Staff Time				
Potential Funding Sources:	Township Budget				
Implementation Timeline:	Within 1 year				
Goals Met:	1, 2, 7				
Benefits:	This action will protect the transportation lifeline by keeping roadways open and clear for emergency response and residential use.				
Impact on Socially Vulnerable Populations:	This action will assist socially vulnerable populations whose properties are impacted by snow-covered roads in the Sandyston lake communities.				
Impact on Future Development:	Future development in the impacted area will be less likely to be impacted by snow-covered roads.				
Impact on Critical Facilities/Lifelines:	This action will identify measures to protect infrastructure in the transportation lifeline, which will lead to the assurance of clear roadways for evacuations, regular travel, and emergency responses.				
Impact on Capabilities:	This action will expand the Township's winter weather response and preparation capabilities.				
Climate Change Considerations:	Climate change is likely to incre weather events such as nor'eas the chance of heavier snowfalls	sters and severe			
Mitigation Category	⊠Local Plans and Regulations □Structure and Infrastructure F	, ,		ns Protection (NSP) I Awareness Programs (EAP)	
CRS Category	 ☑ Preventative Measures (PR) ☐ Property Protection (PP) ☐ Public Information (PI) ☐ Natural Resource Protection (NR) ☐ Structural Flood Control Projects ☑ Emergency Services (ES) 		od Control Projects (SP)		
Priority	⊠High	□Medium	С	□Low	
Alternatives:	Action		١	Evaluation	
	No action		Curren	t problem continues	
	Property owners hire outside	contractors	Cost prohibitive for owners		
	Expand roadways	S	Cost prohibitive		



Action 2025-SandystonTwp-14. Early Warning Systems

Lead Agency:	Fire Department				
Supporting Agencies:	Emergency Management, Township Administration				
Hazard(s) of Concern:	 ☑Dam Failure ☐Disease Outbreak ☐Drought ☑Earthquake ☑Flood ☑Geological Hazards ☐Hazardous Materials 		⊠Hurricane □Infestation ⊠Nor'easter ⊠Severe Weath ⊠Severe Winte ⊠Wildfire		
Description of the Problem:	Fire Stations #1 and #2. Fire S Building along CR-645 and Fir Dingmans Ferry Road. Station	Sandyston Township has an early warning siren for hazard events. The sirens are located at Fire Stations #1 and #2. Fire Station #1 is located near the Sandyston Township Municipal Building along CR-645 and Fire Station #2 is located in Layton on CR-560/Tuttles Corner-Dingmans Ferry Road. Station #2's early warning siren is broken and is no longer functional, thereby limiting a source of emergency communications for residents in the northern portion of the Township			
Description of the Solution:	The Township proposes to rep Station with a siren with enhan			ng capabilities at the Fire	
Estimated Cost:	Low				
Potential Funding Sources:	HMGP, BRIC, AFG, Township	Budget			
Implementation Timeline:	3 years				
Goals Met:	1, 3, 5, 7				
Benefits:	This action will increase warning times within the Township and alert constituents to an impending hazard.				
Impact on Socially Vulnerable Populations:	Populations living near Station #2 will have the early warning system available to alert them to potential impending hazards.				
Impact on Future Development:	Future development within range of Station #2 will be supported by this action.				
Impact on Critical Facilities/Lifelines:	This action supports strengthens the safety and security lifeline by providing another means of informing the public of impending hazards; this supports the mission to protect life, property, and the environment.				
Impact on Capabilities:	This action strengthens the Fir	e Department's,	and Township's	early warning capabilities.	
Climate Change Considerations:					
Mitigation Category	□Local Plans and Regulations ⊠Structure and Infrastructure			ms Protection (NSP) d Awareness Programs (EAP)	
CRS Category	⊠Preventative Measures (PR) □Property Protection (PP) □Public Information (PI))		urce Protection (NR) od Control Projects (SP) ervices (ES)	
Priority	⊠High	□Medium		□Low	
Alternatives:	Action			Evaluation	
	No action		Curre	ent problem remains	
	Alternate communications		Cost prohibitive		
	Rely on reverse messagir	ng systems	Not all residents may be registered		



