9.19 TOWNSHIP OF SPARTA

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

9.19.1 Hazard Mitigation Planning Team

The Township of Sparta followed the planning process described in Section 2 (Planning Process). This annex was developed over the course of several months with input from many jurisdiction representatives. All departments were asked to contribute to the annex development through reviewing and contributing to the capability assessment, reporting on the status of previously identified actions, and participating in action identification and prioritization. The coronavirus pandemic resulted in a strain on local resources that limited some participation, but every effort was made to connect with staff and stakeholders and gain diverse input. Due to safety precautions, all meetings were held virtually. The following table summarizes who participated and in what capacity. Additional documentation on the municipality's planning process through Planning Partnership meetings is included in Section 2 (Planning Process) and Appendix C (Meeting Documentation).

Table 9.19-1. Hazard Mitigation Planning Team

Primary Point of Contact	Alternate Point of Contact
Name / Title: Neil Spidaletto, OEM Coordinator Address: 65 Main Street, Sparta, NJ 07871 Phone Number: (973) 729-6121 Email: nspidaletto@spartapd.org	Name / Title: William Close, Deputy OEM Coordinator Address: 65 Main Street, Sparta, NJ 07871 Phone Number: (973) 726-3600 Email: william.close@spartanj.org
NFIP Floodplain Administrator	
Name / Title: Stan Puszcz, P.E., Township Engineer Address: 11 Park Lake Road, Sparta, NJ 07871 Phone Number: 973-300-9003 Email: stan.puszcz@cpengineers.com	

Name	Title	Method of Participation
Neil Spidaletto	OEM Coordinator	Primary point of contact; attended the kickoff meeting, annex training, risk assessment meeting and mitigation strategy workshop; provided data and information for the annex update
William Close	Deputy OEM Coordinator	Alternate point of contact
Stan Puszcz, P.E.	Township Engineer	NFIP floodplain administrator; attended the annex training and risk assessment meeting; provided data and information for the annex update
John Cahillane	Engineer	Provided data and information, contributed to the mitigation strategy
Thomas McIntyre	Deputy OEM Coordinator	Attended the annex training

9.19.2 Jurisdiction Profile

Sparta Township is located in southwestern Sussex County and has a total area of 38.9 square miles. The Township is bordered to the north by Lafayette and Hardyston Townships, to the south by Byram Township and Hopatcong Borough, to the east by Morris County and to the west by Andover and Lafayette Townships. Streams that flow through Sparta Township include: Wallkill River and its tributaries, Russia Brook tributaries, Sparta Junction Brook, Wildcat Branch, Sparta Glen Brook, Tar Hill Brook tributaries, and Lubbers Run

tributaries. Lake Mohawk is a large lake located in the southwest corner of the Township. Other lakes and ponds are located throughout the Township as well. The following unincorporated communities are located within the Township: Ackerson, Woodruffs Gap, Houses Corner, Sparta Junction, Sussex Mills, Upper Mohawk, and Lake Mohawk.

According to the U.S. Census, the 2010 population for the Township of Sparta was 19,722. The estimated 2018 population was 18,841, a 4.5 percent decrease from the 2010 Census. Data from the 2018 U.S. Census American Community Survey indicate that 5.3 percent of the population is 5 years of age or younger and 13.7 percent is 65 years of age or older. Communities must deploy a support system that enables all populations to safely reach shelters or to quickly evacuate a hazard area.

9.19.3 Growth/Development Trends

Understanding how past, current, and projected development patterns have or are likely to increase or decrease risk in hazard areas is a key component to understanding a jurisdiction's overall risk to its hazards of concern. Table 9.18-2 summarizes recent and expected future development trends, including major residential/commercial development and major infrastructure development. The figures at the end of this annex illustrate the geographically-delineated hazard areas and the location of potential new development.

Table 9.19-2. Recent and Expected Future Development

Type of Development	2015		2016		2017		2018		2019	
Number of Building Permits for New Construction Issued Since the Previous HMP										
	Total	**Within SFHA**	**Total**	**Within SFHA**	**Total**	**Within SFHA**	**Total**	**Within SFHA**	**Total**	**Within SFHA**
Single and Two-Family Units	2	0	1	0	7	0	22	0	95	0
Multi-Family	0	0	0	0	0	0	0	0	0	0
Other (commercial, mixed-use, etc.)	6	0	3	0	1	0	7	0	5	0

Property or Development Name	Type of Development	# of Units / Structures	Location (address and/or block and lot)	Known Hazard Zone(s)*	Description / Status of Development
Recent Major Development and Infrastructure from 2015 to Present					
North Village	Residential/Commercial	100+ Residential Units & 8 Commercial	Block 16001, Lots 4.02, 5, 6, 7, 8, 89, & 91.01	Railway Incident Hazard Area, Hazardous Material Incident Area, Nuclear Incident Hazard Area, Carbonate Soil	95% Complete
White Lake Technical Center	Commercial	8-10 Commercial Sites	Block 16001, Lots 14-21; Block 16003, Lots 1-5	Railway Incident Hazard Area, Nuclear Incident Hazard Area, Carbonate Soil	75% Complete
Gas Light Court	Residential	18 Single Family Homes	Block 27006, Lots 5-7 & 12-29	Railway Incident Hazard Area, Carbonate	50% Complete

				Soil, Steep Slopes, Nuclear Incident Area, Wildfire	
Known or Anticipated Major Development and Infrastructure in the Next Five (5) Years					
None Identified					

** Only location-specific hazard zones or vulnerabilities identified.*
SFHA = Special Flood Hazard Area

9.19.4 Capability Assessment

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

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

For a community to succeed in reducing long-term risk, hazard mitigation must be integrated into the day-to-day local government operations. As part of this planning effort, planning/policy documents were reviewed, and each jurisdiction was surveyed to obtain a better understanding of their progress in plan integration. Areas with current mitigation integration are summarized below. The Township of Sparta identified specific integration activities that will be incorporated into municipal procedures; these actions are included in the updated mitigation strategy.

Planning, Legal and Regulatory Capability

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

Table 9.19-3. Planning, Legal and Regulatory Capability

	Do you have this? (Yes/No)	Authority that enforces (Federal, State, Regional, County, Local)	Is this State Mandated?	Have aspects of the HMP been integrated into your codes/ordinances/plans?	
				If yes- how? Describe in comments.	If no - add Mitigation Action #, if applicable.
Codes, Ordinances, & Requirements					
Building Code	Yes	State & Local	Yes	Yes	-
Comment: • *State mandated on local level under NJAC 5:23-3.14. International Building Code – New Jersey Edition, 2018, NJAC 5:24-3.14 Adopted 9/3/2019* • *This code follows State Uniform Construction Code Act (N.J.S. 52:27D-119 et seq.).*					
Zoning Code	Yes	Local	Yes – if municipality has a	Yes	-

	Do you have this? (Yes/No)	Authority that enforces (Federal, State, Regional, County, Local)	Is this State Mandated?	Have aspects of the HMP been integrated into your codes/ordinances/plans?	
				If yes- how? Describe in comments.	If no - add Mitigation Action #, if applicable.
			Planning Board		
Comment: • *State permissive on local level. Per State of NJ Municipal Land Use Law (MLUL) L. 1975, s. 2, eff Aug 1, 1976, 40-55D-62: 49. Power to zone, requires all jurisdictions to have current zoning and other land development ordinances after the planning board has adopted the land use element and master plan.* • *This code follows Chapter 18, Comprehensive Land Management Code.* • *Part of the Code objectives is to secure safety from flood, fire, panic or other natural or man-made disaster.*					
Subdivisions	Yes	Local	Yes – if municipality has a Planning Board	Yes	-
Comment: • *P.L.1975, c.291 (C.40:55D-47): 40:55D-37. Grant of power; referral of proposed ordinance; county planning board approval a. The governing body may by ordinance require approval of subdivision plats by resolution of the planning board as a condition for the filing of such plats with the county recording officer and approval of site plans by resolution of the planning board as a condition for the issuance of a permit for any development, except that subdivision or individual lot applications for detached one or two dwelling-unit buildings shall be exempt from such site plan review and approval; provided that the resolution of the board of adjustment shall substitute for that of the planning board whenever the board of adjustment has jurisdiction over a subdivision or site plan pursuant to subsection 63b. of this act . Dictated by the Municipal Land Use Law. NJ Statute 40:27-6.2 - the board of commissioners of any county having a county planning board shall provide for the review of all subdivisions of land within the county by said county planning board and for the approval of those subdivisions affecting county road or drainage facilities as set forth and limited hereinafter in this section.* • *This ordinance follows Chapter 18 of the Township Code.*					
Stormwater Management	Yes	Local	Yes	Yes	-
Comment: • *See Title 7 of the NJ Administrative Code, N.J.A.C. 7:8* • *The Engineering Department is responsible for this ordinance in compliance with Chapter 18 of the Township Code.* • *The Township Engineer, Planning Board Engineer, and Zoning Board Engineer have all completed NJDEP stormwater training.*					
Post-Disaster Recovery	No	-	No	-	-
Comment:					
Real Estate Disclosure	Yes	State, Division of Consumer Affairs	Yes	No	-
Comment: • *N.J.A.C. 13:45A-29.1 - Before signing a contract of sale, all purchasers must receive a New Jersey Public Offering Statement (POS) approved by the New Jersey Real Estate Commission. The POS provides information such as estimated completion dates for improvements, fees for services and amenities, the type of title and ownership interest being offered, its proximity to hospitals, schools, fire and police, as well as any hazards, risks or nuisances in or around the subdivision.*					
Growth Management	Yes	Local	Yes – if municipality has a Planning Board	No	-
Comment: • *State Mandated on a municipal level. See Zoning Ordinance; Also - Plan Endorsement Process via the State Development & Redevelopment Plan provides for the delineation of Growth Areas and Environs; Use of the endorsed plans in the implementation of state environmental regulations makes the Plan Endorsement process a growth management strategy.* • *These ordinance in compliance with Chapter 18.*					
Site Plan Review	Yes	Local	Yes – if municipality has a Planning Board	Yes	-
Comment: • *Dictated by the Municipal Land Use Law which sets forth minimum requirements for plans, etc., timeframes for development review. NJ Statute 40:27-6.2: The board of commissioners of any county having a county planning board shall provide for the review of all subdivisions of land within the county by said county planning board and for the approval of those subdivisions*					

