

# SUSSEX COUNTY MULTI-JURISDICTIONAL HAZARD MITIGATION ACTION PLAN 2021 UPDATE

## Volume II



*Prepared for:*

*Sussex County Sheriff's Office  
Division of Emergency Management  
Sheriff Michael Strada, Emergency Management Coordinator*



*Prepared by:  
Tetra Tech, Inc.  
6 Century Drive, Suite 300  
Parsippany, NJ 07054*



# SUSSEX COUNTY MULTI-JURISDICTIONAL HAZARD MITIGATION ACTION PLAN

## Volume II

MAY 2021

*Prepared for:*

Sussex County Division of Emergency Management



*Prepared by:*



**TETRA TECH**

complex world | CLEAR SOLUTIONS™

6 Century Drive, Suite 300

Parsippany, NJ 07054



# TABLE OF CONTENTS

## VOLUME I

**SECTION 1 INTRODUCTION .....1-1**

**SECTION 2 PLANNING PROCESS .....2-1**

**SECTION 3 COUNTY PROFILE .....3-1**

**SECTION 4 RISK ASSESSMENT .....4-1**

4.1 IDENTIFICATION OF HAZARDS OF CONCERN ..... 4.1-1

4.2 METHODOLOGY AND TOOLS ..... 4.2-1

4.3 HAZARDS OF CONCERN ..... 4.3-1

4.3.1 Dam Failure ..... 4.3.1-1

4.3.2 Disease Outbreak ..... 4.3.2-1

4.3.3 Drought ..... 4.3.3-1

4.3.4 Earthquake ..... 4.3.4-1

4.3.5 Flood ..... 4.3.5-1

4.3.6 Geological Hazards ..... 4.3.6-1

4.3.7 Hazardous Materials ..... 4.3.7-1

4.3.8 Hurricane ..... 4.3.8-1

4.3.9 Infestation and Invasive Species ..... 4.3.9-1

4.3.10 Nor'Easter ..... 4.3.10-1

4.3.11 Severe Weather ..... 4.3.11-1

4.3.12 Severe Winter Weather ..... 4.3.12-1

4.3.13 Wildfire ..... 4.3.13-1

4.4 HAZARD RANKING ..... 4.4-1

**SECTION 5 CAPABILITY ASSESSMENT .....5-1**

**SECTION 6 MITIGATION STRATEGY .....6-1**

**SECTION 7 PLAN MAINTENANCE PROCEDURES .....7-1**





**VOLUME II**

**SECTION 8 PLANNING PARTNERSHIP .....8-1**

**SECTION 9 JURISDICTIONAL ANNEXES.....9-1**

9.1 Sussex County.....9.1-1

9.2 Borough of Andover .....9.2-1

9.3 Township of Andover .....9.3-1

9.4 Borough of Branchville.....9.4-1

9.5 Township of Byram .....9.5-1

9.6 Township of Frankford .....9.6-1

9.7 Borough of Franklin.....9.7-1

9.8 Township of Fredon.....9.8-1

9.9 Township of Greene.....9.9-1

9.10 Borough of Hamburg .....9.10-1

9.11 Township of Hampton .....9.11-1

9.12 Township of Hardyston.....9.12-1

9.13 Borough of Hopatcong.....9.13-1

9.14 Township of Lafayette .....9.14-1

9.15 Township of Montague .....9.15-1

9.16 Township of Newton.....9.16-1

9.17 Borough of Ogdensburg.....9.17-1

9.18 Township of Sandyston.....9.18-1

9.19 Township of Sparta.....9.19-1

9.20 Borough of Stanhope .....9.20-1

9.21 Township of Stillwater.....9.21-1

9.22 Borough of Sussex .....9.22-1

9.23 Township of Vernon .....9.23-1

9.24 Township of Walpack .....9.24-1

9.25 Township of Wantage .....9.25-1

**ACRONYMS AND ABBREVIATIONS**

**ACRONYMS AND ABBREVIATIONS..... AC-1**

**REFERENCES**

**REFERENCES ..... R-1**

**APPENDICES**

- APPENDIX A – PLAN ADOPTION**
- APPENDIX B – PARTICIPATION DOCUMENTATION**
- APPENDIX C – MEETING DOCUMENTATION**
- APPENDIX D – PUBLIC AND STAKEHOLDER OUTREACH**
- APPENDIX E – RISK ASSESSMENT SUPPLEMENT**
- APPENDIX F – MITIGATION STRATEGY SUPPLEMENT**
- APPENDIX G – PLAN MAINTENANCE TOOLS**
- APPENDIX H – LINKAGE PROCEDURES**





## SECTION 8. PLANNING PARTNERSHIP

### 2021 HMP Changes

- The 2021 HMP update maintained the two-volume approach with each jurisdiction having an individual annex (Section 9). Enhancements to the annex subsections is described below and in further detail in this section.
  - Reorganization of information
  - Expanded capability assessment to include integration in the tables and a subsection on adaptive capacity
  - A streamlined presentation of the hazard ranking
  - The mitigation of repetitive and severe repetitive flood loss properties is listed
  - Problem statements are summarized in the updated mitigation strategy table
  - A subsection dedicated to staff and local stakeholder involvement in annex development

This section provides a description of the Sussex County’s HMP update planning partnership, their responsibilities throughout the planning process, and the jurisdictional annexes developed as a result of their plan update efforts.

### 8.1 BACKGROUND

The Federal Emergency Management Agency (FEMA) encourages multi-jurisdictional planning for hazard mitigation. All participating jurisdictions must meet the requirements of Chapter 44 of the Code of Federal Regulations (44 CFR):

*“Multi-jurisdictional plans (e.g., watershed plans) may be accepted, as appropriate, as long as each jurisdiction has participated in the process and has officially adopted the plan” [Section 201.6a(4)]*

*Members of the Planning Partnership have the expertise to develop the plan and have their jurisdiction’s authority to implement the mitigation strategy developed during the planning process. The Planning Partnership is responsible for developing and reviewing draft sections of the plan, updating their respective annex, creating the mitigation strategy for their jurisdiction, and adopting the final plan.*

For the Sussex County HMP update, a Planning Partnership was formed to leverage resources and to meet requirements for the federal Disaster Mitigation Action of 2000 (DMA) for as many eligible governments as possible. Members of the Planning Partnership consisted of representatives from each jurisdiction. The DMA defines a local government as follows:

*Any county, municipality, city, town, township , public authority, school district, special district, intrastate district, council of governments (regardless of whether the council of governments is incorporated as a nonprofit corporation under State law), regional or interstate government entity, or agency or instrumentality of a local government; any Indian tribe or authorized tribal organization, or Alaska Native village or organization; and any rural community, unincorporated town or village, or other public entity.*

Each participating planning partner has prepared a jurisdictional annex to this plan. These annexes, as well as information on the process by which they were created, are contained in this volume.

### 8.2 INITIAL SOLICITATION AND LETTERS OF INTENT

Sussex County solicited the participation of all municipalities in the County at the commencement of this project. All municipalities interested signed a “Letter of Intent to Participate” committing their participation and





resources to the development of the Sussex County HMP update (Appendix B). Sussex County and all municipalities in the County participated in the update process and have met the minimum requirements of participation as established by the County and Steering Committee.

### 8.3 PLANNING PARTNER EXPECTATIONS

The Steering Committee developed the following list of planning partner expectations, which were outlined in the letter sent by Sussex County DEM to all jurisdictions and confirmed at the kick-off meeting held on August 18, 2020 (see Appendix C [Meeting Documentation] for details):

- Complete administrative tasks:
  - Complete a letter of intent to participate and return to the Sussex County DEM
  - Designate points of contact
- Provide representation at planning partnership meetings;
- Provide information about jurisdictional assets (critical facilities, plans/ordinances, hazard events/damages, new development, etc.) as requested;
- Support public outreach efforts within the jurisdictions, including posting of notices and plan links on websites and local media sources, advertising and supporting public meetings, and supporting outreach to NFIP repetitive loss and severe repetitive loss property owners, where applicable;
- Solicit and encourage the participation of regional agencies, a range of stakeholders, and citizens in the HMP development process;
- Assist with the identification of stakeholders within the jurisdiction that should be informed and potentially involved with the planning process;
- Prepare and submit a jurisdictional annex.
  - Attend mitigation workshop
  - Perform a capability assessment
  - Review the risk assessment
  - Involve local NFIP Floodplain Administrator in the planning process and have them complete the NFIP portion of the annex
  - Review the 2016 mitigation strategies and provide a status of each
  - Identify jurisdiction-specific mitigation strategies to address each of the natural hazards posing a risk to the jurisdiction;
- Review draft plan sections when requested and provide comment and input as appropriate;
- Ensure the HMP update meets the requirements of the DMA 2000, and FEMA and NJOEM guidance;
- Adopt the plan by resolution of local governing body after FEMA conditional approval;
- Provide information regarding progress on identified initiatives as requested by the County Hazard Mitigation Planning Coordinator; and
- Participate, as able, in additional opportunities:
  - Attend municipal support meetings
  - Participate in and advertise the public review and comment period prior to adoption.

By adopting this plan, each planning partner also agrees to the plan implementation and maintenance protocol established in Volume I. As described in Volume I, Section 7 (Plan Maintenance) it is intended that the planning partnership remain active beyond the regulatory update to support plan maintenance. Regarding the composition of the Steering Committee and Planning Partnership, it is recognized that individual commitments change over time, and it shall be the responsibility of each jurisdiction and its representatives to inform the HMP Coordinator of any changes in representation.



## 8.4 JURISDICTIONAL ANNEX PREPARATION PROCESS

As in the 2016 HMP, the jurisdictional annexes were maintained and updated for the 2021 HMP. The jurisdictional annexes continue to provide a unique, stand-alone guide to mitigation planning for each jurisdiction. Section 9 (Jurisdictional Annexes) includes an annex for every jurisdiction in Sussex County.

### Data Collection

Each jurisdiction was paired with a contract consultant mitigation planner to work with the primary POC, alternate POC, NFIP Floodplain Administrator and the mitigation team to update their annexes. Each jurisdiction was asked to participate in a municipal kick-off meeting, held on September 10, 2020 to review participant expectations and the updated information needed to support the annex update. It was made clear that the annexes are sections of the plan that can be enhanced if more information is available to further customize any and all aspects of mitigation planning.

A concerted effort was made to have all plan participants document areas of flooding outside of the floodplain, and other ‘problem areas’ in the County where hazard impacts have occurred in the past and present chronic issues and challenges. This information was captured using an online form (Survey123) to capture the location on a map and description of the problem area.