Action 2025-SandystonTwp-15. Sandyston-Walpack School Retrofits

Lead Agency:	Sandyston-Walpack Board of Education			
Supporting Agencies:	Emergency Management, Township Administration			
Hazard(s) of Concern:	□Dam Failure □Disease Outbreak □Drought □Earthquake □Flood □Geological Hazards □Hazardous Materials		 ☑ Hurricane ☐ Infestation ☑ Nor'easter ☑ Severe Weather ☑ Severe Winter Weather ☐ Wildfire 	
Description of the Problem:	The Sandyston-Walpack School building is not designed to withstand high wind. High wind associated with severe winter weather, severe weather, hurricanes, and nor'easters have the potential to damage the roof, which may cause injury to the individuals inside of the building.			
Description of the Solution:	The Township and Board of Edheavy wind events and occurre		e to retrofit the school building to withstand snowfall.	
Estimated Cost:	High			
Potential Funding Sources:	HMGP, BRIC, USDA Commun	ity Facilities Gra	ant Program, Township Budget	
Implementation Timeline:	Within 5 years			
Goals Met:	2, 6			
Benefits:	This action will protect the Sandyston-Walpack School from wind damage associated with severe weather, severe winter weather, hurricanes, nor easters, and any debris which the winds may elevate. Furthermore, this action will protect the School from roof collapse from snow loads associated with severe winter weather and nor easters.			
Impact on Socially Vulnerable Populations:	The Sandyston-Walpack School may be utilized by the public. This action will protect the individuals and groups within this structure from outside impacts.			
Impact on Future Development:	Not applicable			
Impact on Critical Facilities/Lifelines:	This action will protect the Sandyston-Walpack School from potential wind damages and rood collapse caused by debris and snow accumulations, respectively.			
Impact on Capabilities:	Not applicable			
Climate Change Considerations:	Climate change is likely to increase severe weather events such as hurricanes, nor'easters, winter storms, and winds. This action accounts for a likely increase in flying debris which may damage windows and snowfall which may impact the roofing of the School			
Mitigation Category	□Local Plans and Regulations (LPR) Structure and Infrastructure Project (SIP)		□Natural Systems Protection (NSP) □Education and Awareness Programs (EAP)	
CRS Category	□Preventative Measures (PR) ☑Property Protection (PP) □Public Information (PI)		□Natural Resource Protection (NR) □Structural Flood Control Projects (SP) □Emergency Services (ES)	
Priority	□High	⊠Medium	□Low	
Alternatives:	Action		Evaluation	
	No Action		Current problem continues	
	Build new structures Replace roof and windows without referencing changes in building standards		Costly, unnecessary	
			May result in same issue	