	Do you have this? (Yes/No)	Authority that enforces (Federal, State, Regional, County, Local)	Is this State Mandated?	Have aspects of the HMP been integrated into your codes/ordinances/plans?	
				If yes- how? Describe in comments.	If no - add Mitigation Action #, if applicable.
affecting county road or drainage facilities as set forth and limited hereinafter in this section. 40:27-6.10 In order that county planning boards shall have a complete file of the planning and zoning ordinances of all municipalities in the county, each municipal clerk shall file with the county planning board a copy of the planning and zoning ordinances of the municipality in effect on the effective date of this act and shall notify the county planning board of the introduction of any revision or amendment of such an ordinance which affects lands adjoining county roads or other county lands, or lands lying within 200 feet of a municipal boundary, or proposed facilities or public lands shown on the county master plan or official county map. Such notice shall be given to the county planning board at least 10 days prior to the public hearing thereon by personal delivery or by certified mail of a copy of the official notice of the public hearing together with a copy of the proposed ordinance. • *The Planning Department is responsible for these requirements in compliance with Chapter 18 of the Township Code.*					
Environmental Protection	Yes	Local	No	Yes	-
Comment: • *Chapter 2-39 of the Township Code establishes and Environmental Commission which is responsible for the protection, development and use of natural resources, with the exception of those duties related to water resources which are under the jurisdiction of the Board of Health.* • *Chapter 18, Comprehensive Land Management Code.* ○ *Part of the Code objectives is to promote the conservation of open space and valuable natural resources and to prevent urban sprawl and degradation of the environment through improper use of land;* • *Chapter 25 of the Township Code establishes regulations regarding the use of lawn fertilizer(s) on properties within the Lake Mohawk Country Club.*					
Flood Damage Prevention	Yes	Federal, State & Local	Yes	Yes	-
Comment: • *The NJ State Law Flood Area Control Act (N.J.S.A. 58:16A-52) and the National Flood Control Act of 1968 (NFIP) are state and federal acts to support minimization of flood losses. They do not require local adoption but as enforced by the NJDEP, the floodplain ordinances of each municipality must be reviewed for compliance with these regulations. In addition, participation in the NFIP requires a floodplain ordinance. Regulations for the Flood Control Hazards Act were adopted in 2007 and amended effective June 20, 2016.* • *The Construction official is responsible for this ordinance in compliance with Chapter 28 of the Township Code.* • *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:* ○ *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 second 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	State	Yes	Yes	-
Comment: • *The NJ State Safe Drinking Water Act (N.J.S.A. 58:12A-1) and the Safe Drinking Water Act of 1974 (SDWA) are state and federal acts to protect the quality of drinking water. They do not require local adoption as they are enforced by the NJDEP. Regulations for the Safe Drinking Water Act were adopted in 1977 and amended effective June 1, 2020.*					
Emergency Management	Yes	Federal, State & Local	No	Yes	-
Comment: • *The Office of Emergency Management is established by Chapter 2-27 of the Township Code.*					
Climate Change	No	-	No	-	-
Comment:					
Disaster Recovery Ordinance	No	-	No	-	-
Comment:					
Disaster Reconstruction Ordinance	No	-	No	-	-
Comment:					

	Do you have this? (Yes/No)	Authority that enforces (Federal, State, Regional, County, Local)	Is this State Mandated?	Have aspects of the HMP been integrated into your codes/ordinances/plans?	
				If yes- how? Describe in comments.	If no - add Mitigation Action #, if applicable.
Planning Documents					
Comprehensive / Master Plan	Yes	Local	Yes	Yes	-
Comment: • *2018 Revised NJ Statute 40:27-2; the county planning board shall make and adopt a master plan for the physical development of the county. The master plan of a county, with the accompanying maps, plats, charts, and descriptive and explanatory matter, shall show the county planning board's recommendations for the development of the territory covered by the plan, and may include, among other things, the general location, character, and extent of streets or roads, viaducts, bridges, waterway and waterfront developments, parkways, playgrounds, forests, reservations, parks, airports, and other public ways, grounds, places and spaces; the general location and extent of forests, agricultural areas, and open-development areas for purposes of conservation, food and water supply, sanitary and drainage facilities, or the protection of urban development, and such other features as may be important to the development of the county. The county planning board shall encourage the co-operation of the local municipalities within the county in any matters whatsoever which may concern the integrity of the county master plan and to advise the board of chosen commissioners with respect to the formulation of development programs and budgets for capital expenditures. Per State of NJ Municipal Land Use Law (MLUL) L. 1975, s. 2, eff Aug 1, 1976 40:55D-28 provides the required components of a municipal Master Plan and requires that each municipality prepare a master plan and update it every 6 years. Further, all zoning ordinances must be consistent with the Master Plan or will not be benefitted from a presumption of validity.* • *This plan was adopted in 1984.* • *The Planning Department is responsible for this plan in compliance with the Master Plan.*					
Capital Improvement Plan	Yes	Local	No	No	-
Comment: *The Engineering Department and DPW is responsible for this plan.*					
Disaster Debris Management Plan	No	-	No	-	2021-Sparta-009
Comment:					
Floodplain or Watershed Plan	No	-	No	-	-
Comment:					
Stormwater Management Plan	Yes	Local	Yes	Yes	-
Comment: • *The Stormwater Management rules (N.J.A.C. 7:8) rules were published in the February 2, 2004 NJ Register. These rules set forth the required components of regional and municipal stormwater management plans and establish the stormwater management design and performance standards for new (proposed) development. The design and performance standards for new development include groundwater recharge, runoff quantity controls, and runoff quality controls. The rules emphasize, as a primary consideration, the use of nonstructural stormwater management techniques including minimizing disturbance, minimizing impervious surfaces, minimizing the use of stormwater pipes, preserving natural drainage features, etc. The rules also set forth requirements for groundwater recharge, stormwater runoff quantity control, stormwater runoff quality control, and the prohibition of major development to be located within or to discharge runoff from the major development into a 300-foot riparian zone without prior authorization from the Department under the Flood Hazard Area Control Act Rules, N.J.A.C. 7:13.* • *The Engineering Department is responsible for this plan, which is an element of the Master Plan.*					
Stormwater Pollution Prevention Plan	Yes	State	Yes	Yes	-
Comment: • *The Phase II New Jersey Pollutant Discharge Elimination System Stormwater Regulation Program (NJPDES) rules (N.J.A.C. 7:14A) were published in the February 2, 2004, NJ Register. These NJPDES rules are intended to address and reduce pollutants associated with existing stormwater runoff. The NJPDES rules establish a regulatory program for existing stormwater discharges as required under the Federal Clean Water Act. These NJPDES rules govern the issuance of permits to entities that own or operate small municipal separate storm sewer systems, known as MS4s. Under this program, permits must be secured by municipalities, certain public complexes such as universities and hospitals, and State, interstate and federal agencies that operate or maintain highways. The permit program establishes the Statewide Basic Requirements that must be implemented to reduce nonpoint source pollutant loads from these sources. The Statewide Basic Requirements include measures such as: the adoption of ordinances (litter control, pet waste, wildlife feeding, proper waste disposal, etc.); the development of a municipal stormwater management plan and implementing ordinance(s); requiring certain maintenance activities (such as street sweeping and catch basin cleaning); implementing solids and floatables control; locating discharge points and stenciling catch basins; and a public education component.*					
Urban Water Management Plan	No	-	No	-	-
Comment:					
Habitat Conservation Plan	No	-	No	-	-

	Do you have this? (Yes/No)	Authority that enforces (Federal, State, Regional, County, Local)	Is this State Mandated?	Have aspects of the HMP been integrated into your codes/ordinances/plans?	
				If yes- how? Describe in comments.	If no - add Mitigation Action #, if applicable.
Comment:					
Economic Development Plan	No	-	No	-	-
Comment:					
Shoreline Management Plan	No	-	Yes – if located in a coastal zone	-	-
Comment: • *NJ Coastal Area Facility Review Act (N.J.S.A. 13:19) or CAFRA regulates almost all development along the coast for activities including construction, relocation, and enlargement of buildings or structures, and excavation, grading, shore protection structures, and site preparation. This law is implemented through NJ's Coastal Zone management Rules N.J.A.C. 7:7E-1 et seq.* • *Sparta Township is not located in a coastal area.*					
Community Wildfire Protection Plan	No	-	No	-	-
Comment:					
Community Forest Management Plan	No	-	No	-	-
Comment:					
Transportation Plan	Yes	Local	No	No	-
Comment: *The Planning Department is responsible for this plan, which is an element of the Master Plan.*					
Agriculture Plan	No	-	No	-	-
Comment:					
Climate Action Plan	No	-	No	-	-
Comment:					
Tourism Plan	No	-	No	-	-
Comment:					
Business Development Plan	No	-	No	-	-
Comment:					
Other: Open Space Plan	Yes	Local	No	No	-
Comment: • *The Planning Department is responsible for this plan, which is an element of the Master Plan.*					
Other: Watershed Management or Protection Plan	Yes	Local	No	No	-
Comment: *The Planning Department is responsible for this plan, which is an element of the Master Plan.*					
Response/Recovery Planning					
Comprehensive Emergency Management Plan (CEMP) / Emergency Operations Plan (EOP)	Yes	Local	Yes	Yes	-
Comment: • *Each county and municipality in the State shall prepare a written Emergency Operations Plan with all appropriate annexes necessary to implement the plan. Each Emergency Operations Plan shall be adopted no later than one year after the State Emergency Planning Guidelines have been adopted by the State Office of Emergency Management and shall be evaluated at such subsequent scheduled review of the State Emergency Operations Plan. L.1989, c.222, s.19.* • *The Police Department is responsible for this plan in compliance with the Office of Emergency Management.*					
Threat & Hazard Identification & Risk Assessment (THIRA)	No	-	No	-	-
Comment:					
Post-Disaster Recovery Plan	No	-	No	-	-
Comment:					
Continuity of Operations Plan	No	-	No	-	-