### Hazard Ranking Exercise

The presentation of the risk assessment and hazard ranking for each jurisdiction was conducted on October 28, 2020. At this meeting, the consultant presented the overall risk assessment for the hazards of concern and distributed jurisdiction-specific handouts with risk assessment results relevant to each plan participant. In addition, each planning partner was asked to review the ranked hazards specific for its jurisdiction. Refer to Section 4.4 (Hazard Ranking) for the methodology of the hazard ranking process. The calculated ranking was presented to each jurisdiction and they were asked to review the ranking and revise based on history of events, probability of occurrence, and the potential impact on people, property, and the economy. In addition, each jurisdiction was asked to rank their adaptive capacity for each hazard. Refer to Appendix B (Participation Documentation) for the input submitted by each municipality. The objectives of this exercise were to familiarize the partnership with how to use the risk assessment as a tool to support other planning and hazard mitigation processes and to help prioritize types of mitigation actions that should be considered. Hazards that were ranked as “high” for each jurisdiction as a result of this exercise were considered to be priorities for identifying appropriate mitigation actions, although jurisdictions also identified actions to mitigate “medium” or “low” ranked hazards as appropriate.

### Strengths Weaknesses Obstacles and Opportunities (SWOO) Exercise

The Steering Committee and Planning Partnership were asked to participate in a facilitated SWOO session to identify strengths, weakness or challenges, obstacles and opportunities in hazard mitigation for the County’s high-ranked hazards. Then, each jurisdiction was asked to complete a SWOO online form to document strengths, weaknesses, obstacles and opportunities relevant to their jurisdiction for their high-ranked hazards. All SWOO results were compiled and provided as a resource to plan participants at the Mitigation Strategy Workshop in November 2020. Refer to Appendix B (Participation Documentation) which provides the information captured by meeting participants during the SWOO session.

### Mitigation Strategy Workshop

A mitigation strategy workshop was conducted by the contracted planning consultant on November 12, 2020, for all participating jurisdictions to support the development of the updated mitigation strategy. To assist with the identification of implementable and action-oriented mitigation actions, a three-step process was followed for



the 2021 HMP update: 1) Assemble a ‘mitigation toolbox’; 2) Identify problem statements through ‘mitigation brainstorming’ and 3) Update the mitigation action plan. The purpose of this workshop was to guide the planning partnership in completing this portion of the planning process and discuss how projects that are well developed and documented are more quickly identifiable for selection when grants become available.

Electronic problem statement worksheets were developed and distributed to all jurisdictions which detailed detail the problems/challenges/gaps/identified to date, and mitigation alternatives to reduce future risk and address the identified problem. At the workshop the problem statements were reviewed, and the Planning Partnership focused on developing additional statements based on the impacts of hazards in the County and their communities. The results of the updated risk assessment, challenges and opportunities identified during the capability assessment update and SWOO sessions, and information gathered from the citizen survey were used to inform problem statement development. At the workshop, the Planning Partnership heard from the County, NJOEM, and the consultant on how to develop a diverse and detailed mitigation strategy and action worksheets.

These problem statements were intended to provide a detailed description of the problem area, including impacts to the jurisdiction, past damages, and loss of service. These problem statements helped form a bridge between the hazard risk assessment, which quantifies impacts to each community, with the development of achievable mitigation strategies. Each jurisdiction was requested to identify their highest priority mitigation strategy for implementation, of funding was available.

### **Municipal Support Meetings**

In addition to the municipal kick-off meeting and Planning Partnership meetings, municipal support meetings were held throughout the planning process. At these support meetings, the consultant worked one-on-one with the planning partners to complete their jurisdictional annexes. Each section of the annex was discussed to ensure accuracy and completeness. This included, but not limited to, the following:

- Reviewing the calculated hazard ranking for the jurisdiction and provide input to adjust the ranking as necessary.
- Inspecting the list of critical facilities located in the jurisdiction and their exposure to the 1% flood hazard area. For those critical facilities located in the Special Flood Hazard Area, each jurisdiction was requested to document whether the asset is already mitigated or identify an action to mitigate future flood impacts. By reviewing the list, jurisdictions were able to identify additional mitigation actions related to the critical facilities.
- Identify mitigation initiatives that have reasonable potential to be accomplished within the lifespan of the County HMP (five years), including both FEMA-eligible projects and those projects using funds from non-FEMA sources.

### **Jurisdictional Annexes**

While the jurisdictional annex format is designed to document and assure local compliance with the DMA 2000 regulations, its greater purpose and function includes:

- Providing a locally relevant synthesis of the overall mitigation plan that can be readily presented, distributed, and maintained;
- Facilitating local understanding of the community’s risk to natural hazards;
- Facilitating local understanding of the community’s capabilities to manage natural hazard risk, including opportunities to improve those capabilities;
- Facilitating local understanding of the efforts the community has taken, and plans to take, to reduce their natural hazard risk;
- Facilitating the implementation of mitigation strategies, including the development of grant applications;





- Providing a framework by which the community can continue to capture relevant data and information for future plan updates.

It is recognized that each jurisdiction’s annex is a “living” document and will continue to be improved as resources permit. As such, its design is intended to promote and accommodate continued efforts to maintain the annex to be current and to improve the effectiveness of the annex as the key tool, reference and guiding document by which the jurisdiction will implement hazard mitigation locally.

The following provides a description of the various elements of the jurisdictional annex.

**Section 9.X.1: Hazard Mitigation Planning Team:** Identifies the hazard mitigation planning primary and alternate(s) contacts and Floodplain Administrators as identified by the jurisdiction, and additional representatives that contributed to the annex update. Further detail is provided in Section 2 (Planning Process), Section 9 (jurisdictional annexes) and Appendix B (Participation Matrix).

**Section 9.X.2: Jurisdiction Profile:** Provides an overview and profile of the jurisdiction.

**Section 9.X.3: Growth/Development Trends:** Identifies of areas of known and anticipated future development and the vulnerability of those areas to the hazards of concern.

**Section 9.X.4: Capability Assessment:** This subsection provides an inventory and evaluation of the jurisdiction’s tools, mechanisms and resources available to support hazard mitigation and natural hazard risk reduction. Within the municipal annexes, tables provide an inventory of the municipality’s planning and regulatory, administrative and technical, and fiscal, capabilities, respectively. Further, another table identifies the municipality’s level of participation in state and federal programs designed to promote and incentivize local risk reduction efforts. Further information regarding Federal, State and local capabilities may be found in the Capability Assessment portion of Section 5.

- **Adaptive Capacity:** *A new addition to the capability assessment is a summary of the jurisdiction’s adaptive capacity to each hazard.*
- **National Flood Insurance Program (NFIP):** This subsection documents the NFIP as implemented within the jurisdiction. This summary was based on questions prepared by, and/or interviews conducted with, the NFIP Floodplain Administrators for each NFIP-participating community in the County. This subsection also identifies actions to enhance implementation and enforcement of the NFIP within the community.
- **National Flood Insurance Program (NFIP) Summary:** Provides NFIP summary statistics for the jurisdiction.
- **Integration of Hazard Mitigation into Existing and Future Planning Mechanisms:** This subsection identifies how the jurisdiction has integrated hazard risk management into their existing planning, regulatory and operational/administrative framework (“integration capabilities”), and/or how they intend to promote this integration (“integration actions”). This is included as a new column in the planning/regulatory table and described in narrative at the end of this subsection.

**Section 9.X.5: Hazard Event History Specific to the Jurisdiction:** Identifies hazard events that have caused significant impacts within the jurisdiction, including a summary characterization of those impacts as identified by the jurisdiction. The documentation of events and losses is critical to supporting the identification and justification of appropriate mitigation actions, including providing critical data for benefit-cost analysis. It is recognized that this “inventory” of events and losses is a work-in-progress, and may continue to be improved as



resources permit. As such, the lack of data or information for a specific event does not necessarily mean that the jurisdiction did not suffer significant losses during that event.

**Section 9.X.6: Jurisdiction-Specific Vulnerabilities and Hazard Ranking:** This subsection provides information regarding each plan participant’s vulnerability to the identified hazards. New to the 2020 HMP is a table summarizing the risk assessment results for the jurisdiction. Full data and information on the hazards of concern, the methodology used to develop the vulnerability assessments, and the results of those assessments that serve as the basis of these local risk rankings may be found in Section 4.

- **Repetitive Flood Losses:** A summary of the repetitive and severe repetitive loss properties in the jurisdiction is documented. In addition, the number of properties mitigated has also been documented as recorded by NJOEM.
- **Critical Facility and Lifeline Flood Risk:** Identifies potential flood losses to critical facilities in the jurisdiction, based on the flood vulnerability assessment process presented in Section 4 (Risk Assessment). If a mitigation action is identified, this is specified in the table.
- **Identified Issues:** Presents other specific hazard vulnerabilities as identified by the jurisdiction.
- **Hazard Extent and Location:** Each annex includes a map (or series of maps) illustrating identified hazard zones, critical facilities, and areas of NFIP Repetitive Loss/Severe Repetitive Loss (RL/SRL). Further, these maps show areas of known or anticipated future development, as available and provided by the jurisdiction. These maps may be found at the end of the annex.
- **Hazard Risk Ranking:** The Sussex County HMP update identifies and characterizes the broad range of hazards that pose risk to the entire planning area; however, each jurisdiction has differing degrees of risk exposure and vulnerability aside from the whole. The local risk ranking serves to identify each jurisdiction’s degree of risk to each hazard as it pertains to them, supporting the appropriate selection and prioritization of initiatives that will reduce the highest levels of risk for each community.

**Section 9.X.7: Mitigation Strategy and Prioritization:** This section discusses and provides the status of past mitigations actions and status, describes proposed hazard mitigation initiatives, and prioritization.

- **Past Mitigation Initiative Status:** Where applicable, a review of progress on the jurisdiction’s prior mitigation strategy is presented, identifying the disposition of each prior action, project or initiative in the jurisdiction’s updated mitigation strategy. Other completed or on-going mitigation activities that were not specifically part of a prior local mitigation strategy may be included in this sub-section as well.
- **Completed Mitigation Initiatives Not Identified in the Previous Mitigation Strategy:** Other completed or on-going mitigation activities that were not specifically part of a prior local mitigation strategy may be included in this subsection as well.
- **Proposed Hazard Mitigation Initiatives for the Plan Update:** Table 9.X-16 presents the jurisdiction’s updated mitigation strategy. Table 9.X-17 provides a summary of the local mitigation strategy prioritization process discussed in Section 6 (Mitigation Strategy). Table 9.X-18 summarizes the mitigation action types identified by hazard in the jurisdiction.

**Hazard Area Extent and Location Maps:** Each annex includes a series of maps illustrating identified hazard zones and critical facilities. Further, these maps show areas of known or anticipated future development, as available and provided by the jurisdiction.