Action 2025-SandystonTwp-16. Brush Truck Acquisition

Lead Agency:	Fire Department			
Supporting Agencies:	-			
Hazard(s) of Concern:	□Dam Failure □Disease Outbreak □Drought □Earthquake □Flood □Geological Hazards □Hazardous Materials		□Hurricane □Infestation □Nor'easter □Severe Weather □Severe Winter Weather ⊠Wildfire	
Description of the Problem:	Sandyston Township is a largely rural and wooded community. Roads in the Township are narrow, and brush fires require a quick response by the Fire Department. Additionally, a large portion of Sandyston is preserved open space associated with the Delaware Water Gap. The high amount of visitation and tourism associated with the recreation facilities magnifies the importance of emergency response from the Township, though it has limited resources to acquire equipment and vehicles.			
Description of the Solution:	The Township proposes to purchase a brush truck to augment the Township's response to fire and rescue incidents. The brush truck is the first line of defense in a brush fire and can traverse rough terrain. The acquisition would enable enhanced response from the Township's fire department and greater capabilities during all types of hazard events.			
Estimated Cost:	High			
Potential Funding Sources:	Township Budget, HSGP, FTA Em	nergency Reli	ef Program, AFG	
Implementation Timeline:	Within 5 years			
Goals Met:	2, 5, 6			
Benefits:	This action will strengthen the response capabilities of the Sandyston Fire Department.			
Impact on Socially Vulnerable Populations:	This action will provide another level of protection for all populations within the Township from the wildfire hazard.			
Impact on Future Development:	This action will permit the fire department to provide a more robust response to fires which may disrupt areas selected for future development.			
Impact on Critical Facilities/Lifelines:	This action will provide the safety and security lifeline with additional equipment to support it mission of protecting life, property, and the environment.			
Impact on Capabilities:	This action will strengthen the capabilities within the safety and security lifeline within the Township.			
Climate Change Considerations:	Higher temperatures are expected to increase the amount of moisture that evaporates from land and water. These changes have the potential to lead to more frequent and severe droughts, which, in turn, increases the likelihood of wildfires.			
Mitigation Category	⊠Local Plans and Regulations (LPR)□Structure and Infrastructure Project (SIP)		□ Natural Systems Protection (NSP) □ Education and Awareness Programs (EAP)	
CRS Category	□Preventative Measures (PR) □Property Protection (PP) □Public Information (PI)		□Natural Resource Protection (NR) □Structural Flood Control Projects (SP) ⊠Emergency Services (ES)	
Priority	⊠High □Medium		□Low	
Alternatives:	Action No action Rent the equipment Rely on MOUs		Evaluation	
			Current problem remains	
			Costly, may not be available when needed	
			Resources may not be available	



Action 2025-SandystonTwp-17. Phone Service Retention

Lead Agency:	Service Providers		
Supporting Agencies:	Township Administration		
Hazard(s) of Concern:	⊠Dam Failure □Disease Outbreak □Drought ⊠Earthquake ⊠Flood ⊠Geological Hazards ⊠Hazardous Materials	 ☑ Hurricane ☐ Infestation ☑ Nor'easter ☑ Severe Weather ☑ Severe Winter Weather ☑ Wildfire 	
Description of the Problem:	Sandyston Township experiences cable outages that impact phone lines during severe storm events. Maintaining these lines of communication is pertinent as reverse notification systems may be tied to landlines and cable provides the population with hazard notifications, warnings, and integral hazard-related information.		
Description of the Solution:	The Township proposes to work with the PUC and FCC to enact regulations requiring phone providers to maintain phone service during loss of power.		
Estimated Cost:	High		
Potential Funding Sources:	Service Providers		
Implementation Timeline:	5+ years		
Goals Met:	1, 5, 6		
Benefits:	Township emergency responders will have connection across the entire Township to ensure their services are accessible by all residents and business owners.		
Impact on Socially Vulnerable Populations:	Socially vulnerable populations may not have the financial means to own a cellular device to contact emergency responders.		
Impact on Future Development:	Phone service would be available at future development locations.		
Impact on Critical Facilities/Lifelines:	Critical facilities may benefit from this action because it allows them to have increased communication and connections to other critical facilities and emergency responders.		
Impact on Capabilities:	This increased the Township's capability to handle all emergencies and hazards.		
Climate Change Considerations:	Climate change is leading to an increase in se	verity and frequency in severe weather.	
Mitigation Category	⊠Local Plans and Regulations (LPR) □Structure and Infrastructure Project (SIP)	□Natural Systems Protection (NSP) □Education and Awareness Programs (EAP)	
CRS Category	□Preventative Measures (PR) □Property Protection (PP) □Public Information (PI)	□Natural Resource Protection (NR) □Structural Flood Control Projects (SP) ⊠Emergency Services (ES)	
Priority	□High ⊠Medium	□Low	
Alternatives:	Action	Evaluation	
	No action	Current problem remains	
	Township buys cellular signal extender for all first responders	Cost prohibitive	
	Township contracts with service provider for Cell on Wheels (COW)	Cost prohibitive, unknown availability	