	Do you have this? (Yes/No)	Authority that enforces (Federal, State, Regional, County, Local)	Is this State Mandated?	Have aspects of the HMP been integrated into your codes/ordinances/plans?	
				If yes- how? Describe in comments.	If no - add Mitigation Action #, if applicable.
Comment:					
Public Health Plan	No	-	No	-	-
Comment:					
Other	No	-	No	-	-
Comment:					

Table 9.19-4. Development and Permitting Capability

Criterion	Response
Does your jurisdiction issue development permits? - If no, who does? If yes, which department?	Yes; Planning/Zoning Department
Does your jurisdiction have the ability to track permits by hazard area?	No
Does your jurisdiction have a buildable lands inventory? -If yes, please describe briefly. -If no, please quantitatively describe the level of buildout in the jurisdiction.	No

Administrative and Technical Capability

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

Table 9.19-5. Administrative and Technical Capabilities

Staff/Personnel Resource	Available?	Department/Agency/Position
Administrative Capability		
Planning Board	Yes	Planning/Zoning Department
Mitigation Planning Committee	Yes	Public Safety Committee, STEP, CERT
Environmental Board / Commission	Yes	Environmental Commission
Open Space Board / Committee	No	Community Development
Economic Development Commission / Committee	Yes	Community Development
Warning Systems / Services (reverse 911, outdoor warning signals)	Yes	Department of Public Works & Sparta Police Department
Maintenance program to reduce risk	No	Department of Public Works
Mutual aid agreements	Yes	Sparta Police Department, Fire Department and Surrounding Towns
Technical/Staffing Capability		
Planners or engineers with knowledge of land development and land management practices	Yes	Town Engineer
Engineers or professionals trained in building or infrastructure construction practices	Yes	Town Engineer
Planners or engineers with an understanding of natural hazards	Yes	Town Engineer
Staff with training in benefit/cost analysis	Yes	Town Engineer
Staff with training in green infrastructure	Yes	Town Engineer
Staff with education/knowledge/training in low impact development	Yes	Town Engineer
Surveyor	No	-

Staff/Personnel Resource	Available?	Department/Agency/Position
Stormwater engineer	Yes	Town Engineer
Personnel skilled or trained in GIS applications	Yes	Town Engineer
Local or state water quality professional	Yes	Town Engineer
Scientist familiar with natural hazards in local area	No	-
Emergency manager	Yes	Police Chief
Watershed planner	Yes	Town Engineer
Environmental specialist	Yes	Town Engineer
Grant writers	Yes	Consultant
Resilience Officer	No	-
Other: NFIP Floodplain Administrator	Yes	Construction Official

Fiscal Capability

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

Table 9.19-6. Fiscal Capabilities

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

Education and Outreach Capability

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

Table 9.19-7. Education and Outreach Capabilities

Criterion	Response
Do you have a public information officer or communications office?	Yes
Do you have personnel skilled or trained in website development?	Yes
Do you have hazard mitigation information available on your website? -If yes, briefly describe.	No
Do you use social media for hazard mitigation education and outreach? -If yes, briefly describe.	No
Do you have any citizen boards or commissions that address issues related to hazard mitigation? -If yes, briefly describe.	Environmental Commission

Criterion	Response
Do you have any other programs already in place that could be used to communicate hazard-related information? If yes, briefly describe.	Reverse 911, Outdoor warning signals, Township website/social media

Community Classifications

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

Table 9.19-8. Community Classifications

Program	Participating?	Classification	Date Classified
Community Rating System	No	-	-
Building Code Effectiveness Grading Schedule (BCEGS)	Yes	Class 3	2014
Public Protection (Fire ISO Protection Class)	No	-	-
Storm Ready Certification	No	-	-
Firewise Community Classification	No	-	-
Sustainable Jersey	Yes	Bronze	2009

Adaptive Capacity

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

Table 9.19-9. Adaptive Capacity

Hazard	Adaptive Capacity (Capabilities) - Strong/Moderate/Weak
Dam Failure	Moderate
Disease Outbreak	Moderate
Drought	Moderate
Earthquake	Moderate
Flood	Moderate
Geologic	Moderate
Hazardous Materials	Moderate
Hurricane and Tropical Storm	Moderate
Invasive Species	Moderate
Nor'Easter	Moderate
Severe Weather	Moderate
Severe Winter Weather	Strong
Wildfire	Moderate

Notes:
Strong = Capacity exists and is in use; Moderate = Capacity may exist, but is not used or could use some improvement;
Weak = Capacity does not exist or could use substantial improvement; Unsure = Not enough information is known to assign a rating.

The Township does not have access to resources to determine the possible impacts of climate change upon the municipality and is not currently supportive of integrating climate change in policies or actions.

National Flood Insurance Program

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

Table 9.19-10. National Flood Insurance Program Compliance

Criterion	Response
What local department is responsible for floodplain management?	Construction Department
Who is your floodplain administrator? (name, department/position)	Domenick Carnevale, Construction Official
Are any certified floodplain managers on staff in your jurisdiction?	No
What is the date that your flood damage prevention ordinance was last amended?	2011
Does your floodplain management program meet or exceed minimum requirements? -If exceeds, in what ways?	The program meets minimum requirements, but the Township is unsure if the program exceeds requirements.
When was the most recent Community Assistance Visit or Community Assistance Contact?	January 11, 1994
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? -If so, state what they are.	No
Are any RiskMAP projects currently underway in your jurisdiction? If so, state what they are.	RMP - Mainstem Delaware River - FY15 (CTP)
Do your flood hazard maps adequately address the flood risk within your jurisdiction? -If no, state why.	Yes
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 like continuing education and/or certification training on floodplain management.
Does your jurisdiction participate in the Community Rating System (CRS)? -If yes, is your jurisdiction interested in improving its CRS Classification? -If no, is your jurisdiction interested in joining the CRS program?	No, and the Township is not interested in participating.
How many flood insurance policies are in force in your jurisdiction? * -What is the insurance in force? -What is the premium in force?	46 policies $12,578,000 insurance in force $33,046 premium in force
How many total loss claims have been filed in your jurisdiction? * -How many claims are still open or were closed without payment? -What were the total payments for losses?	14 claims $32,999 in payments
Do you maintain a list of properties that have been damaged by flooding?	No
Do you maintain a list of property owners interested in flood mitigation?	No

**According to FEMA statistics as of October 13, 2020*
Source: FEMA 2020

9.19.5 Hazard Event History Specific to the Jurisdiction

Sussex County has a history of hazard events, as detailed in Section 4 (Risk Assessment) of this plan. A summary of historical events is provided in each of the hazard profiles in Section 4.3 (Hazards of Concern) and includes a chronology of events that affected Sussex County and its jurisdictions. The Township of Sparta's history of

federally-declared (as presented by FEMA) and significant hazard events (as presented in NOAA-NCEI) is consistent with that of Sussex County. Table 9.18-11 provides details regarding municipal-specific loss and damages the jurisdiction experienced during hazard events. Information provided in the table below is based on reference material or local sources.

Table 9.19-11. Hazard Event History

Date(s) of Event	Event Type (disaster declaration if applicable)	Sussex County Designated?	Summary of Event	Summary of Local Damages and Losses
January 22, 2016 - January 24, 2016	DR-4264: Severe Winter Storm and Snowstorm	Yes	A major nor'easter, produced record snowfall and blizzard conditions in parts of New Jersey on January 23rd and 24th.	Closed roadways; Overtime pay to clear roads
January 20, 2020 and continuing	EM-3451, DR-4488: COVID-19 Pandemic	Yes	The coronavirus pandemic resulted in the need for shutdowns and social distancing and mask requirements.	The Township enforced social distancing and masking mandates and was impacted by various closures due to the coronavirus pandemic.
July 28, 2020 - August 5, 2020	Tropical Storm Isaias	TBD	A tropical storm produced strong winds and heavy rainfall resulting in power outages throughout New Jersey on August 4th	Power outages; Fallen trees and tree branches; Closed roadways

Source: FEMA 2020, NOAA NCEI 2020

9.19.6 Jurisdiction-Specific Vulnerabilities and Hazard Ranking

The hazard profiles in Section 4 (Risk Assessment) provide detailed information regarding each plan participant's vulnerability to the identified hazards. Refer to Section 4.2 (Methodology and Tools) and Section 4.4 (Hazard Ranking) for a detailed summary for the Township of Sparta risk assessment results and data used to determine the hazard ranking discussed later in this section.

Hazard Area Extent and Location

Hazard area extent and location maps were generated for the Township of Sparta that illustrate the probable areas impacted within the municipality. These maps are based on the best available data at the time of the preparation of this plan and are adequate for planning purposes. Maps have been generated only for those hazards that can be clearly identified using mapping techniques and technologies and for which the Township of Sparta has significant exposure.