**Action Worksheets:** FEMA-eligible mitigation actions, projects and initiatives are further documented on an Action Worksheet which provides details on the project identification, evaluation, prioritization and implementation process.



Annex Review

Additional meetings to complete the jurisdictional annexes were held with the Steering and Planning Committees throughout the planning process. In preparation for the draft plan public review, each jurisdiction was asked to have their ‘mitigation team’ review their annex to ensure it was complete and accurate for posting to the Sussex County DEM’s mitigation website.

In summary, all participating communities and the County completed the planning partner expectations and annex-preparation process. Details regarding these meetings are described further in Sections 2 (Planning Process) and 6 (Mitigation Strategy). Completed jurisdictional annexes are presented in Section 9.

8.5 COVERAGE UNDER THE PLAN

All jurisdictions (County and municipalities) met the participation requirements specified by the Steering Committee. Any non-participating local jurisdiction within the Sussex County planning area can “link” to this plan in the future following the linkage procedures defined in Appendix H (Linkage Procedures).

Table 8-1 lists the status of each jurisdiction, whether or not they submitted letters of intent to participate, and their ultimate status in this plan update. Refer to Appendix B (Participation Documentation) and Appendix C (Meeting Documentation) for details on participation and meeting attendance.

Table 8-1. Jurisdictional Status

Table with 6 columns: Jurisdiction, Letter of Intent to Participate, Attended Workshops and/or Meetings and Project Calls, Provided Update on Past Projects, Submitted Mitigation Actions for Current Plan, Seeking Approval for Adoption (meets all previous requirements). Rows list various Sussex County municipalities and the County itself.





Jurisdiction	Letter of Intent to Participate	Attended Workshops and/or Meetings and Project Calls	Provided Update on Past Projects	Submitted Mitigation Actions for Current Plan	Seeking Approval for Adoption (meets all previous requirements)
Stillwater (Twp)	X	X	X	X	Yes
Sussex (B)	X	X	X	X	Yes
Vernon (Twp)	X	X	X	X	Yes
Walpack (Twp)	X	X	X	X	Yes
Wantage (Twp)	X	X	X	X	Yes

NA = Not applicable. The Sussex County's DEM is the HMP Coordinator and managed the project and grant and served as Steering Committee chair. A letter of intent to participate was not required for Sussex County.

Workshops and additional meetings (via in person, email and/or teleconference) to complete the jurisdictional annexes were held with the Steering and Planning Committees throughout the planning process. In summary, all participating communities and the County completed the planning partner expectations and annex-preparation process. Details regarding these meetings are described further in Section 2 (Planning Process) and Section 6 (Mitigation Strategy). Completed jurisdictional annexes are presented in Section 9.



## **SECTION 9. JURISDICTIONAL ANNEXES**

Section 201.6.a(4) of Chapter 44 of the Code of Federal Regulations (44CFR) states: “Multi-jurisdictional plans (e.g. watershed plans) may be accepted, as appropriate, as long as each jurisdiction has participated in the process and has officially adopted the plan.” One component of each participating jurisdiction’s involvement in the planning process of this HMP was to prepare an annex that focuses specifically on the natural hazards facing their community and the mitigation actions they propose to reduce their exposure and losses to these hazards.

Sussex County and each participating jurisdiction completed an annex that outlines the following information: natural hazard event history, hazard ranking and vulnerability, capabilities, progress on past mitigation actions and an updated mitigation strategy specific to the County or that jurisdiction. Once complete, the County and each participating jurisdiction reviewed and approved their final annex prior to submission to the NJOEM and the FEMA Region 2. Each jurisdiction’s annex itself may be found in Sections 9.1 through 9.25.



## 9.1 SUSSEX COUNTY

This section presents the jurisdictional annex for the Sussex County. The annex includes a general overview of the Sussex County; an assessment of the Sussex County’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.

### 9.1.1 Hazard Mitigation Planning Team

Sussex County 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 9.1-1. Hazard Mitigation Planning Team**

Primary Point of Contact		Alternate Point of Contact
Name / Title: Bob Haffner, Director/Division of Emergency Management Address: 135 Morris Turnpike, Newton, New Jersey 07860 Phone Number: (973) 579-0380 x2208 Email: <a href="mailto:rhaffner@sussexcountysheriff.com">rhaffner@sussexcountysheriff.com</a>		Name / Title: Jennifer Van Der Wende, Corporal/Division of Emergency Management Address: 135 Morris Turnpike, Newton, New Jersey 07860 Phone Number: (973) 579-0380 x2366 Email: <a href="mailto:jenvanderwende@sussexcountysheriff.com">jenvanderwende@sussexcountysheriff.com</a>
Name	Title	Method of Participation
Bob Haffner	Division of Emergency Management	Primary point of contact, provided information and data, contributed to mitigation strategy, attended Steering Committee and Planning Partnership meetings; reviewed annex*
Jennifer Van Der Wende, Division of Emergency Management	Division of Emergency Management	Alternate point of contact, provided information and data, contributed to mitigation strategy, attended Steering Committee and Planning Partnership meetings; reviewed annex:
Scott House	County DPW	Provided data and information; contributed to mitigation strategy; reviewed annex*
Autumn Sylvester	Sussex County Division of Planning and Economic Development	Provided data and information, contributed to mitigation strategy, attended Steering Committee and Planning Partnership meetings; reviewed annex*
William J. Koppelaar	Sussex County Engineering Department	Provided data and information, contributed to mitigation strategy, attended Steering Committee and Planning Partnership meetings; reviewed annex*
Tom Drabic	Sussex County Division of Planning	Provided data and information, contributed to mitigation strategy, attended Steering Committee and Planning Partnership meetings
Keith Nelson	Sussex County Facilities	Provided data and information, contributed to mitigation strategy, attended Steering Committee and Planning Partnership meetings; reviewed annex*
Gregory Poff, II	County Administrator	Steering Committee member and attended meetings; reviewed annex*



Name	Title	Method of Participation
Elke Yetter	Fiscal/CFO	Reviewed annex*

\*Refer to Jurisdictional Annex Review Sign-Off Sheet in Appendix B.

### 9.1.2 Jurisdiction Profile

Please refer to Section 4, Volume I of this HMP for details on Sussex County’s population, location, climate, history, growth and development.

### 9.1.3 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 9.1-2 summarizes recent and expected future development trends, including major residential/commercial development and major infrastructure development.

**Table 9.1-2. Recent and Expected Future Development**

Type of Development	2015	2016	2017	2018	2019
<b>Number of Building Permits for New Construction Issued Since the Previous HMP</b>					
Building permits are addressed at the local municipal level.					
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
<b>Recent Major Development and Infrastructure from 2015 to Present</b>					
None identified					
<b>Known or Anticipated Major Development and Infrastructure in the Next Five (5) Years</b>					
Dennis Library	Renovation and addition	1	101 Main St, Newton, NJ 07860	None identified	Planned. Renovation and addition of existing structure

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

### 9.1.4 Capability Assessment

Section 5 (Capability Assessment) describes the components included in the capability assessment and their significance for hazard mitigation planning. The Sussex County 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 Sussex County 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 Sussex County and where hazard mitigation has been integrated.

**Table 9.1-3. 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.
<b>Codes, Ordinances, &amp; Requirements</b>					
<b>Building Code</b>	Yes	State & Local	Yes	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>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</li> <li>Addressed at the local level.</li> </ul>					
<b>Zoning Code</b>	Yes	State & Local	Yes – if municipality has a Planning Board	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>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.</li> <li>Addressed at the local level.</li> </ul>					
<b>Subdivisions</b>	Yes	County & Local	Yes – if municipality has a Planning Board	Yes	2021-Sussex County-009
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>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.</li> <li>Land Development Standards, 2008. Administered by the Planning Board. The Land Development Standards are anticipated to be updated. The update could include information on green technologies and BMPs for addressing stormwater.</li> </ul>					
<b>Stormwater Management</b>	Yes	State & Local	Yes	Yes	2021-Sussex County-009
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>See Title 7 of the NJ Administrative Code, N.J.A.C. 7:8</li> <li>Land Development Standards, 2008. Administered by the Planning Board. The Land Development Standards are anticipated to be updated. The update could include information on green technologies and BMPs for addressing stormwater.</li> </ul>					
<b>Post-Disaster Recovery</b>	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.
<b>Comment:</b>					
Real Estate Disclosure	Yes	State, Division of Consumer Affairs	Yes	Yes	-
<b>Comment:</b>					
<ul style="list-style-type: none"> <li>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.</li> </ul>					
Growth Management	Yes	Local	Yes – if municipality has a Planning Board	No	-
<b>Comment:</b>					
<ul style="list-style-type: none"> <li>State Mandated on a municipal level. See Zoning Ordinance; Also - Plan Endorsement Process via the State Development &amp; 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.</li> </ul>					
Site Plan Review	Yes	County & Local	Yes – if municipality has a Planning Board	Yes	-
<b>Comment:</b>					
<ul style="list-style-type: none"> <li>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 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.</li> <li>Site Plan Review is the responsibility of the Division of Planning &amp; Municipal ordinances</li> </ul>					
Environmental Protection	No	-	No	-	-
<b>Comment:</b>					
Flood Damage Prevention	Yes	State & Local	Yes	Yes	-
<b>Comment:</b>					
<ul style="list-style-type: none"> <li>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.</li> <li>Adopted at the local level</li> </ul>					
Wellhead Protection	No	-	No	-	-
<b>Comment:</b>					
Emergency Management	No	-	No	-	-
<b>Comment:</b>					
Climate Change	No	-	No	-	-
<b>Comment:</b>					
Disaster Recovery Ordinance	No	-	No	-	-
<b>Comment:</b>					



	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.
<b>Disaster Reconstruction Ordinance</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Other</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Planning Documents</b>					
<b>Comprehensive / Master Plan</b>	Yes	State, County, & Local	Yes	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>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.</li> <li>Master Plan Study Report, 2005 Strategic Growth Plan, updated in draft form 2014 (but not adopted). The Plan is the responsibility of the Division of Planning.</li> <li>2016 Open Space Plan. The Plan is the responsibility of the Division of Planning – Open Space Committee. The 2016 update to the Sussex County Open Space Plan acknowledges that the long-term sustainability of the County's groundwater supply depends on safeguarding water quality and quantity. The Plan gives the County the ability to analyze priority lands for preservation and stewardship with a primary focus on properties that support the water resources integral to the county.</li> </ul>					
<b>Capital Improvement Plan</b>	Yes	County	No	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>Annual Capital Project Requests (Both in Summary and Detailed Forms)</li> </ul>					
<b>Disaster Debris Management Plan</b>	Yes	County	No	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>The Plan identifies two county locations for debris collection.</li> </ul>					
<b>Floodplain or Watershed Plan</b>	Yes	County	No	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>Groundwater Manual. The Manual is the responsibility of the Division of Planning.</li> </ul>					
<b>Stormwater Management Plan</b>	No	State & Local	Yes	-	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>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.</li> </ul>					
<b>Stormwater Pollution Prevention Plan</b>	Yes	County, Local	Yes	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>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</li> </ul>					