Action 2025-SandystonTwp-18. Delaware River Bridge Retrofit

Lead Agency:	Township Administration			
Supporting Agencies:	Public Works, Emergency Management, Bridge Owner(s), NJDEP, Sussex County			
Hazard(s) of Concern:	□Dam Failure □Disease Outbreak □Drought □Earthquake ⊠Flood ⊠Geological Hazards ⊠Hazardous Materials		 ☑ Hurricane ☐ Infestation ☑ Nor'easter ☑ Severe Weather ☑ Severe Winter Weather ☐ Wildfire 	
Description of the Problem:	The Dingman's Ferry bridge is the primary access road between the Township and Pennsylvania. The Bridge is privately owned and vulnerable to flooding. Failure of bridges or causeways could result in loss to life and limitations to emergency access.			
Description of the Solution:	The Township proposes to protect the roadway crossing the Delaware River from damages and debris during hazard events. The Township will work with the bridge's owners, the County, and NJDEP to protect the bridge from debris.			
Estimated Cost:	High			
Potential Funding Sources:	BRIC, HMGP, NJDOT, Townsh	nip Budget, Brid	ge Owner, Sussex County	
Implementation Timeline:	5+ years			
Goals Met:	2, 5			
Benefits:	This action ensures infrastructure will be protected from future hazard damages and that at least a single transportation route remains accessible to the community.			
Impact on Socially Vulnerable Populations:	This action will benefit socially vulnerable populations by ensuring routes are available for travel, should an evacuation occur or if emergency medical assistance in required.			
Impact on Future Development:	This action will ensure transportation routes are available to future developments during periods of heavy rainfall, which would otherwise cause roadway flooding.			
Impact on Critical Facilities/Lifelines:	This action ensures transportation routes remain open and accessible to the public for daily use and evacuation needs and provides a point of access for first responders into communities that may have faced damage from a hazard event on either side of the bridge.			
Impact on Capabilities:	Increases community resiliency to flooding events in vulnerable areas that would normally be vulnerable to prolonged isolation after high-water events.			
Climate Change Considerations:	Ensure the bridge structure is i	mpervious to er	osion at its base due to rising water levels.	
Mitigation Category			□Natural Systems Protection (NSP) □Education and Awareness Programs (EAP)	
CRS Category			□Natural Resource Protection (NR) Structural Flood Control Projects (SP) □Emergency Services (ES)	
Priority	□High	⊠Medium	□Low	
Alternatives:	Prinatives: Action No Action Bridge abandonment/reconstruction Bridge retrofit		Evaluation	
			Current problem remains	
			Not feasible	
			Most cost effective	



Action 2025-SandystonTwp-19. Firewise Program Participation

Lead Agency:	Fire Department		
Supporting Agencies:	Township Administration, NJFFS		
Hazard(s) of Concern:	□Dam Failure □Disease Outbreak □Drought □Earthquake □Flood □Geological Hazards □Hazardous Materials	☐ Hurricane ☐ Infestation ☐ Nor'easter ☐ Severe Weather ☐ Severe Winter Weather ☑ Wildfire	
Description of the Problem:	The Township had participated in the Firewise program between 2014-2019. The Township seeks to re-enter the Firewise program one it is reintroduced by the State. The Firewise program helps the entire community become more prepared, and ultimately resilient, to the wildfire hazard through connections with local firefighters and state professionals, understanding fire fuel and how to dispose and prevent it, and learning how to protect property from wildfires.		
Description of the Solution:	The Township will follow the proper steps in applying for and becoming a Firewise community. This includes forming a board/committee, obtaining a wildfire risk assessment, developing an action plan, and hosting outreach events and programs. The Township will also create an education program and set up town hall meetings.		
Estimated Cost:	Low		
Potential Funding Sources:	Municipal Budget		
Implementation Timeline:	3 years		
Goals Met:	1, 2, 3, 4, 5		
Benefits:	The national Firewise USA recognition program provides a collaborative framework to help neighbors in a geographic area get organized, find direction, and take action to increase the ignition resistance of their homes and community and to reduce wildfire risks at the local level.		
Impact on Socially Vulnerable Populations:	Socially vulnerable populations in the Township may be located within very high and high fuel risk areas for wildfires. Participation in the Firewise Program will assist in the Township's efforts to educate populations on how to increase the ignition resistance of their home sand property.		
Impact on Future Development:	Participation in this program requires a community wildfire assessment to be completed, which should be a community-wide view that identifies areas of successful wildfire risk reduction and areas where improvements could be made. This assessment may identify areas which the Township would like to restrict future development.		
Impact on Critical Facilities/Lifelines:	Participation in this program requires a community wildfire assessment to be completed, which should be a community-wide view that identifies areas of successful wildfire risk reduction and areas where improvements could be made, which could include relocating various critical facilities or lifelines.		
Impact on Capabilities:	This action will increase wildfire risk reduction and response capabilities for the Township.		
Climate Change Considerations:	Higher temperatures are expected to increase the amount of moisture that evaporates from land and water. These changes have the potential to lead to more frequent and severe droughts, which, in turn, increases the likelihood of wildfires.		
Mitigation Category	□Local Plans and Regulations (LPR) □Structure and Infrastructure Project (SIP)	□ Natural Systems Protection (NSP) ⊠ Education and Awareness Programs (EAP)	
CRS Category	□Preventative Measures (PR) □Property Protection (PP) ☑Public Information (PI)	□Natural Resource Protection (NR) □Structural Flood Control Projects (SP) □Emergency Services (ES)	
Priority	⊠High □Medium	□Low	
Alternatives:	Action	Evaluation	
	No Action	The Township does not participate in the Firewise Program	