Repetitive Flood Losses

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

- Number of repetitive loss (RL) properties: 0
- Number of severe repetitive loss (SRL) properties: 0
- Number of RL/SRL properties that have been mitigated: 0

Source: FEMA 2019
Note: The number of SRL properties excludes RL properties.

Critical Facilities and Lifelines

The table below identifies critical facilities and lifelines in the community located in the 1-percent and 0.2-percent floodplain.

Table 9.19-12. Critical Facilities and Lifelines Flood Exposure

Name	Type	Exposure	
		1% Event	0.2% Event
22-16 Lake Grinnell Dam	Dam	X	X
22-63 Lake Mohawk Dam	Dam	X	X
22-106 Ackerson Mill Dam	Dam	X	X
22-108 Flag Pond Dam	Dam	X	X
22-109 Mud Pond Dam	Dam	X	X
22-136 Foulds Pond Dam	Dam	X	X
22-183 Seneca Lake Dam	Dam	X	X
Sparta Junction	Hazardous Material Facility	X	X

Source: Sussex County Planning Partnership 2020
*Note: *Identified lifeline*

Sparta Township's dams are privately owned.

Identified Issues and Problem Areas

The jurisdiction has identified the following vulnerabilities within their community:

- There are many lakes, ponds, rivers, streams, and tributaries throughout the Township that are adjacent to developed lots, including Township facilities such as Town Hall and the Township Library. Infrastructure in the Township should be hardened against flooding events to protect continuity of operations.
- Groundwater in the Germany Flats area of Township requires protection from potential contamination.
- The shelter located within the Sparta Ambulance Service building on Sparta Avenue lacks backup power
- The Township would like to use the DPW building located on Prices Lane as a safe room for tornadoes and hurricanes. The Township has already installed a backup generator to support the site.
- Windows of the Germany Flats pump facility are not impact resistant and pose a threat in the event of a high wind event.
- Glen Brook and Wallkill River are prone to erosion of streambanks, threatening homes, roadways, and a JCP&L substation.
- The Township does not participate in the Firewise program. Despite low wildfire risk, the Township is interested in enrollment.
- West Mountain Road floods regularly between the High School football field and Main Street.
- The Township lacks a Disaster Debris Management Plan.

Hazard Ranking

This section summarizes the jurisdiction's primary hazards of concern based on identified problems, impacts and the results of the risk assessment as presented in Section 4 (Risk Assessment). The ranking process involves an assessment of the likelihood of occurrence for each hazard; its potential impacts on people, property, and the economy; community capability and changing future climate conditions. This input supports the development of mitigation actions, targeting those hazards with the highest level of concern.

As discussed in Section 4.4 (Hazard Ranking), each plan participant may have differing degrees of risk exposure and vulnerability compared to Sussex County as a whole. Therefore, the Township of Sparta ranked each hazard's degree of risk as it pertains to their community factoring in their capabilities to withstand impacts and rebound after the event. The table below summarizes the hazard rankings of potential hazards for the Township of Sparta. The Township of Sparta has reviewed the Sussex County hazard ranking table and has provided input to its individual results to reflect the relative risk of the hazards of concern to the community. During the review of the hazard ranking, the Township of Sparta agreed with the calculated hazard rankings.

Table 9.19-13. Township of Sparta Hazard Ranking

Dam Failure	Disease Outbreak	Drought	Earthquake	Flood	Geologic
Medium	Medium	Medium	Low	Medium	Medium

Hazardous Materials	Hurricane and Tropical Storm	Invasive Species	Nor'Easter	Severe Weather	Severe Winter Weather	Wildfire
Medium	High	Medium	High	High	High	Low

9.19.7 Mitigation Strategy and Prioritization

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

Past Mitigation Initiative Status

The following table summarizes the jurisdiction's progress on their mitigation strategy identified in the 2016 HMP. Actions that are carried forward as part of this plan update are included in Table 9.18-15 and Table 9.18-16 with prioritization. Previous actions that are now on-going programs and capabilities are indicated as such in the following table and can also be found under 'Capability Assessment' presented previously in this annex.

Table 9.19-14. Status of Previous HMP Mitigation Actions

2016 Action Number	Action Description	Responsible Party	Status (In Progress, No Progress, Ongoing Capability, or Completed)	Include in the 2021 HMP Update? Check if Yes	Include in the 2021 HMP Update? Enter 2021 HMP Action #
Sparta-1 (revised old #1)	Ensure continuity of operations at critical facilities. At this time the following was identified: Emergency generator for shelter located within Sparta Ambulance Service building located on Sparta Avenue	Emergency Management	In Progress	X	2021-Sparta-003
Sparta-2 (old #2)	Harden Sparta DPW building located on Prices Lane to FEMA 361 Standards	Emergency Management	In Progress	X	2021-Sparta-004
Sparta-3 (old #3)	Retrofit impact resistant windows and shutters on Germany Flats Pump Facility located on Park Lake Drive.	Emergency Management	In Progress	X	2021-Sparta-005

2016 Action Number Action Description		Responsible Party	Status (In Progress, No Progress, Ongoing Capability, or Completed)	Include in the 2021 HMP Update?	
				Check if Yes	Enter 2021 HMP Action #
Sparta-4 (old #4)	Stream bank stabilization along Sparta Glen Brook (3500 feet)	Emergency Management	No Progress	X	2021-Sparta-006
Sparta-5 (old #5)	Stream bank stabilization along Wallkill River at Station Park (1500 feet)	Township Engineer	No Progress	X	2021-Sparta-006
Sparta-6 (old #7)	Implement Fire Wise Program throughout the Township.	Fire Department	No Progress	X	2021-Sparta-007
Sparta-7 (revised old #11)	Conduct all-hazards public education and outreach program for hazard mitigation and preparedness. Enhance STEP and CERT programs.	Emergency Management	Ongoing Capability		
Sparta-8 (new)	Replace Culvert at West Mountain Road	Township Engineer	In Progress	X	2021-Sparta-008
Sparta-9 (new)	Lake Grinell Dam/ Spillway Reconstruction	Township Engineer	No Progress; not Township owned		

In addition to the above progress, the Township of Sparta identified the following mitigation projects/activities that were completed but not identified in the 2016 HMP mitigation strategy:

- The Township installed emergency generators for the building and fuel island at the DPW facility located on Prices Lane.

Proposed Hazard Mitigation Initiatives for the Plan Update

The Township of Sparta participated in a risk assessment workshop in October 2020 in which detailed information was provided about assets exposed and vulnerable to the identified hazards of concern. The Township of Sparta participated in a mitigation action workshop in November 2020 and was provided a Mitigation Toolbox that included a mitigation catalog developed specifically for Sussex County and its hazards of concerns; challenges and opportunities identified during the capability and risk assessments; mitigation funding sources, and the following FEMA publications to use as a resource as part of their comprehensive review of all possible activities and mitigation measures to address their hazards: FEMA 551 *Selecting Appropriate Mitigation Measures for Floodprone Structures* (March 2007) and FEMA *Mitigation Ideas – A Resource for Reducing Risk to Natural Hazards* (January 2013). Section 6 (Mitigation Strategy) and Appendix F (Mitigation Strategy Supplement) provide a more complete description of the Mitigation Toolbox and its resources.

Table 9.18-15 summarizes the comprehensive-range of specific mitigation initiatives the Township of Sparta would like to pursue in the future to reduce the effects of hazards. Initiatives are dependent upon available funding (grants and local match availability) and can be modified or omitted at any time based on the occurrence of new hazard events and changes in municipal priorities. Both the four FEMA mitigation action categories and the six CRS mitigation action categories are listed in the table below to further demonstrate the wide-range of activities and mitigation measures selected.

As discussed in Section 6 (Mitigation Strategy), 14 evaluation/prioritization criteria are used to complete the prioritization of mitigation initiatives. For each new mitigation action, a numeric rank is assigned (-1, 0, or 1)

for each of the 14 evaluation criteria to assist with prioritizing actions as *High*, *Medium*, or *Low*. The table below summarizes the evaluation of each mitigation initiative, listed by action number.

Table 9.18-16 provides a summary of the prioritization of all proposed mitigation initiatives for this HMP update.

Table 9.19-15. Proposed Hazard Mitigation Initiatives

Initiative Number	Mitigation Initiative Name	Description of the Problem and Solution	New or Existing Assets?	Hazard(s) to be Mitigated	Goals Met	Lead and Support Agencies	Potential Funding Sources	Estimated Benefits	Estimated Cost	Timeline	Priority	Mitigation Category	CRS Category
2021-Sparta-001	Flood Damage Prevention/ Mitigation	**Problem**: There are many lakes, ponds, rivers, streams, and tributaries throughout the Township that are adjacent to developed lots, including Township facilities such as Town Hall and the Township Library. Infrastructure in the Township should be hardened against flooding events to protect continuity of operations. **Solution:** The Township will undertake a feasibility assessment to determine what must be done to harden infrastructure against flooding and construct the cost-effective projects identified to prevent/mitigate flooding damage.	Existing	Flood	2, 6	Engineering, OEM	FEMA HMGP and PDM, BRIC, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Township Budget	Protection of infrastructure from flood damages	High	Within 5 years	High	SIP	PR, PP
2021-Sparta-002	Groundwater Quality Protection	**Problem**: Groundwater in the Germany Flats area of Township requires protection from potential contamination. **Solution:** Engineering/utilities will research potential equipment/technologies that could be put in place to protect groundwater. If viable, the Township will work to use these equipment/technologies in the Township's water supply system.	Existing	Hazardous Materials	1, 2, 6	Engineering, Utilities	BRIC, HMGP, Township budget	Protection of groundwater from contamination	High	Within 5 years	High	SIP, NSP	PR, NR
2021-Sparta-003	Backup Power for Sparta Ambulance Service	**Problem**: Backup power sources are necessary to maintain critical services for critical facilities. The shelter located within the Sparta Ambulance Service building on Sparta Avenue lacks backup power. **Solution:** The Engineer will research what size generator is needed to power the Sparta Ambulance Service building. The Township will then purchase and install the selected generator and necessary electrical components to supply backup power to the Sparta Ambulance Service building.	Existing	Hurricane, Nor'Easter, Severe Weather, Severe Winter Weather	1, 2, 6	Engineer, OEM	FEMA HMGP and BRIC, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program,	Ensures continuity of operations of Sparta Ambulance Service building	$50,000	Within 5 years	High	SIP	ES