	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.
<p><i>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 floatable control; locating discharge points and stenciling catch basins; and a public education component.</i></p> <ul style="list-style-type: none"> <li><i>The County Stormwater Pollution Prevention Plan</i></li> </ul>					
<b>Urban Water Management Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Habitat Conservation Plan</b>	Yes	County	No	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li><i>Covered under Open Space Plan</i></li> </ul>					
<b>Economic Development Plan</b>	Yes	County	No	No	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>Target Business and Industry Analysis (2009) is the responsibility of the Division of Planning, Vision 2020 Economic Strategy Committee.</li> <li>Sussex County Economic Base Assessment and Strategic Growth Plan Update (2014) is the responsibility of the Division of Planning, Vision 2020 Economic Strategy Committee.</li> </ul>					
<b>Shoreline Management Plan</b>	No	-	Yes – if located in a coastal zone	-	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li><i>NJ Coastal Area Facility Review Act (N.J.S.A. 13:19) or CAFRA regulates almost all development along the coast for activities including construction, relocation, and enlargement of buildings or structures, and excavation, grading, shore protection structures, and site preparation. This law is implemented through NJ's Coastal Zone management Rules N.J.A.C. 7:7E-1 et seq.</i></li> </ul>					
<b>Community Wildfire Protection Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Community Forest Management Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Transportation Plan</b>	Yes	County, Local	No	Yes	2021-Sussex County-010
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>Ten-Year Mobility Study (2005), Division of Planning</li> <li>Master Circulation Plan for Transportation (draft, 2016), Division of Planning. The Master Circulation Plan for Transportation is due for an update in the next several years.</li> </ul>					
<b>Agriculture Plan</b>	Yes	Local	No	Yes	2021-Sussex County-008
<i>Comment:</i>					
<ul style="list-style-type: none"> <li><i>Sussex County Farmland Preservation Plan, last updated in 2008. Update currently underway. Division of Planning – Sussex County Agriculture Development Board</i></li> <li><i>The plan is in need of update.</i></li> </ul>					
<b>Climate Action Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Tourism Plan</b>	Yes	County	No	Yes	2021-Sussex County-008
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>Sussex County Farmland Preservation Plan includes section on agritourism.</li> <li>Open Space Plan includes trails section.</li> </ul>					
<b>Business Development Plan</b>	No	-	No	-	-
<i>Comment:</i>					



	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.
<b>Other</b>	Yes	County	No	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>Open Space and Recreation Plan, 2003. The Plan is the responsibility of the Division of Planning – Open Space Committee.</li> <li>Natural Resources Inventory, n.d., Division of Planning</li> <li>Solid Waste Management Plan, 2013, Division of Planning</li> </ul>					
<b>Response/Recovery Planning</b>					
<b>Comprehensive Emergency Management Plan (CEMP) / Emergency Operations Plan (EOP)</b>	Yes	County	Yes	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>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.</li> <li>Emergency Operations Plan responsibility of the Office of Emergency Management. Last updated 12/11/2019. Expires 12/11/2023</li> </ul>					
<b>Threat &amp; Hazard Identification &amp; Risk Assessment (THIRA)</b>	Yes	County	No	Yes	-
<i>Comment: Plan in place through OHS&amp;P</i>					
<b>Post-Disaster Recovery Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Continuity of Operations Plan</b>	Yes	County	No	Yes	-
<i>Comment:</i>					
<b>Public Health Plan</b>	Yes	County	No	Yes	-
<i>Comment:</i>					
<b>Other</b>	Yes	County	No	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>County works with local municipalities and provide input on local dam plans</li> <li>Traffic Diversion Plans</li> <li>Communication Plan identifies how communication should flow throughout an incident, who is involved, etc.</li> </ul>					

**Table 9.1-4. Development and Permitting Capability**

Criterion	Response
Does your jurisdiction issue development permits? - If no, who does? If yes, which department?	Development permits are issued at the local municipal level.
Does your jurisdiction have the ability to track permits by hazard area?	Development permits are issued at the local municipal level.
Does your jurisdiction have a buildable lands inventory? -If yes, please describe briefly. -If no, please quantitatively describe the level of buildout in the jurisdiction.	Yes, but in need of update. Was last updated 10 years ago.

**ADMINISTRATIVE AND TECHNICAL CAPABILITY**

The table below summarizes potential staff and personnel resources available to the Sussex County.

**Table 9.1-5. Administrative and Technical Capabilities**

Staff/Personnel Resource	Available?	Department/Agency/Position
<b>Administrative Capability</b>		
Planning Board	Yes	Planning Board, Board of Commissioners





Staff/Personnel Resource	Available?	Department/Agency/Position
Mitigation Planning Committee	Yes	Sussex County Pre-Disaster Mitigation Steering Committee (alternately, Working Group)
Environmental Board / Commission	Yes	Water Quality Policy Advisory Committee, Solid Waste Advisory Committee, Department of Environmental and Health Services
Open Space Board / Committee	Yes	Open Space Committee
Economic Development Commission / Committee	No	Sussex County Economic Development Partnership (SCEDP)
Warning Systems / Services (reverse 911, outdoor warning signals)	Yes	SwiftReach 911
Maintenance program to reduce risk	Yes	Sussex County DPW installs snow fencing; annually cleans storm drains and inspects storm drains pre- and post-storm events
Mutual aid agreements	Yes	Intra-County Agreements County Fire Box Alarms Norwest Region (Hunterdon, Somerset, Sussex, Warren) Statewide HazMat County to municipality agreements (MOUs)
<b>Technical/Staffing Capability</b>		
Planners or engineers with knowledge of land development and land management practices	Yes	Planning Division, Engineering
Engineers or professionals trained in building or infrastructure construction practices	Yes	Division of Public Works—Office of Roads, Engineering
Planners or engineers with an understanding of natural hazards	Yes	Department of Engineering and Planning
Staff with training in benefit/cost analysis	Yes	Sussex County Department of Finance
Staff with training in green infrastructure	No	-
Staff with education/knowledge/training in low impact development	Yes	Department of Engineering and Planning – Division of Engineering
Surveyor	Yes	Department of Engineering and Planning – Division of Engineering
Stormwater engineer	Yes	Planning and Engineering
Personnel skilled or trained in GIS applications	Yes	Office of GIS Management
Local or state water quality professional	Yes	Director of Division Planning and Economic Development
Scientist familiar with natural hazards in local area	No	-
Emergency manager	Yes	Sherriff’s Office—Office of Emergency Management
Watershed planner	No	-
Environmental specialist	No	Use outside consultant where necessary
Grant writers	Yes	Planning Division
Resilience Officer	No	-
Other	No	-

**FISCAL CAPABILITY**

The table below summarizes financial resources available to the Sussex County.

**Table 9.1-6. Fiscal Capabilities**

Financial Resource	Accessible or Eligible to Use?
Community Development Block Grants (CDBG, CDBG-DR)	Yes
Capital Improvements Project Funding	Yes





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

**EDUCATION AND OUTREACH CAPABILITY**

The table below summarizes the education and outreach resources available to the Sussex County.

**Table 9.1-7. Education and Outreach Capabilities**

Criterion	Response
Do you have a public information officer or communications office?	County Administrator is PIO. OEM has an incident management team and there is a PIO for the Sheriff's Office
Do you have personnel skilled or trained in website development?	Yes, and outside web master can be utilized for major changes as well.
Do you have hazard mitigation information available on your website? -If yes, briefly describe.	Yes, the County of Sussex webpage posts Pre-Disaster Mitigation Information as well as the current and prior HMP and contact information
Do you use social media for hazard mitigation education and outreach? -If yes, briefly describe.	Yes, Facebook
Do you have any citizen boards or commissions that address issues related to hazard mitigation? -If yes, briefly describe.	No
Do you have any other programs already in place that could be used to communicate hazard-related information? If yes, briefly describe.	CERT teams discuss preparedness

**COMMUNITY CLASSIFICATIONS**

The table below summarizes the classifications for community programs available to the Sussex County.

**Table 9.1-8. Community Classifications**

Program	Participating?	Classification	Date Classified
Community Rating System	No	-	-
Building Code Effectiveness Grading Schedule (BCEGS)	N/A	-	-
Public Protection (Fire ISO Protection Class)	N/A	-	-
Storm Ready Certification	No	-	-
Firewise Community Classification	No	-	-
Sustainable Jersey	No	-	-





**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 9.1-9. 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 County has access to resources to determine the possible impacts of climate change through NOAA and NJ DEP and staff keep up on academic updates. The 2016 update to the Sussex County Open Space Plan acknowledges that the long-term sustainability of the County’s groundwater supply depends on safeguarding water quality and quantity. The Plan gives the County the ability to analyze priority lands for preservation and stewardship with a primary focus on properties that support the water resources integral to the county.

**NATIONAL FLOOD INSURANCE PROGRAM**

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

**Table 9.1-10. National Flood Insurance Program Compliance**

Criterion	Response
Floodplain administration is administered at the local municipal level in the County.	
How many flood insurance policies are in force in your jurisdiction?*	271 policies
-What is the insurance in force?	
-What is the premium in force?	
How many total loss claims have been filed in your jurisdiction?*	167 claims \$1,729,080
-How many claims are still open or were closed without payment?	
-What were the total payments for losses?	