Complete half of the program requirements	The Township would not be eligible to participate in the Firewise Program
Participate in the program, but do not utilize resources	The Township would miss opportunities to strengthen communication and safety skills





Action 2025-SandystonTwp-20. Code Coordinated Ordinance

Lead Agency:	Floodplain Administrator			
Supporting Agencies:	Construction Official, Building Department, Township Administration, NFIP State Coordinator, FEMA Regional Office			
Hazard(s) of Concern:	□Dam Failure □Disease Outbreak □Drought □Earthquake ⊠Flood □Geological Hazards □Hazardous Materials	□ Hurricane □ Infestation □ Nor'easter □ Severe Weather □ Severe Winter Weather □ Wildfire		
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. The Township's ordinance requires update.			
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:	Municipal 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.			
Mitigation Category	⊠Local Plans and Regulations (LPR) □Structure and Infrastructure Project (SIP)	□Natural Systems Protection (NSP) □Education and Awareness Programs (EAP)		
CRS Category	⊠Preventative Measures (PR) □Property Protection (PP) □Public Information (PI)	□Natural Resource Protection (NR) □Structural Flood Control Projects (SP) □Emergency Services (ES)		
Priority	⊠High □Medium	□Low		
Alternatives:	Action	Evaluation		
	No Action	Current problem exists		
	Modify existing flood damage prevention ordinance	Time intensive		





Leave NFIP Residents lose flood insurance coverage





Action 2025-SandystonTwp-21. Substantial Damage Management Plan

Lead Agency:	Floodplain Administrator			
Supporting Agencies:	Emergency Management, Building Department			
Hazard(s) of Concern:	⊠Dam Failure	mig Boparanon	⊠Hurricane	
riazaru(s) or concern.	□Disease Outbreak		⊠Infestation	
	□Drought		⊠Nor'easter	
	⊠Earthquake — - · · ·		⊠Severe Wear	
	⊠Flood ⊠Coological Hazarda		Severe Winte ⊠Wildfire	er Weather
	⊠Geological Hazards ⊠Hazardous Materials		Avviidille	
Description of the Problem:	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:			
	 Determine where the damage occurred within the community and if the damaged structures are in an SFHA. 			
	 Determine what to use fo regulations will protect ag 			
	 Determine if repairing plu the structure's pre-dama 		damaged struc	ture equals or exceeds 50% of
	 Require permits for floodplain development. The municipality 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 municipality is in need of a formal process and plan to provide a framework for conducting such inspections and determinations. 			
Description of the Solution:	The municipality 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 damge mgmt plan.pdf). This plan will outline responsibilities for Substantial Damage determinations, determining market value, and permit approval processes following a disaster event.			
Estimated Cost:	Low			
Potential Funding Sources:	Municipal 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.			sting, current, and future
Impact on Critical Facilities/Lifelines:	A Substantial Damage Management Plan would include all critical facilities and lifelines in the municipality.			ical facilities and lifelines in the
Impact on Capabilities:	This action improves disaster re	ecovery capabili	ties.	
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	 ☑Local Plans and Regulations (LPR) ☐ Natural Systems Protection ☐ Education and Awareness F 		ems Protection (NSP) ad Awareness Programs (EAP)	
CRS Category	⊠Preventative Measures (PR) □Property Protection (PP) □Public Information (PI)			ource Protection (NR) and Control Projects (SP) Services (ES)
Priority	⊠High	□Medium		□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-SandystonTwp-22. Robert Rooke Dam Rehab