Initiative Number	Mitigation Initiative Name	Description of the Problem and Solution	New or Existing Assets?	Hazard(s) to be Mitigated	Goals Met	Lead and Support Agencies	Potential Funding Sources	Estimated Benefits	Estimated Cost	Timeline	Priority	Mitigation Category	CRS Category
							Municipal Budget						
2021-Sparta-004	Harden DPW Building	**Problem**: The Township would like to use the DPW building located on Prices Lane as a safe room for tornadoes and hurricanes. The Township has already installed a backup generator to support the site. **Solution:** The Township will work to harden the DPW building using FEMA 361 standards.	Existing	Hurricane, Severe Weather	1, 2, 6	Public Works, Engineer, OEM	HMGP, BRIC, USDA Community Facilities Grant Program, Township budget	Safe Room established	Medium	3 years	High	SIP	PP, ES
2021-Sparta-005	Harden Germany Flats Pump Facility	**Problem**: Windows of the Germany Flats pump facility are not impact resistant and pose a threat in the event of a high wind event. **Solution:** The Township will retrofit impact resistant windows and shutters on Germany Flats Pump Facility located on Park Lake Drive.	Existing	Hurricane, Nor'Easter, Severe Weather, Severe Winter Weather	2, 6	OEM, Public Works	HMGP, BRIC, USDA Community Facilities Grant Program, Township budget	Protection of critical facilities	Medium	Within 5 years	Medium	SIP	PP
2021-Sparta-006	Streambank Stabilization	**Problem**: Glen Brook and Wallkill River are prone to erosion of streambanks, threatening homes, roadways, and a JCP&L substation. **Solution:** The Township will determine the proper stream stabilization techniques for a 3,500 feet section of Glen Brook and a 1,500 section of the Walkill River at Station Park. Once the techniques are established, the Township will implement stream stabilization and continue to monitor the locations to measure success and needs for additional measures.	N/A	Flood, Hurricane, Nor'Easter, Severe Weather	2	Engineer	HMGP, BRIC, Township budget	Protect from home damage, road damage, JCP&L substation damage	Medium for Glen Brook, $1M for Wallkill River	Within 5 years	High	NSP	NR
2021-Sparta-007	Firewise	**Problem**: The Township does not participate in the Firewise program. Despite low wildfire risk, the Township is interested in enrollment. **Solution:** The Township will enroll in the Firewise program.	New and Existing	Wildfire	1, 2, 3, 4, 5	OEM	Township budget	Increased wildfire mitigation and preparedness	Staff time	Within 5 years	High	LPR, EAP	PR, ES, PI

Initiative Number	Mitigation Initiative Name	Description of the Problem and Solution	New or Existing Assets?	Hazard(s) to be Mitigated	Goals Met	Lead and Support Agencies	Potential Funding Sources	Estimated Benefits	Estimated Cost	Timeline	Priority	Mitigation Category	CRS Category
2021-Sparta-008	Culvert at West Mountain Road	**Problem**: West Mountain Road floods regularly between the High School football field and Main Street. **Solution:** The Township will replace the culvert at West Mountain Road and elevate the roadway to allow for larger storm events.	Existing	Severe Weather	2	Engineer	HMGP, BRIC, municipal budget	Alleviate flooding of properties and roadway in the area, including Sparta High School.	$600,000	Within 5 years	High	SIP	SP
2021-Sparta-009	Disaster Debris Management Plan	**Problem**: The Township lacks a Disaster Debris Management Plan. **Solution:** The Township will develop and adopt a Disaster Debris Management Plan.	Existing	All Hazards	3, 6	DPW, OEM	Township budget	Increased disaster response planning	Staff time	1 year	High	LPR	ES

Notes:

Acronyms and Abbreviations:

CAV	*Community Assistance Visit*
CRS	*Community Rating System*
DPW	*Department of Public Works*
FEMA	*Federal Emergency Management Agency*
FPA	*Floodplain Administrator*
HMA	*Hazard Mitigation Assistance*
N/A	*Not applicable*
NFIP	*National Flood Insurance Program*
OEM	*Office of Emergency Management*

Potential FEMA HMA Funding Sources:

FMA	*Flood Mitigation Assistance Grant Program*
HMGP	*Hazard Mitigation Grant Program*
BRIC	*Building Resilient Infrastructure and Communities Program*

Timeline:
The time required for completion of the project upon implementation

Cost:
The estimated cost for implementation.

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

Mitigation Category:

- *Local Plans and Regulations (LPR) – These actions include government authorities, policies or codes that influence the way land and buildings are being developed and built.*
- *Structure and Infrastructure Project (SIP) - These actions involve modifying existing structures and infrastructure to protect them from a hazard or remove them from a hazard area. This could apply to public or private structures as well as critical facilities and infrastructure. This type of action also involves projects to construct manmade structures to reduce the impact of hazards.*
- *Natural Systems Protection (NSP) – These are actions that minimize damage and losses and preserve or restore the functions of natural systems.*

- *Education and Awareness Programs (EAP) – These are actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them. These actions may also include participation in national programs, such as StormReady and Firewise Communities.*

CRS Category:

- *Preventative Measures (PR) - Government, administrative or regulatory actions, or processes that influence the way land and buildings are developed and built. Examples include planning and zoning, floodplain local laws, capital improvement programs, open space preservation, and storm water management regulations.*
- *Property Protection (PP) - These actions include public activities to reduce hazard losses or actions that involve (1) modification of existing buildings or structures to protect them from a hazard or (2) removal of the structures from the hazard area. Examples include acquisition, elevation, relocation, structural retrofits, storm shutters, and shatter-resistant glass.*
- *Public Information (PI) - Actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them. Actions include outreach projects, real estate disclosure, hazard information centers, and educational programs for school-age children and adults.*
- *Natural Resource Protection (NR) - Actions that minimize hazard loss and preserve or restore the functions of natural systems. Actions include sediment and erosion control, stream corridor restoration, watershed management, forest and vegetation management, and wetland restoration and preservation.*
- *Structural Flood Control Projects (SP) - Actions that involve the construction of structures to reduce the impact of a hazard. Structures include dams, setback levees, floodwalls, retaining walls, and safe rooms.*
- *Emergency Services (ES) - Actions that protect people and property during and immediately following a disaster or hazard event. Services include warning systems, emergency response services, and the protection of essential facilities.*

Table 9.19-16. Summary of Evaluation and Action Priorities

Initiative Number	Mitigation Initiative Name	Life Safety	Property Protection	Cost Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community	Total	High / Medium / Low
2021-Sparta-001	Flood Damage Prevention/ Mitigation	1	1	1	1	1	1	0	1	1	1	0	0	1	1	11	High ⚠
2021-Sparta-002	Groundwater Quality Protection	1	0	0	1	1	1	0	1	1	1	0	0	1	1	9	High
2021-Sparta-003	Backup Power for Sparta Ambulance Service	1	1	1	1	1	1	0	1	1	1	1	0	1	1	12	High
2021-Sparta-004	Harden DPW Building	1	1	1	1	1	1	0	1	1	1	1	0	1	1	12	High
2021-Sparta-005	Harden Germany Flats Pump Facility	1	1	1	1	1	1	0	1	1	1	1	0	1	1	12	High
2021-Sparta-006	Streambank Stabilization	0	1	1	1	1	0	0	1	1	1	1	0	1	1	10	High
2021-Sparta-007	Firewise	1	1	1	1	1	1	1	1	1	1	0	0	1	1	12	High
2021-Sparta-008	Culvert at West Mountain Road	1	1	0	1	1	1	0	1	0	0	1	0	1	1	9	High
2021-Sparta-009	Disaster Debris Management Plan	0	1	1	1	1	1	1	1	1	1	1	1	1	1	13	High

Notes: Section 6 (Mitigation Strategy) conveys guidance on prioritizing mitigation actions.
Low (0-4), Medium (5-8), High (9-14).