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





### ADDITIONAL AREAS OF EXISTING INTEGRATION

- **Board of Chosen Commissioners:** The Board of Chosen Commissioners serves as the top governing body in Sussex County. They approve major initiatives, capital improvement spending, and other high level decisions for the County. Additionally, the Board sets policies for five major departments in the county—Department of Central and Shared Services, Department of Engineering and Planning, Department of Environmental and Public Health Services, Department of Finance and Library Services, and Department of Human Services—as well as the 12 Divisions and other boards, commissions, authorities, and committees in the county. The Commissioners are supported in their duties by the County Administrator. The Board of Chosen Commissioners reviews information from county Engineering, DPW, and Planning Division to determine project priorities and release capital improvement funding. These projects include addressing roads that experience frequent flooding (i.e., roadway design and drainage improvements) or are otherwise vulnerable to disasters and hazards.
- **Radiological Program:** Sussex County participates in New Jersey's Radiological Program, per NJOEM's Radiological Program Guidelines, and shared appropriate informational pamphlets with residents on the Sherriff's Office website. Sussex County OEM is privy to hazardous materials (HazMat) and capabilities for response if needed.
- **Stormwater Clearing:** Per NJDEP requirements, the County DPW cleans catch basins each year and cleans in-let and outlets as needed or requested. If fall rains are forecasted, DPW makes sure the catch basins are clear and open; the county also marks the catch basins in the fall to identify their locations for the winter months. These activities are coordinated between DPW and Engineering on a daily basis, facilitated by both departments having the same administrator.
- **Hazardous Materials:** The County Right to Know Coordinator maintains effective coordination and information sharing related to hazardous material sites with NJOEM and the Right to Know Network. The Sussex County HAZMAT team integrates data about hazardous materials with most current available information about other risk factors, e.g. population, climate, other site-specific characteristics.
- **Outside Partnerships and Stakeholders:** The Department of Engineering and Planning, and other relevant departments maintain relationships with the U.S. Army Corps of Engineers (USACE) and Rutgers University, along with other important regional stakeholders. These relationships help provide the county with technical information and/or assistance in the identification of hazard areas and risk assessments.
- **Floodplain Management:** Sussex County DEM and the Planning Division encourage compliance with floodplain management as it relates to new and existing construction by integrating hazard mitigation practices with zoning, subdivision ordinances, comprehensive planning, and other land use tools at the municipal level.
- **Office of GIS Management:** Sussex County maintains an Office of GIS Management, which provides multiple helpful links to residents, including the map applications for bridge and road closures, government services, and West Nile Virus surveillance. It also has prebuilt maps on property parcels, polling locations, watershed boundary (HUC 11), active storm paths, bedrock geology, wetlands, aerial photography, floodplains, and sewer service areas.
- **Operating Budget:** The County's operating budget contains provisions for necessary capital and infrastructure projects, as well as public safety and mitigation initiatives. In the 2015 budget, Sussex County identified \$315,116 to be allocated to emergency management (about \$8,000 more than was allocated in the 2014 budget). Sussex County also funds other departments involved in mitigation, such as public health, planning, and public works.





- **Outside Funding:** While much of the County’s revenue comes from taxes and other fees, part of its revenue is grant-related or received through State Aid. This includes funding from the State Homeland Security Grant Program, Emergency Management Agency Assistance, funding from the NJ Department of Law and Public Safety for the HMP Update, and other relevant programs. Sussex County also participates in regional or multi-county grant funding opportunities, as needs dictate and opportunities arise.
- **Capital Projects:** The County Capital Budget Request is the vehicle that county departments use to undertake various projects, including mitigation, stormwater management, and drainage enhancements. The 2015 Sussex County budget provides detailed and summary versions of its Capital Budget Request; the detailed version groups projects by relevant departments and categories. Projects of interest include road and bridge enhancements, stormwater improvements, fire security systems upgrades, and security upgrades.
- **Alert Programs:** The Sussex County DEM also oversees two community alert programs—Swift911 and Register Ready. Swift 911 enables the County to provide residents with critical information during hazard events. Residents can select to be notified by phone, e-mail, text message, hearing impaired devices, and more. Register Ready is a statewide program to ensure individuals with disabilities or who may need extra assistance can receive help or advance notification of an impending hazard event.

#### OPPORTUNITIES FOR FUTURE INTEGRATION

- **FEMA HMA Informational Workshops:** The County will expand offerings and incorporate information on BRIC at an annual workshop related to the FEMA HMA grant programs (HMGP, BRIC, FMA). This may be done at quarterly OEM coordinator meetings and invite other County departments (2021-Sussex County-005).
- **Update Farmland Preservation Plan:** The County will update the Farmland Preservation Plan and include resiliency planning to address long term risk (2021-Sussex County-008).
- **Update Land Development Standards:** The County will update the Land Development Standards. The update will include discussion on green technologies and BMP’s for stormwater (2021-Sussex County-009).
- **Master Circulation Plan for Transportation Update:** The County will update the Master Circulation Plan for Transportation, using information from the Hazard Mitigation Plan to identify and reduce risk to the transportation system and maintain emergency access (2021-Sussex County-010).
- **Adopt the Wastewater Management Plan:** The County’s Wastewater Management Plan is currently in draft form. Prior to adoption, the County will use information from the Hazard Mitigation Plan to make updates to reduce risk to the wastewater management system (2021-Sussex County-011).

#### 9.1.5 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 Sussex County’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 9.1-11 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 9.1-11. 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 23 <sup>rd</sup> and 24 <sup>th</sup> .	Utility issues, road closures
March 3-4, 2019	Snowstorm	No	Up to 8 inches of snow fell in portions of the County. Some areas also experienced freezing rain.	March 2019 snowstorm. Utility issues, road closures, downed trees.
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.	Education, procurement of PPE, setting up testing sites, tracking
August 4, 2020	Tropical Storm Isaias (declaration number pending)	Yes	Tropical Storm Isaias brought heavy rain to western New Jersey. Rainfall totals were as high as 3 to 5.5 inches. Observations from surrounding areas suggest sustained tropical storm force winds likely occurred.	Reached damage threshold and applying for a declaration. Downed trees, power outages, road closures.

Source: FEMA 2020, NOAA NCEI 2020

### 9.1.6 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 Sussex County 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 Sussex County 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 Sussex County has significant exposure.

#### REPETITIVE FLOOD LOSSES

The following summarizes the repetitive and severe repetitive flood losses in the Sussex County.

- Number of repetitive loss (RL) properties: 16
- Number of severe repetitive loss (SRL) properties: 0
- Number of RL/SRL properties that have been mitigated: 0

Source: FEMA 2019. Data is as of September 30, 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 9.1-12. Critical Facilities and Lifelines Flood Exposure**

Name	Type	Exposure	
		1% Event	0.2% Event
Critical facilities within the County are identified in the local municipal annexes in Section 9 and discussed in the County Profile (Section 3).			

Source: Sussex County Planning Partnership 2020

Note: \*Identified lifeline

**IDENTIFIED ISSUES AND PROBLEM AREAS**

The jurisdiction has identified the following vulnerabilities within their community:

- Additional sheltering locations are needed to meet the County’s sheltering needs.
- Warming centers need to be established in new locations to expand offerings of warming and cooling centers and maintain access for at risk communities.
- DPW is responsible for much work in County areas to conduct tree trimming and emergency tree removal. The DPW lacks a 70-foot tree truck and a stump grinder.
- The Department of Public Works building does not have a roof that meets current standards for snow load. Failure of the roof could lead to a reduction in critical services by DPW before, during, and after hazard events.
- With the advent of new information on how to apply for hazard mitigation funding support and new programs for funding support, additional education is needed for County staff and municipal staff on FEMA HMA grant programs.
- Wildfire preparedness by the public is lacking.
- Frequent flooding events have resulted in damages to residential properties. These properties have been repetitively flooded as documented by paid NFIP claims. The County has 16 repetitive loss properties, but other properties may be impacted by flooding as well.
- The Farmland Preservation Plan was last updated in 2008. A new update is needed which would incorporate more information on hazard mitigation.
- The County’s Land Development Standards have not been updated since 2008.
- The Master Circulation Plan for Transportation requires update.
- The County Wastewater Management Plan is currently in draft form and requires adoption.

**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 Sussex County 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 Sussex County. The Sussex County 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 Sussex County agreed with the calculated hazard rankings.

**Table 9.1-13. Sussex County Hazard Ranking**

<b>Dam Failure</b>	<b>Disease Outbreak</b>	<b>Drought</b>	<b>Earthquake</b>	<b>Flood</b>	<b>Geologic</b>	
Medium	Medium	Medium	Low	Medium	Medium	
<b>Hazardous Materials</b>	<b>Hurricane and Tropical Storm</b>	<b>Invasive Species</b>	<b>Nor'Easter</b>	<b>Severe Weather</b>	<b>Severe Winter Weather</b>	<b>Wildfire</b>
High	High	High	High	High	High	Medium

### 9.1.7 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 9.1-15 and Table 9.1-16 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 9.1-14. 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	Enter 2021 HMP Action #
Sussex County-1 (new)	Ensure continuity of operations at critical facilities and county-owned buildings. The following project was identified at this time: Secure a generator for the Sheriff’s Office.	Sheriff’s Office, SCDEM	Complete		
Sussex County-2 (revised old 4.B.2)	Incorporate hazard mitigation considerations and priorities into various County Plan updates, and integrate the County Master Plan with the County HMP during the Master Plan Update.	SCDEM, Planning Division	Ongoing Capability		
Sussex County-3 (new)	Design and implement a mitigation awareness campaign through County Planning or Rutgers Extension to Farms/Tree Farms regarding the ingestion pathway response for the radiological hazard.	SCDEM, Planning Division, Rutgers Extension	Ongoing Capability		



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 #
Sussex County-4 (revised old 1.A.2)	Coordinate with the Sussex County College FM Radio Station to disseminate preparedness information.	SCDEM, Sussex County College	Ongoing Capability		
Sussex County-5 (new)	Increase County capabilities to address tree and roadway maintenance, response and removal, and continuity of operations and purchase a new tree truck (70-feet, chipper box), updated stump grinder, and excavator.	DPW	In Progress: Added fourth person to tree crew. Purchased new 65 foot tree truck and excavator. DPW still needs a 70 foot tree truck and a stump grinder.	X	2021-Sussex County-003
Sussex County-6 (new)	Support continuity of operations at County buildings including the purchase and installation of generators including the Office of Bridges and Traffic, replace a generator at the Andover Garage/OEM warehouse, new generators new warming locations (libraries), shelters (Vo Tech)	Facilities Department	In Progress. Warming stations need to be updated to new locations. Additional shelters still needed. Andover Garage is complete. Office of Emergency Management near completion.	X	2021-Sussex County-001, 2021-Sussex County-002, 2021-Sussex County-016
Sussex County-7 (old County Facilities 1)	Retrofit roof to meet current standards for snow load on County Department of Public Works building located on Route 206.	Facilities Department	No Progress	X	2021-Sussex County-004
Sussex County-8 (revised old 1.A.3, 2.A.4)	Conduct annual workshop related to the FEMA HMA grant programs (HMGP, PDM, FMA). This may be done at quarterly OEM coordinator meetings and invite other County departments.	SCDEM and Engineering	In Progress. The County would like to expand offerings and incorporate information on BRIC.	X	2021-Sussex County-005
Sussex County-9 (revised old 1.A.4)	Coordinate a yearly program for public information on wildfire with NJ Forest Fire Service (Division A Liaison); and post this information on the County website regarding the wildfire hazard (including current information about fuel loads and conditions that may affect potential for fires).	SCDEM	In Progress	X	2021-Sussex County-006
Sussex County-10 (revised old 2.A.5)	Inventory the critical facilities to identify those in geographic areas that may be prone to high ground motion during earthquakes (due to proximity to faults or to soil	Facilities Department and Engineering	No Progress	X	2021-Sussex County-017