Lead Agency:	YMCA of Newark			
Supporting Agencies:	County Engineer, County OEM, NJDEP, Municipal Engineer			
Hazard(s) of Concern:	 ☑Dam Failure ☑Disease Outbreak ☑Drought ☑Earthquake ☑Flood ☑Geological Hazards ☑Hazardous Materials 		□ Hurricane □ Infestation □ Nor'easter □ Severe Weather □ Severe Winter Weather □ Wildfire	
Description of the Problem:	Robert Rooke Dam is a Class I High Hazard Dam that is located on Lake Robert Rooke. The dam is owned by the YMCA of Newark. Failure of the dam could result in inundation of populated areas, forested areas, recreational areas, and local roadways including Flatbrook Road and State Route 206. Although the dam was last inspected in 2024 and found to be in satisfactory condition, the risk of dam failure warrants an engineering evaluation to determine if retrofits of the dam would result in safer conditions.			
Description of the Solution:	The Municipal Engineer will work with the YMCA of Newark to complete an engineering study of Robert Rooke Dam. The Township will also request information and input from its Public Works/Highway department and the County regarding impacted roadways. If cost-effective mitigation measures or retrofit options are identified that can increase the level of safety and length of useful life, the Township and the YMCA of Newark will pursue funding support, permit approval from NJDEP, and implement the cost-effective measures.			
Estimated Cost:	High			
Potential Funding Sources:	FEMA BRIC, HHPD			
Implementation Timeline:	Within 5 years			
Goals Met:	1, 2, 8			
Benefits:	This action will improve the safety and security of those who live within the dam inundation areas of the dams and increase the resilience of responding agencies.			
Impact on Socially Vulnerable Populations:	The action will result in better preparedness within the Special Flood Hazard Area and inundation areas where significant risk to socially vulnerable populations exists.			
Impact on Future Development:	Future development located in or near the dam inundation area will be further protected fro a dam failure event.			
Impact on Critical Facilities/Lifelines:	Dams are considered a critical facility. This action will create an understanding of the safety procedures in place for each identified dam and strengthen the structural integrity of dam, a needed.			
Impact on Capabilities:	This action will improve planning and response capabilities through the understanding of responsibilities and procedures.			
Climate Change Considerations:	Climate change may result in an increase in the frequency and severity of weather-related disaster events, which may contribute to the likelihood of a dam failure event due to projecte increases in precipitation. This action will increase the capabilities to respond to these event			
Mitigation Category	□Local Plans and Regulations (LPR) Structure and Infrastructure Project (SIP)		□Natural Systems Protection (NSP) □Education and Awareness Programs (EAP)	
CRS Category	□ Preventative Measures (PR) □ Property Protection (PP) □ Public Information (PI)		□ Natural Resource Protection (NR) Structural Flood Control Projects (SP) □ Emergency Services (ES)	
Priority	⊠High	□Medium	□Low	
Alternatives:	Action No Action Decommission Dam		Evaluation	
			Current problem continues	
			High cost, flood risk for nearby infrastructure increased, loss of Lake Robert Rooke as an environmental and recreational resource.	





Elevate nearby structures

Very high cost and likely not feasible for commercial properties. Will not reduce potential for dam failure due to poor dam conditions