⚠ *This action has been identified as being of highest importance to the municipality and an action that the municipality would like to complete as soon as funding is received.*

Table 9.19-17. Analysis of Mitigation Actions by Hazard and Category

Hazard	Prevention	Property Protection	Public Education and Awareness	Natural Resource Protection	Emergency Services	Structural Projects	Climate Resilient	Community Capacity Building
Dam Failure					X			
Disease Outbreak					X			
Drought					X			
Earthquake					X			
Flood	X	X		X	X	X		
Geologic					X			
Hazardous Materials		X		X	X			
Hurricane and Tropical Storm		X		X	X			
Invasive Species					X			
Nor'Easter		X		X	X			
Severe Weather		X		X	X			
Severe Winter Weather		X			X			
Wildfire	X		X		X			

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

high ranked hazard

ORANGE medium ranked hazard

YELLOW low ranked hazard

Figure 9.19-1. Township of Sparta Hazard Area Extent and Location Map 1

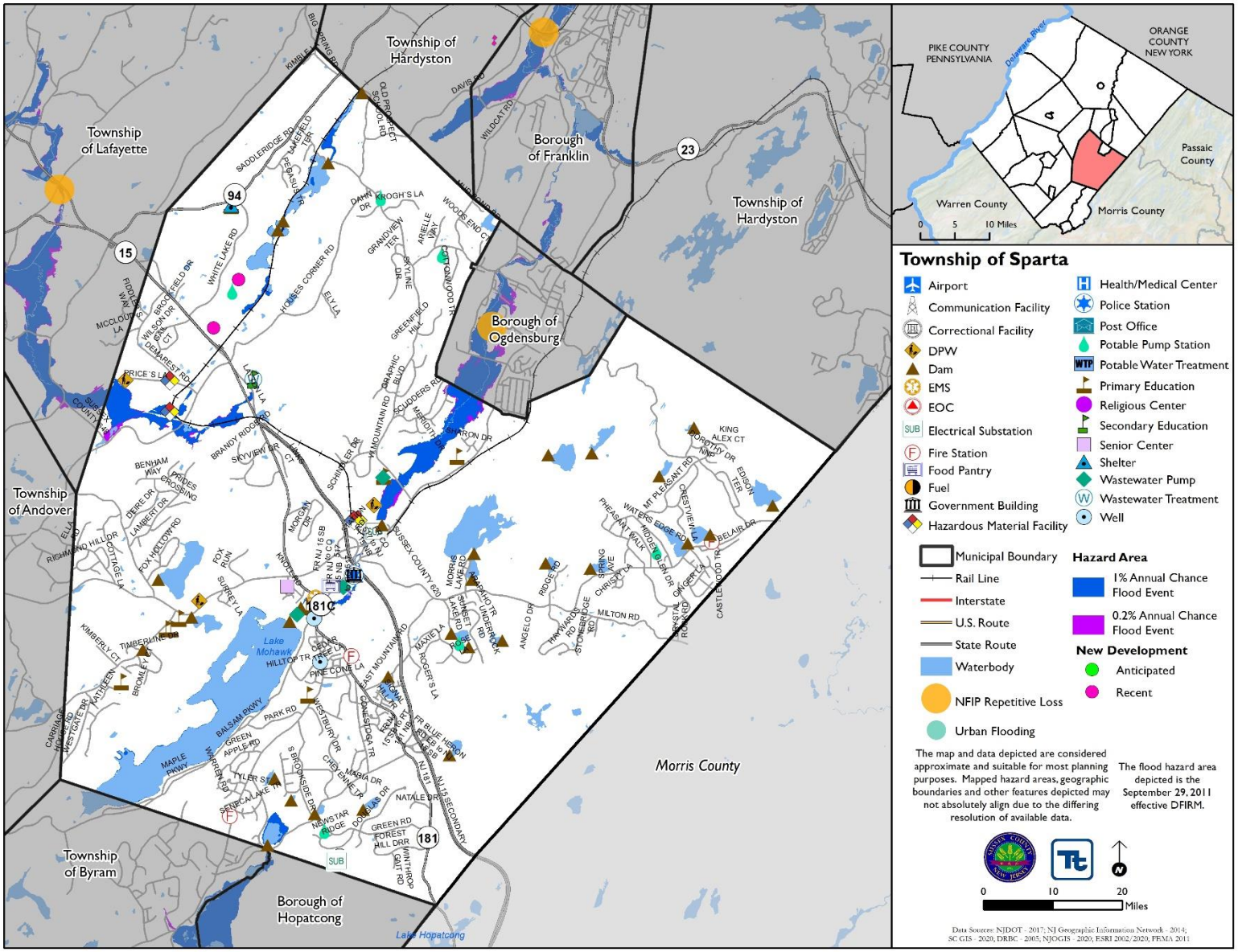


Figure 9.19-2. Township of Sparta Hazard Area Extent and Location Map 2

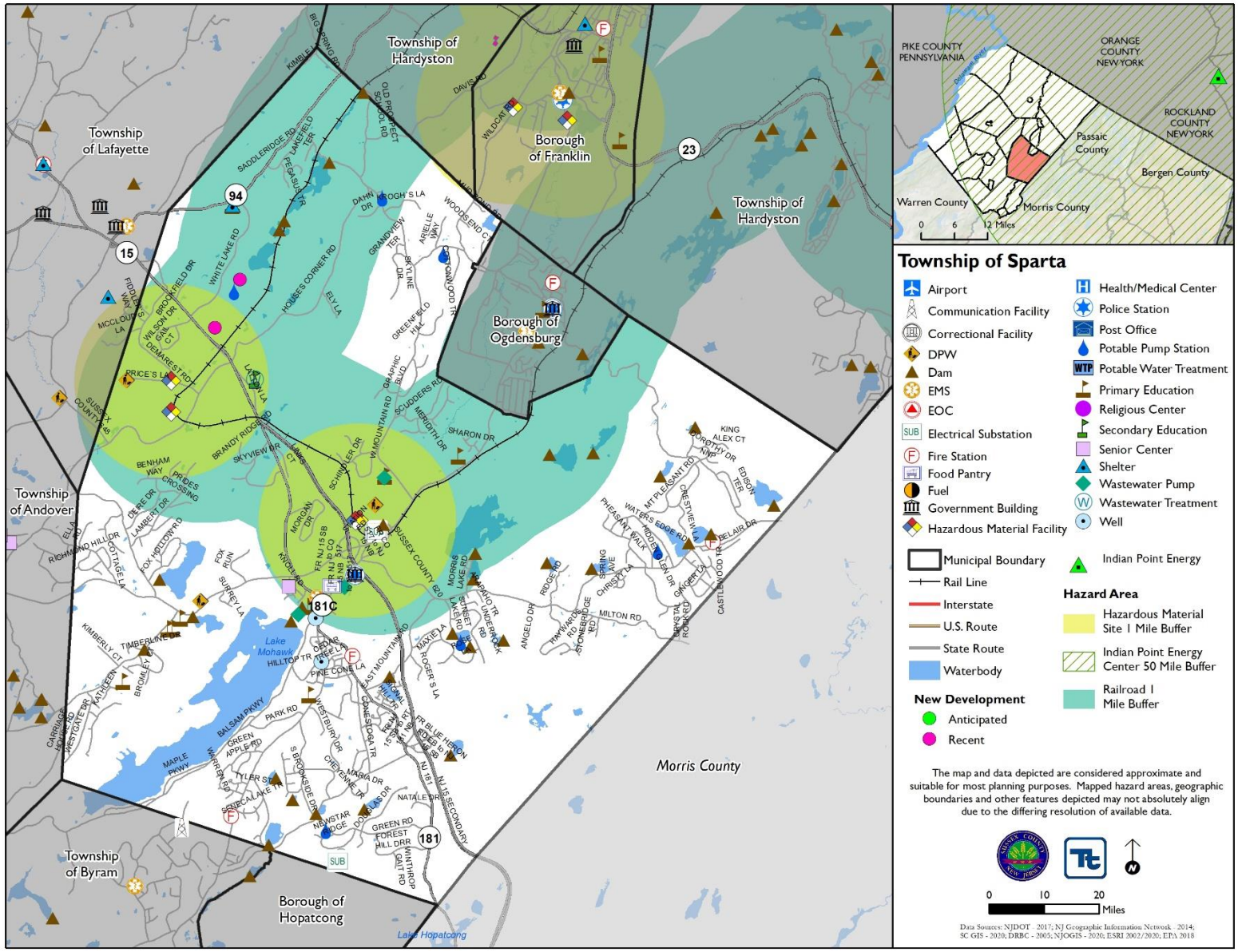
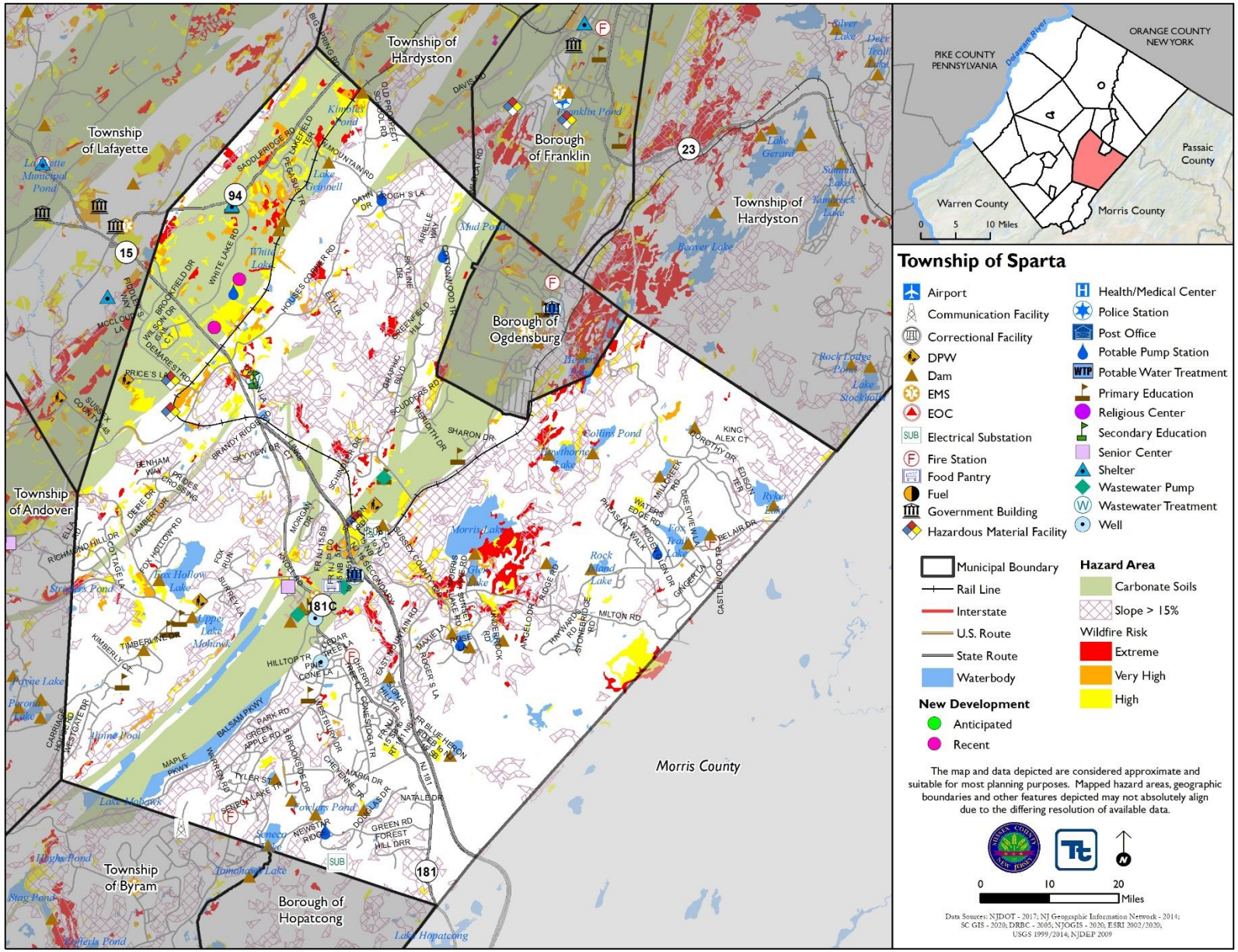