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 #
	characteristics), and those with structures that may be at risk during an earthquake. Study will include determine soil and shake characteristics.				
Sussex County-11 (revised old 2.A.7)	Work to determine soil and shake characteristics at specific sites that the county has identified as priority critical facilities with potential vulnerabilities to earthquake forces. Based on these results, analyze the critical structures to determine if the structures are sound and next steps to further mitigate.	Facilities Department and Engineering	No Progress	X	2021-Sussex County-017
Sussex County-12 (revised old 2.A.9, 2.A. 10)	Identify wind vulnerabilities at County critical facilities because buildings were designed to 70 mph; new updated code is 90 mph.	County Facilities	No Progress	X	2021-Sussex County-017
Sussex County-13 (revised old 2.A.19)	Undertake a survey of critical facilities to identify and prioritize those that may have structural characteristics that make them vulnerable to excessive snow and ice loads such as the Sherriff's Office.	County Facilities	No Progress	X	2021-Sussex County-017
Sussex County-14 (old 2.B.1)	Participate in the Emergency Preparedness Conference and workshops	SCDEM and municipal OEMs, NJOEM, NJFFS	Ongoing capability		
Sussex County-15 (revised 3.A.1)	Support the mitigation of vulnerable structures via retrofit (e.g. elevation, flood-proofing) or acquisition/relocation to protect them from future damage; repetitive loss and severe repetitive loss properties should be a priority, when applicable. Phase 1: Identify appropriate candidates and determine most cost-effective mitigation option Phase 2: Work with the property owners to implement selected action based on available funding from FEMA and local match availability.	SCDEM	In Progress	X	2021-Sussex County-007



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

- The County has done extensive work to increase the outreach and emergency response capabilities regarding the coronavirus pandemic.

### PROPOSED HAZARD MITIGATION INITIATIVES FOR THE PLAN UPDATE

The Sussex County 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 Sussex County 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 9.1-15 summarizes the comprehensive-range of specific mitigation initiatives the Sussex County 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 9.1-16 provides a summary of the prioritization of all proposed mitigation initiatives for this HMP update.



Table 9.1-15. 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-Sussex County-001	Sheltering	<b>Problem:</b> Additional sheltering locations are needed to meet the County’s sheltering needs.	New	All Hazards	1, 3, 6	SCDEM	HMGP, BRIC, USDA Community Facilities Grant Program, County budget	Increased sheltering capacity	High	5 years	High	SIP	ES
		<b>Solution:</b> The County will be working to establish new shelters at the Sussex County Fair Grounds (capacity of 200) and the Fredon Civic Center (capacity of 90). Shelters will be designed to meet FEMA standards and include backup power.											
2021-Sussex County-002	Warming and Cooling Centers	<b>Problem:</b> Warming centers need to be established in new locations to expand offerings of warming and cooling centers and maintain access for at risk communities.	New	Severe Weather, Severe Winter Weather	1, 3, 6	SCDEM	HMGP, BRIC, USDA Community Facilities Grant Program, County budget	Increased emergency capabilities for extreme heat and cold events	Medium	3 years	High	SIP	ES
		<b>Solution:</b> The County will expand the number of warming and cooling centers to service the County population.											
2021-Sussex County-003	Increase Vegetation Management Capabilities	<b>Problem:</b> DPW is responsible for much work in County areas to conduct tree trimming and emergency tree removal. The DPW lacks a 70-foot tree truck and a stump grinder.	N/A	Severe Weather, Severe Winter Weather, Hurricane, Nor’Easter	2, 5	DPW	County budget	Increased capabilities	High	5 years	High	SIP	ES
		<b>Solution:</b> The County will purchase a 70-foot tree truck and a stump grinder.											
2021-Sussex County-004	DPW Snow Load Retrofit	<b>Problem:</b> The Department of Public Works building does not have a roof that meets current standards for snow load. Failure of the roof could lead to a reduction in critical services by DPW before, during, and after hazard events.	Existing	Severe Winter Weather, Nor’Easter	1, 2, 6	Facilities	HMGP, BRIC, USDA Community Facilities Grant Program, County budget	Reduction in risk of roof failure and protection of critical services	Medium	5 years	High	SIP	PP
		<b>Solution:</b> The County Facilities Department will retrofit the roof to meet current standards for snow load on the County Department of Public Works building located on Route 206.											





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-Sussex County-005	FEMA HMA Informational Workshops	<b>Problem:</b> With the advent of new information on how to apply for hazard mitigation funding support and new programs for funding support, additional education is needed for County staff and municipal staff on FEMA HMA grant programs.	New and Existing	All Hazards	3, 5	SCDEM, Engineering	County budget	Increased participation and success in FEMA HMA programs	Low	1 year	High	EAP	PI
		<b>Solution:</b> The County will expand offerings and incorporate information on BRIC at an annual workshop related to the FEMA HMA grant programs (HMGP, BRIC, FMA). This may be done at quarterly OEM coordinator meetings and invite other County departments.											
2021-Sussex County-006	Wildfire Outreach	<b>Problem:</b> Wildfire preparedness by the public is lacking.	New and Existing	Wildfire	3, 4	SCDEM	County budget, NJ Forest Fire Service	Increased wildfire awareness and preparedness	Low	2 years	High	EAP	PI
		<b>Solution:</b> Coordinate a yearly program for public information on wildfire with NJ Forest Fire Service (Division A Liaison); and post this information on the County website regarding the wildfire hazard (including current information about fuel loads and conditions that may affect potential for fires).											
2021-Sussex County-007	Repetitive Loss Mitigation Support	<b>Problem:</b> Frequent flooding events have resulted in damages to residential properties. These properties have been repetitively flooded as documented by paid NFIP claims. The County has 16 repetitive loss properties but other properties may be impacted by flooding as well.	Existing	Flood, Severe Weather	2	SCDEM, local NFIP Floodplain Administrator, supported by homeowners	FEMA HMGP and FMA, local cost share by residents	Eliminates flood damage to homes and residents, creates open space, increasing flood storage	\$2 Million	3 years	High	SIP	PP
		<b>Solution:</b> Support the mitigation of vulnerable structures via retrofit (e.g. elevation, flood-proofing) or acquisition/relocation to protect them from future damage; repetitive loss and severe repetitive loss properties should be a priority, when applicable. Phase 1: Identify appropriate candidates and determine most cost-effective mitigation option											



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
		Phase 2: Work with the property owners to implement selected action based on available funding from FEMA and local match availability.											
2021-Sussex County-008	Update Farmland Preservation Plan	<p><b>Problem:</b> The Farmland Preservation Plan was last updated in 2008. A new update is needed which would incorporate more information on hazard mitigation.</p> <p><b>Solution:</b> The County will update the Farmland Preservation Plan and include resiliency planning to address long term risk.</p>	New and Existing	All Hazards	4, 5	Department of Engineering and Planning	County budget	Increased planning and preparedness	Low	Within 5 years	High	LPR	PR
2021-Sussex County-009	Update Land Development Standards	<p><b>Problem:</b> The County's Land Development Standards have not been updated since 2008.</p> <p><b>Solution:</b> The County will update the Land Development Standards. The update will include discussion on green technologies and BMP's for stormwater.</p>	New and Existing	All Hazards	2, 4, 5	Department of Engineering and Planning, Planning Board	County budget	Reduced risk to new development and increasing stormwater effectiveness	Low	Within 5 years	High	LPR	PR, SP
2021-Sussex County-010	Master Circulation Plan for Transportation Update	<p><b>Problem:</b> The Master Circulation Plan for Transportation is due for update.</p> <p><b>Solution:</b> The County will update the Master Circulation Plan for Transportation, using information from the Hazard Mitigation Plan to identify and reduce risk to the transportation system and maintain emergency access.</p>	New and Existing	All Hazards	1, 2, 4, 5	Department of Engineering and Planning	County budget	Increased planning	Low	Within 5 years	High	LPR	PP, PR, ES
2021-Sussex County-011	Adopt the Wastewater Management Plan	<p><b>Problem:</b> The County Wastewater Management Plan is currently in draft form and requires adoption.</p> <p><b>Solution:</b> The County's Wastewater Management Plan is currently in draft form. Prior to adoption, the County will use information from the Hazard Mitigation Plan to make updates to reduce risk to the wastewater management system.</p>	New and Existing	Severe Weather, Flood, Hurricane, Nor'Easter	2, 6	Department of Engineering and Planning	County budget	Reduction in risk of spills, better preparedness	Low	Within 5 years	High	LPR	PR, PP





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-Sussex County-012	Update Stormwater Pollution Prevention Plan	<p><b>Problem:</b> The County’s Stormwater Pollution Prevention Plan requires update.</p> <p><b>Solution:</b> The County will update the Stormwater Pollution Prevention Plan, using information from the Hazard Mitigation Plan to assist in the update regarding storms and stormwater.</p>	New and Existing	Flood, Severe Weather	2, 4, 5	Department of Engineering and Planning	County budget	Updated plan with integrated information	Low	1 year	High	LPR	PR
2021-Sussex County-013	PPE for Disease Outbreak Events	<p><b>Problem:</b> During the current COVID-19 pandemic, an adequate supply of personal protective equipment (PPE) for County staff was difficult to come by. Without proper PPE, it puts staff and emergency responders at risk to the spread of infectious diseases.</p> <p><b>Solution:</b> The County will purchase PPE to create a stockpile for municipal staff. This will include gloves, masks, gowns, antibacterial handwash, antiviral cleaning solutions, sanitizers, and misters.</p>	N/A	Disease Outbreak	1, 3, 5	Department of Health and Human Services	BRIC, County budget	Increase protection from diseases; decrease risk of disease spread	High	1 year	High	LPR	ES
2021-Sussex County-014	Disinfecting Equipment for County Facilities	<p><b>Problem:</b> In order to keep County facilities open and functioning during disease outbreak events, the County will require emerging technologies for the disinfecting of County facilities</p> <p><b>Solution:</b> The County Division of Facilities staff will continue to research emerging technologies for the disinfecting of buildings that would allow for continuing operations during disease outbreak events. The Facilities Department will deploy / install technologies that are determined to be cost-effective</p>	Existing	Disease Outbreak	1, 3, 5	Department of Health and Human Services, Facilities	BRIC, County budget	Maintain continuity of operations during disease outbreak events	TBD by available technologies	Within 5 years	High	SIP	PP
2021-Sussex County-015	Increased Computer Technology and Software for Health Department	<p><b>Problem:</b> The Health Department requires increased technological capabilities to track disease outbreak events, notify the public of important updates, share information between departments, and allow for registration for testing, treatment, and vaccination</p> <p><b>Solution:</b> The County will invest in funds to upgrade the Health Department’s computer hardware and software capabilities to better identify,</p>	N/A	Disease Outbreak	1, 3, 5	Department of Health and Human Services	County budget	Increase County capabilities in disease outbreak events	Medium	1 year	High	LPR, EAP	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
		respond to, and treat disease outbreak events.											
2021-Sussex County-016	Office of Bridges and Traffic Backup Power	<p><b>Problem:</b> Backup power sources are necessary to maintain critical services for critical facilities. The Office of Bridges and Traffic lacks a backup power source.</p> <p><b>Solution:</b> Facilities will research what size generator is needed to power the Office of Bridges and Traffic. The County will then purchase and install the selected generator and necessary electrical components to supply backup power to the Office of Bridges and Traffic.</p>	Existing	Severe Weather, Severe Winter Weather, Hurricane, Nor'Easter	1, 3, 6	Facilities	FEMA HMGP and BRIC, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, County Budget	Ensure s continuity of operations of Office of Bridge s and Traffic	\$50,000	Withi n 5 ye ars	Hig h	SIP	ES
2021-Sussex County-017	County Facilities Hazard Surveying	<p><b>Problem:</b> County facilities should be protected from hazards to maintain continuity of operations. Numerous facilities are aging and were built to standards that are lower than modern building requirements.</p> <p><b>Solution:</b> The County will complete the following surveys of County Facilities:</p> <ul style="list-style-type: none"> <li>• Soil and shake characteristics with potential vulnerabilities to earthquake forces.</li> <li>• Structures that may be at risk during an earthquake</li> <li>• Wind vulnerabilities (buildings were designed to 70 mph; new updated code is 90 mph)</li> <li>• Structural characteristics that make them vulnerable to excessive snow and ice loads</li> </ul> <p>The County will then pursue necessary structural improvements that are identified by these surveys.</p>	Existing	Earthquake , Severe Weather, Severe Winter Weather	1, 3, 6	Facilities	County Budget	Protect ion of County facilitie s.	Staff time for surve ys	Withi n 5 ye ars	Hig h	SIP	PP
2021-Sussex	Frankford Wastewater	<p><b>Problem:</b> The Frankford Wastewater Treatment facility requires upgrade of the force main to prevent spills of sewage.</p>	Existing	Hazardous Materials	2	County Facilities, Sussex	BRIC, County budget	Prevent ion of spills	\$3.5-4	Withi n 5	Hig h	SIP	PP





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
County-018	Facility Upgrades	<b>Solution:</b> County Facilities will work with the Sussex County Utilities Authority to upgrade the force main at the Wastewater Facility.				County Municipal Utilities Authority			million	years			

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 9.1-16. 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-Sussex County-001	Sheltering	1	0	1	1	1	1	0	1	1	1	1	0	1	1	11	High ⚠
2021-Sussex County-002	Warming and Cooling Centers	1	0	1	1	1	1	0	1	1	1	1	0	1	1	11	High
2021-Sussex County-003	Increase Vegetation Management Capabilities	0	1	1	1	1	1	1	1	1	1	1	0	1	1	12	High
2021-Sussex County-004	DPW Snow Load Retrofit	1	1	1	1	1	1	0	1	1	1	1	0	1	1	12	High
2021-Sussex County-005	FEMA HMA Informational Workshops	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	High
2021-Sussex County-006	Wildfire Outreach	1	1	1	1	1	1	1	1	1	1	0	1	1	1	13	High
2021-Sussex County-007	Repetitive Loss Mitigation Support	1	1	1	1	1	1	0	1	0	0	1	0	1	1	10	High
2021-Sussex County-008	Update Farmland Preservation Plan	0	1	1	1	1	1	1	1	1	1	1	0	1	1	12	High
2021-Sussex County-009	Update Land Development Standards	0	1	1	1	1	1	1	1	1	1	1	0	1	1	12	High
2021-Sussex County-010	Master Circulation Plan for Transportation Update	1	1	1	1	1	1	1	1	1	1	1	0	1	1	12	High
2021-Sussex County-011	Adopt the Wastewater Management Plan	0	1	1	1	1	1	1	1	1	1	1	0	1	1	12	High
2021-Sussex County-012	Update Stormwater Pollution Prevention Plan	0	1	1	1	1	1	1	1	1	1	1	1	1	1	13	High
2021-Sussex County-013	PPE for Disease Outbreak Events	1	0	1	1	1	1	0	0	1	1	0	1	1	1	10	High





Initiative Number	Mitigation Initiative Name	Life Safety	Property Protection	Cost Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community	Total	High / Medium / Low
2021-Sussex County-014	Disinfecting Equipment for County Facilities	1	0	1	1	1	1	0	1	1	1	0	0	1	1	12	High
2021-Sussex County-015	Increased Computer Technology and Software for Health Department	1	0	1	1	1	1	0	0	1	1	0	1	1	1	10	High
2021-Sussex County-016	Office of Bridges and Traffic Backup Power	1	1	1	1	1	1	0	1	1	1	1	0	1	1	12	High
2021-Sussex County-017	County Facilities Hazard Surveying	1	1	1	1	1	1	1	1	1	1	1	0	1	1	13	High
2021-Sussex County-018	Frankford Wastewater Facility Upgrades	0	1	1	1	1	1	0	1	1	1	0	0	1	1	10	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 9.1-17. 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	X	X		X			X
Disease Outbreak	X	X	X		X			X
Drought	X	X	X		X			X
Earthquake	X	X	X		X			X
Flood	X	X	X		X			X
Geologic	X	X	X		X	X	X	X
Hazardous Materials	X	X	X		X			X
Hurricane and Tropical Storm	X	X	X		X			X
Invasive Species	X	X	X		X			X
Nor’Easter	X	X	X		X			X
Severe Weather	X	X	X		X	X	X	X
Severe Winter Weather	X	X	X		X			X
Wildfire	X	X	X		X			X

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

- RED** high ranked hazard
- ORANGE** medium ranked hazard
- YELLOW** low ranked hazard





Action Worksheet			
<b>Project Name:</b>	Sheltering		
<b>Project Number:</b>	2021-Sussex County-001		
Risk / Vulnerability			
<b>Hazard(s) of Concern:</b>	All hazards		
<b>Description of the Problem:</b>	Additional sheltering locations are needed to meet the County's sheltering needs.		
Action or Project Intended for Implementation			
<b>Description of the Solution:</b>	The County will establish new shelters at the Sussex County Fair Grounds (capacity of 200) and the Fredon Civic Center (capacity of 90). Shelters will be designed to meet FEMA standards and include backup power.		
<b>Is this project related to a Critical Facility or Lifeline?</b>	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
<b>Level of Protection:</b>	500-year	<b>Estimated Benefits (losses avoided):</b>	Increased sheltering capacity
<b>Useful Life:</b>	25 years	<b>Goals Met:</b>	1, 3, 6
<b>Estimated Cost:</b>	High	<b>Mitigation Action Type:</b>	Structure and Infrastructure Project
Plan for Implementation			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	5 years
<b>Estimated Time Required for Project Implementation:</b>	Within 2 years	<b>Potential Funding Sources:</b>	HMGP, BRIC, USDA Community Facilities Grant Program, County budget
<b>Responsible Organization:</b>	SCDEM	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard mitigation, Emergency management
Three Alternatives Considered (including No Action)			
<b>Alternatives:</b>	<b>Action</b>	<b>Estimated Cost</b>	<b>Evaluation</b>
	No Action	\$0	Current problem continues
	Purchase multi-use trailers	\$1M per trailer	Require deployment, limited space
	Purchase tents	\$100,000 per tent and supplies	Not appropriate for during hazard events or cold weather.
Progress Report (for plan maintenance)			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			



Action Worksheet		
<b>Project Name:</b>	Sheltering	
<b>Project Number:</b>	2021-Sussex County-001	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Provides sheltering for the region
Property Protection	0	
Cost-Effectiveness	1	
Technical	1	The project is technically feasible
Political	1	
Legal	1	The County has the legal authority to complete the project
Fiscal	0	The project requires funding support
Environmental	1	
Social	1	Project would benefit and serve the region
Administrative	1	
Multi-Hazard	1	All hazards
Timeline	0	Within 5 years
Agency Champion	1	SCDEM
Other Community Objectives	1	
<b>Total</b>	11	
<b>Priority (High/Med/Low)</b>	High	



Action Worksheet			
<b>Project Name:</b>	DPW Snow Load Retrofit		
<b>Project Number:</b>	2021-Sussex County-004		
Risk / Vulnerability			
<b>Hazard(s) of Concern:</b>	Severe Weather, Severe Winter Weather		
<b>Description of the Problem:</b>	The Department of Public Works building does not have a roof that meets current standards for snow load. Failure of the roof could lead to a reduction in critical services by DPW before, during, and after hazard events.		
Action or Project Intended for Implementation			
<b>Description of the Solution:</b>	The County Facilities Department will retrofit the roof to meet current standards for snow load on the County Department of Public Works building located on Route 206.		
<b>Is this project related to a Critical Facility or Lifeline?</b>	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
<b>Level of Protection:</b>	500-year	<b>Estimated Benefits (losses avoided):</b>	Reduction in risk of roof failure and protection of critical services
<b>Useful Life:</b>	25 years	<b>Goals Met:</b>	1, 2, 6
<b>Estimated Cost:</b>	High	<b>Mitigation Action Type:</b>	Structure and Infrastructure Project
Plan for Implementation			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	3 years
<b>Estimated Time Required for Project Implementation:</b>	1 year	<b>Potential Funding Sources:</b>	HMGP, BRIC, USDA Community Facilities Grant Program, County budget
<b>Responsible Organization:</b>	DPW, Facilities	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard mitigation, Emergency management
Three Alternatives Considered (including No Action)			
<b>Alternatives:</b>	<b>Action</b>	<b>Estimated Cost</b>	<b>Evaluation</b>
	No Action	\$0	Current problem continues
	Build new DPW Garage	High	Costly, unnecessary
	Build small backup garage in case of failure	High	Costly, facility unlikely to be used
Progress Report (for plan maintenance)			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			



Action Worksheet		
<b>Project Name:</b>	DPW Snow Load Retrofit	
<b>Project Number:</b>	2021-Sussex County-004	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Protects critical services of DPW
Property Protection	1	Protects DPW building from Winter Weather and Nor'Easter damages
Cost-Effectiveness	1	
Technical	1	The project is technically feasible
Political	1	
Legal	1	The County has the legal authority to complete the project
Fiscal	0	The project requires funding support
Environmental	1	
Social	1	
Administrative	1	
Multi-Hazard	1	Severe Winter Weather, Nor'Easter
Timeline	0	5 years
Agency Champion	1	DPW, Facilities
Other Community Objectives	1	
<b>Total</b>	12	
<b>Priority (High/Med/Low)</b>	High	