Figure 9.19-3 Township of Sparta Hazard Area Extent and Location Map 3



Action Worksheet			
Project Name:	Flood Damage Prevention/Mitigation		
Project Number:	2021-Sparta-001		
Risk / Vulnerability			
Hazard(s) of Concern:	Flood		
Description of the Problem:	There are many lakes, ponds, rivers, streams, and tributaries throughout the Township that are adjacent to developed lots, including Township facilities such as Town Hall and the Township Library. Infrastructure in the Township should be hardened against flooding events to protect continuity of operations.		
Action or Project Intended for Implementation			
Description of the Solution:	The Township will undertake a feasibility assessment to determine what must be done to harden infrastructure against flooding and construct the cost-effective projects identified to prevent/mitigate flooding damage.		
Is this project related to a Critical Facility?	Yes ☐	No ☒	
Level of Protection:	500-year flood level	**Estimated Benefits (losses avoided):**	Protects infrastructure from flood damages
Useful Life:	TBD by feasibility assessment	**Goals Met:**	2, 6
Estimated Cost:	TBD by feasibility assessment	**Mitigation Action Type:**	Structure and Infrastructure Projects (SIP)
Plan for Implementation			
Prioritization:	High	**Desired Timeframe for Implementation:**	Within 5 years
Estimated Time Required for Project Implementation:	1 year	**Potential Funding Sources:**	FEMA HMGP and PDM, BRIC, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Township Budget
Responsible Organization:	Engineer, OEM	**Local Planning Mechanisms to be Used in Implementation if any:**	Hazard Mitigation, Emergency Management

Three Alternatives Considered (including No Action)			
Alternatives:	**Action**	**Estimated Cost**	**Evaluation**
	No Action	$0	Problem continues.
	Rebuild all infrastructure to higher standards	High	Costly, not necessary
	Set standards for new/replacement infrastructure	Low	Does not protect current infrastructure and replacement process will be slow

Progress Report (for plan maintenance)	
Date of Status Report:	
Report of Progress:	
Update Evaluation of the Problem and/or Solution:	

Action Worksheet		
Project Name:	Flood Damage Prevention/Mitigation	
Project Number:	2021-Sparta-001	
Criteria	**Numeric Rank (-1, 0, 1)**	**Provide brief rationale for numeric rank when appropriate**
Life Safety	1	Project will protect critical services of infrastructure
Property Protection	1	Project will protect critical infrastructure from flood damage.
Cost-Effectiveness	1	
Technical	1	
Political	1	
Legal	1	The Township has the legal authority to complete the project.
Fiscal	0	Project requires funding support.
Environmental	1	
Social	1	
Administrative	1	
Multi-Hazard	0	Flood
Timeline	0	Within 5 years
Agency Champion	1	Engineer, OEM
Other Community Objectives	1	Protection of critical infrastructure
Total	11	
Priority (High/Med/Low)	High	

Action Worksheet			
Project Name:	Groundwater Quality Protection		
Project Number:	2021-Sparta-002		
Risk / Vulnerability			
Hazard(s) of Concern:	Hazardous Materials		
Description of the Problem:	Groundwater in the Germany Flats area of Township requires protection from potential contamination.		
Action or Project Intended for Implementation			
Description of the Solution:	Engineering/utilities will research potential equipment/technologies that could be put in place to protect groundwater. If viable, the Township will work to use these equipment/technologies in the Township's water supply system.		
Is this project related to a Critical Facility?	Yes ☐	No ☒	
Level of Protection:	TBD by engineering study	**Estimated Benefits (losses avoided):**	Protection of groundwater from contamination
Useful Life:	20 years	**Goals Met:**	1, 2, 6
Estimated Cost:	High	**Mitigation Action Type:**	Structure and Infrastructure Project, Natural Systems Protection
Plan for Implementation			
Prioritization:	High	**Desired Timeframe for Implementation:**	Within 5 years
Estimated Time Required for Project Implementation:	Within 5 years	**Potential Funding Sources:**	BRIC, HMGP, Township budget
Responsible Organization:	Engineering, Utilities	**Local Planning Mechanisms to be Used in Implementation if any:**	Capital improvements planning
Three Alternatives Considered (including No Action)			
Alternatives:	**Action**	**Estimated Cost**	**Evaluation**
	No Action	$0	Problem continues.
	Ban hazardous materials in Township	N/A	Not possible
	Develop contract with neighboring towns for water access in event of contamination	N/A	Neighboring town capacity would be unable to meet needs
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			

Action Worksheet		
Project Name:	Groundwater Quality Protection	
Project Number:	2021-Sparta-002	
Criteria	**Numeric Rank (-1, 0, 1)**	**Provide brief rationale for numeric rank when appropriate**
Life Safety	1	Protects water supply
Property Protection	0	
Cost-Effectiveness	0	
Technical	1	
Political	1	
Legal	1	The Township has the legal authority to complete the project
Fiscal	0	Project requires funding support
Environmental	1	
Social	1	
Administrative	1	
Multi-Hazard	0	Hazardous Materials
Timeline	0	Within 5 years
Agency Champion	1	Engineering, Utilities
Other Community Objectives	1	
Total	9	
Priority (High/Med/Low)	High	

Action Worksheet			
Project Name:	Backup Power for Sparta Ambulance Service		
Project Number:	2021-Sparta-003		
Risk / Vulnerability			
Hazard(s) of Concern:	Hurricane, Nor'Easter, Severe Weather, Severe Winter Weather		
Description of the Problem:	Backup power sources are necessary to maintain critical services for critical facilities. The shelter located within the Sparta Ambulance Service building on Sparta Avenue lacks backup power.		
Action or Project Intended for Implementation			
Description of the Solution:	The Engineer will research what size generator is needed to power the Sparta Ambulance Service building. The Township will then purchase and install the selected generator and necessary electrical components to supply backup power to the Sparta Ambulance Service building.		
Is this project related to a Critical Facility?	Yes ☒	No ☐	
Level of Protection:	N/A	**Estimated Benefits (losses avoided):**	Ensures continuity of operations of Sparta Ambulance Service building
Useful Life:	20 years	**Goals Met:**	1, 3
Estimated Cost:	$50,000	**Mitigation Action Type:**	Structure and Infrastructure Projects (SIP)
Plan for Implementation			
Prioritization:	High	**Desired Timeframe for Implementation:**	Within 5 years
Estimated Time Required for Project Implementation:	1 year	**Potential Funding Sources:**	FEMA HMGP and BRIC, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Municipal Budget
Responsible Organization:	Engineer, OEM	**Local Planning Mechanisms to be Used in Implementation if any:**	Hazard Mitigation, Emergency Management

Three Alternatives Considered (including No Action)			
Alternatives:	**Action**	**Estimated Cost**	**Evaluation**
	No Action	$0	Problem continues.
	Install solar panels	$100,000	Weather dependent; need large amount of space for installation; expensive if repairs needed
	Install wind turbine	$100,000	Weather dependent; poses a threat to wildlife; expensive repairs if needed

Progress Report (for plan maintenance)	
Date of Status Report:	
Report of Progress:	
Update Evaluation of the Problem and/or Solution:	

Action Worksheet		
Project Name:	Backup Power for Sparta Ambulance Service	
Project Number:	2021-Sparta-003	
Criteria	**Numeric Rank (-1, 0, 1)**	**Provide brief rationale for numeric rank when appropriate**
Life Safety	1	Project will protect critical services of Sparta Ambulance Service building
Property Protection	1	Project will protect building from power loss.
Cost-Effectiveness	1	
Technical	1	
Political	1	
Legal	1	The Township has the legal authority to complete the project.
Fiscal	0	Project requires funding support.
Environmental	1	
Social	1	
Administrative	1	
Multi-Hazard	1	Hurricane, Nor'Easter, Severe Weather, Severe Winter Weather
Timeline	0	Within 5 years
Agency Champion	1	Engineer, OEM
Other Community Objectives	1	
Total	12	
Priority (High/Med/Low)	High	

Action Worksheet			
Project Name:	Harden DPW Building		
Project Number:	2021-Sparta-004		
Risk / Vulnerability			
Hazard(s) of Concern:	Hurricane, Severe Weather		
Description of the Problem:	The Township would like to use the DPW building located on Prices Lane as a safe room for tornadoes and hurricanes. The Township has already installed a backup generator to support the site.		
Action or Project Intended for Implementation			
Description of the Solution:	The Township will work to harden the DPW building using FEMA 361 standards.		
Is this project related to a Critical Facility or Lifeline?	Yes ☒	No ☐	
Level of Protection:	FEMA 361 standards	**Estimated Benefits (losses avoided):**	Safe Room established
Useful Life:	25 years	**Goals Met:**	1, 2, 6
Estimated Cost:	High	**Mitigation Action Type:**	Structure and Infrastructure Project
Plan for Implementation			
Prioritization:	High	**Desired Timeframe for Implementation:**	3 years
Estimated Time Required for Project Implementation:	1 year	**Potential Funding Sources:**	HMGP, BRIC, USDA Community Facilities Grant Program, Township budget
Responsible Organization:	OEM, Public Works, Engineer	**Local Planning Mechanisms to be Used in Implementation if any:**	Hazard mitigation, Emergency management

Three Alternatives Considered (including No Action)			
Alternatives:	**Action**	**Estimated Cost**	**Evaluation**
	No Action	$0	Current problem continues
	Build new DPW Facility	High	Costly, unnecessary
	Build standalone Safe Room	High	Costly, unnecessary

Progress Report (for plan maintenance)	
Date of Status Report:	
Report of Progress:	
Update Evaluation of the Problem and/or Solution:	

Action Worksheet		
Project Name:	Harden DPW Building	
Project Number:	2021-Sparta-004	
Criteria	**Numeric Rank (-1, 0, 1)**	**Provide brief rationale for numeric rank when appropriate**
Life Safety	1	Creates safe room
Property Protection	1	Protects DPW from wind damages
Cost-Effectiveness	1	
Technical	1	The project is technically feasible
Political	1	
Legal	1	The Township has the legal authority to complete the project
Fiscal	0	The project requires funding support
Environmental	1	
Social	1	
Administrative	1	
Multi-Hazard	1	Hurricane, Severe Weather
Timeline	0	5 years
Agency Champion	1	OEM, Public Works, Engineer
Other Community Objectives	1	
Total	12	
Priority (High/Med/Low)	High	

Action Worksheet			
Project Name:	Harden Germany Flats Pump Facility		
Project Number:	2021-Sparta-005		
Risk / Vulnerability			
Hazard(s) of Concern:	Hurricane, Nor'Easter, Severe Weather, Severe Winter Weather		
Description of the Problem:	Windows of the Germany Flats pump facility are not impact resistant and pose a threat in the event of a high wind event.		
Action or Project Intended for Implementation			
Description of the Solution:	The Township will retrofit impact resistant windows and shutters on Germany Flats Pump Facility located on Park Lake Drive.		
Is this project related to a Critical Facility or Lifeline?	Yes ☒	No ☐	
Level of Protection:	500-year wind event	**Estimated Benefits (losses avoided):**	Reduction in risk of roof failure and protection of critical services
Useful Life:	25 years	**Goals Met:**	2, 6
Estimated Cost:	High	**Mitigation Action Type:**	Structure and Infrastructure Project
Plan for Implementation			
Prioritization:	High	**Desired Timeframe for Implementation:**	3 years
Estimated Time Required for Project Implementation:	1 year	**Potential Funding Sources:**	HMGP, BRIC, USDA Community Facilities Grant Program, Township budget
Responsible Organization:	OEM, Public Works	**Local Planning Mechanisms to be Used in Implementation if any:**	Hazard mitigation, Emergency management

Three Alternatives Considered (including No Action)			
Alternatives:	**Action**	**Estimated Cost**	**Evaluation**
	No Action	$0	Current problem continues
	Build new Pump Facility	High	Costly, unnecessary
	Build small pump station in case of failure	High	Costly, facility unlikely to be used

Progress Report (for plan maintenance)	
Date of Status Report:	
Report of Progress:	
Update Evaluation of the Problem and/or Solution:	

Action Worksheet		
Project Name:	Harden Germany Flats Pump Facility	
Project Number:	2021-Sparta-005	
Criteria	**Numeric Rank (-1, 0, 1)**	**Provide brief rationale for numeric rank when appropriate**
Life Safety	1	Protects critical services of Pump Facility
Property Protection	1	Protects Pump Facility from wind damages
Cost-Effectiveness	1	
Technical	1	The project is technically feasible
Political	1	
Legal	1	The Township has the legal authority to complete the project
Fiscal	0	The project requires funding support
Environmental	1	
Social	1	
Administrative	1	
Multi-Hazard	1	Hurricane, Nor'Easter, Severe Weather, Severe Winter Weather
Timeline	0	5 years
Agency Champion	1	OEM, Public Works
Other Community Objectives	1	
Total	12	
Priority (High/Med/Low)	High	

Action Worksheet			
Project Name:	Streambank Stabilization		
Project Number:	2020-Borough of Sussex-006		
Risk / Vulnerability			
Hazard(s) of Concern:	Flood, Landslide		
Description of the Problem:	Glen Brook and Wallkill River are prone to erosion of streambanks, threatening homes, roadways, and a JCP&L substation (located along the Wallkill River).		
Action or Project Intended for Implementation			
Description of the Solution:	The Township will determine the proper stream stabilization techniques for a 3,500 feet section of Glen Brook and a 1,500 section of the Walkill River at Station Park. Once the techniques are established, the Township will implement stream stabilization and continue to monitor the locations to measure success and needs for additional measures.		
Is this project related to a Critical Facility?	Yes ☐	No ☒	
Level of Protection:	N/A	**Estimated Benefits (losses avoided):**	Protect from home damage, road damage, JCP&L substation damage
Useful Life:	1 year	**Goals Met:**	1
Estimated Cost:	Medium for Glen Brook, $1M for Wallkill River	**Mitigation Action Type:**	Natural Systems Protection
Plan for Implementation			
Prioritization:	High	**Desired Timeframe for Implementation:**	Within 5 years
Estimated Time Required for Project Implementation:	1 year	**Potential Funding Sources:**	HMGP, BRIC, Township budget
Responsible Organization:	Administration	**Local Planning Mechanisms to be Used in Implementation if any:**	Hazard mitigation

Three Alternatives Considered (including No Action)			
Alternatives:	**Action**	**Estimated Cost**	**Evaluation**
	No Action	$0	Problem continues.
	Retreat from areas near Glen Brook and Wallkill River	High	Costly, unpopular
	Levees along Glen Brook and Wallkill River	High	Not feasible/environmentally damaging, costly

Progress Report (for plan maintenance)	
Date of Status Report:	
Report of Progress:	
Update Evaluation of the Problem and/or Solution:	

Action Worksheet		
Project Name:	Streambank Stabilization	
Project Number:	2021-Sparta-006	
Criteria	**Numeric Rank (-1, 0, 1)**	**Provide brief rationale for numeric rank when appropriate**
Life Safety	0	
Property Protection	1	Project will protect from home damage, road damage, JCP&L substation from potential flood damage
Cost-Effectiveness	1	
Technical	1	
Political	1	
Legal	0	Permitting likely required
Fiscal	0	Project requires funding support
Environmental	1	
Social	1	
Administrative	1	
Multi-Hazard	1	Flood, Hurricane, Nor'Easter, Severe Weather
Timeline	0	
Agency Champion	1	Administration
Other Community Objectives	1	Restore natural floodplain function
Total	10	
Priority (High/Med/Low)	High	

Action Worksheet			
Project Name:	Culvert at West Mountain Road		
Project Number:	2021-Sparta-008		
Risk / Vulnerability			
Hazard(s) of Concern:	Flood, Severe Weather		
Description of the Problem:	West Mountain Road floods regularly between the High School football field and Main Street.		
Action or Project Intended for Implementation			
Description of the Solution:	The Township will replace the culvert at West Mountain Road and elevate the roadway to allow for larger storm events to occur without risk for flooding.		
Is this project related to a Critical Facility or Lifeline?	Yes ☐	No ☒	
Level of Protection:	TBD by size selected	**Estimated Benefits (losses avoided):**	Reduction in flood risk
Useful Life:	30 years	**Goals Met:**	2
Estimated Cost:	$600,000	**Mitigation Action Type:**	Structure and Infrastructure Projects
Plan for Implementation			
Prioritization:	High	**Desired Timeframe for Implementation:**	Within 5 years
Estimated Time Required for Project Implementation:	6 months	**Potential Funding Sources:**	HMGP, BRIC, municipal budget
Responsible Organization:	Engineering	**Local Planning Mechanisms to be Used in Implementation if any:**	Hazard mitigation planning

Three Alternatives Considered (including No Action)			
Alternatives:	**Action**	**Estimated Cost**	**Evaluation**
	No Action	$0	Current problem continues
	Elevate roadway but no culvert replacement	$500,000	Culvert failure will eventually cause flooding problems
	Relocate roadway	N/A	Not possible

Progress Report (for plan maintenance)	
Date of Status Report:	
Report of Progress:	
Update Evaluation of the Problem and/or Solution:	

Action Worksheet		
Project Name:	Replace Culvert at West Mountain Road	
Project Number:	2021-Sparta-008	
Criteria	**Numeric Rank (-1, 0, 1)**	**Provide brief rationale for numeric rank when appropriate**
Life Safety	1	Protects life from flooding.
Property Protection	1	Protects culvert from flood damage
Cost-Effectiveness	0	
Technical	1	Technically feasible project
Political	1	
Legal	1	The Township has the legal authority to conduct the project.
Fiscal	0	Project will require grant funding.
Environmental	1	
Social	0	Project would reduce flooding impacts
Administrative	0	
Multi-Hazard	1	Flood, Severe Weather
Timeline	0	Within 5 years
Agency Champion	1	DPW
Other Community Objectives	1	
Total	9	
Priority (High/Med/Low)	High	