Action Worksheet			
<b>Project Name:</b>	Repetitive Loss Mitigation Support		
<b>Project Number:</b>	2021-Sussex County-007		
Risk / Vulnerability			
<b>Hazard(s) of Concern:</b>	Flood, Severe Storm		
<b>Description of the Problem:</b>	Frequent flooding events have resulted in damages to residential properties. These properties have been repetitively flooded as documented by paid NFIP claims. The County has 16 repetitive loss properties but other properties may be impacted by flooding as well.		
Action or Project Intended for Implementation			
<b>Description of the Solution:</b>	Support the mitigation of vulnerable structures via retrofit (e.g. elevation, flood-proofing) or acquisition/relocation to protect them from future damage; repetitive loss and severe repetitive loss properties should be a priority, when applicable. Phase 1: Identify appropriate candidates and determine most cost-effective mitigation option Phase 2: Work with the property owners to implement selected action based on available funding from FEMA and local match availability.		
<b>Is this project related to a Critical Facility or Lifeline?</b>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
<b>Level of Protection:</b>	1% annual chance flood event + freeboard ( <i>in accordance with flood ordinance</i> )	<b>Estimated Benefits (losses avoided):</b>	Eliminates flood damage to homes and residents, creates open space, increasing flood storage.
<b>Useful Life:</b>	Acquisition: Lifetime Elevation: 30 years (residential)	<b>Goals Met:</b>	2
<b>Estimated Cost:</b>	\$2 Million	<b>Mitigation Action Type:</b>	Structure and Infrastructure Project
Plan for Implementation			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	6-12 months
<b>Estimated Time Required for Project Implementation:</b>	Three years	<b>Potential Funding Sources:</b>	FEMA HMGP and FMA, local cost share by residents
<b>Responsible Organization:</b>	SCDEM, local NFIP Floodplain Administrator, supported by homeowners	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard Mitigation
Three Alternatives Considered (including No Action)			
<b>Alternatives:</b>	<b>Action</b>	<b>Estimated Cost</b>	<b>Evaluation</b>
	No Action	\$0	Current problem continues
	Elevate homes	\$500,000	When this area floods, the entire area is impacted; elevating homes would not eliminate the problem and still lead to road closures and impassable roads
	Elevate roads	\$500,000	Elevated roadways would not protect the homes from flood damages
Progress Report (for plan maintenance)			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			



Action Worksheet		
<b>Project Name:</b>	Repetitive Loss Mitigation Support	
<b>Project Number:</b>	2021-Sussex County-007	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
<b>Life Safety</b>	1	Families moved out of high-risk flood areas.
<b>Property Protection</b>	1	Properties removed from high-risk flood areas.
<b>Cost-Effectiveness</b>	1	Cost-effective project
<b>Technical</b>	1	Technically feasible project
<b>Political</b>	1	
<b>Legal</b>	1	The County has the legal authority to conduct the project.
<b>Fiscal</b>	0	Project will require grant funding.
<b>Environmental</b>	1	
<b>Social</b>	0	Project would remove families from the flood prone areas of the County.
<b>Administrative</b>	0	
<b>Multi-Hazard</b>	1	Flood, Severe Weather
<b>Timeline</b>	0	3 years
<b>Agency Champion</b>	1	SCDEM, local NFIP Floodplain Administrator, supported by homeowners
<b>Other Community Objectives</b>	1	
<b>Total</b>	10	
<b>Priority (High/Med/Low)</b>	High	



Action Worksheet			
<b>Project Name:</b>	PPE for Disease Outbreak Events		
<b>Project Number:</b>	2021-Sussex County-013		
Risk / Vulnerability			
<b>Hazard(s) of Concern:</b>	Disease Outbreak		
<b>Description of the Problem:</b>	During the current COVID-19 pandemic, an adequate supply of personal protective equipment (PPE) for County staff was difficult to come by. Without proper PPE, it puts staff and emergency responders at risk to the spread of infectious diseases.		
Action or Project Intended for Implementation			
<b>Description of the Solution:</b>	The County will purchase PPE to create a stockpile for municipal staff. This will include gloves, masks, gowns, antibacterial handwash, antiviral cleaning solutions, sanitizers, and misters.		
<b>Is this project related to a Critical Facility or Lifeline?</b>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
<b>Level of Protection:</b>	PPE	<b>Estimated Benefits (losses avoided):</b>	Increase protection from diseases; decrease risk of disease spread
<b>Useful Life:</b>	Supply needs to be replaced after use	<b>Goals Met:</b>	1, 3, 5
<b>Estimated Cost:</b>	High	<b>Mitigation Action Type:</b>	Local Plans and Regulations
Plan for Implementation			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	Within 2 years
<b>Estimated Time Required for Project Implementation:</b>	1 year	<b>Potential Funding Sources:</b>	BRIC, County budget
<b>Responsible Organization:</b>	Department of Health and Human Services	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard Mitigation, Emergency Management
Three Alternatives Considered (including No Action)			
<b>Alternatives:</b>	<b>Action</b>	<b>Estimated Cost</b>	<b>Evaluation</b>
	No Action	\$0	Current problem continues
	Shut down during disease outbreak events	N/A	Loss of continuity of operations
	Rely on state/federal distribution	\$0	Supply not guaranteed
Progress Report (for plan maintenance)			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			



Action Worksheet		
<b>Project Name:</b>	PPE for Disease Outbreak Events	
<b>Project Number:</b>	2021-Sussex County-013	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Protects life from disease outbreak
Property Protection	0	
Cost-Effectiveness	1	Cost-effective project
Technical	1	Technically feasible project
Political	1	
Legal	1	The County has the legal authority to conduct the project.
Fiscal	0	Project will require funding support.
Environmental	0	
Social	1	Project would help protect families from disease outbreak events
Administrative	1	
Multi-Hazard	0	Disease Outbreak
Timeline	1	1 year
Agency Champion	1	Department of Health and Human Services
Other Community Objectives	1	
<b>Total</b>	10	
<b>Priority (High/Med/Low)</b>	High	





Action Worksheet			
<b>Project Name:</b>	Disinfecting Equipment for County Facilities		
<b>Project Number:</b>	2021-Sussex County-014		
Risk / Vulnerability			
<b>Hazard(s) of Concern:</b>	Disease Outbreak		
<b>Description of the Problem:</b>	In order to keep County facilities open and functioning during disease outbreak events, the County will require emerging technologies for the disinfecting of County facilities		
Action or Project Intended for Implementation			
<b>Description of the Solution:</b>	The County Department of Health and Human Services staff will continue to research emerging technologies for the disinfecting of buildings that would allow for continuing operations during disease outbreak events. The Facilities Department will install technologies that are determined to be cost-effective.		
<b>Is this project related to a Critical Facility or Lifeline?</b>	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
<b>Level of Protection:</b>	TBD by available technologies	<b>Estimated Benefits (losses avoided):</b>	Maintain continuity of operations during disease outbreak events
<b>Useful Life:</b>	25 years	<b>Goals Met:</b>	
<b>Estimated Cost:</b>	TBD by available technologies	<b>Mitigation Action Type:</b>	Structure and Infrastructure Project
Plan for Implementation			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	Within 5 years
<b>Estimated Time Required for Project Implementation:</b>	Within 2 years	<b>Potential Funding Sources:</b>	BRIC, County budget
<b>Responsible Organization:</b>	Department of Health and Human Services, Facilities	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard mitigation, emergency management
Three Alternatives Considered (including No Action)			
<b>Alternatives:</b>	<b>Action</b>	<b>Estimated Cost</b>	<b>Evaluation</b>
	No Action	\$0	Current problem continues
	Hire outside consultant to address disease outbreak events	High	High cost, may not be needed at all times
	Set up plans to work remotely during all disease outbreak events	N/A	Full remote setting not possible for critical services
Progress Report (for plan maintenance)			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			



Action Worksheet		
<b>Project Name:</b>	Disinfecting Equipment for County Facilities	
<b>Project Number:</b>	2021-Sussex County-014	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Provides protection for critical services for the County
Property Protection	0	
Cost-Effectiveness	1	
Technical	1	The project is technically feasible
Political	1	
Legal	1	The County has the legal authority to complete the project
Fiscal	0	The project requires funding support
Environmental	1	
Social	1	Project would benefit and serve the region
Administrative	1	
Multi-Hazard	0	Disease Outbreak
Timeline	0	Within 5 years
Agency Champion	1	Department of Health and Human Services, Facilities
Other Community Objectives	1	
<b>Total</b>	12	
<b>Priority (High/Med/Low)</b>	High	



Action Worksheet			
<b>Project Name:</b>	Office of Bridges and Traffic Backup Power		
<b>Project Number:</b>	2021-Sussex County-016		
<b>Risk / Vulnerability</b>			
<b>Hazard(s) of Concern:</b>	Severe Weather, Severe Winter Weather, Hurricane, Nor'Easter		
<b>Description of the Problem:</b>	Backup power sources are necessary to maintain critical services for critical facilities. The Office of Bridges and Traffic lacks a backup power source.		
<b>Action or Project Intended for Implementation</b>			
<b>Description of the Solution:</b>	Facilities will research what size generator is needed to power the Office of Bridges and Traffic. The County will then purchase and install the selected generator and necessary electrical components to supply backup power to the Office of Bridges and Traffic.		
<b>Is this project related to a Critical Facility?</b>	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
<b>Level of Protection:</b>	N/A	<b>Estimated Benefits (losses avoided):</b>	Ensures continuity of operations of Office of Bridges and Traffic
<b>Useful Life:</b>	20 years	<b>Goals Met:</b>	1, 3
<b>Estimated Cost:</b>	\$50,000	<b>Mitigation Action Type:</b>	Structure and Infrastructure Projects (SIP)
<b>Plan for Implementation</b>			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	Within 5 years
<b>Estimated Time Required for Project Implementation:</b>	1 year	<b>Potential Funding Sources:</b>	FEMA HMGP and BRIC, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, County Budget
<b>Responsible Organization:</b>	County Facilities	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard Mitigation, Emergency Management
<b>Three Alternatives Considered (including No Action)</b>			
<b>Alternatives:</b>	<b>Action</b>	<b>Estimated Cost</b>	<b>Evaluation</b>
	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
<b>Progress Report (for plan maintenance)</b>			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			



Action Worksheet		
<b>Project Name:</b>	Office of Bridges and Traffic Backup Power	
<b>Project Number:</b>	2021-Sussex County-016	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Project will protect critical services of Office of Bridges and Traffic
Property Protection	1	Project will protect building from power loss.
Cost-Effectiveness	1	
Technical	1	
Political	1	
Legal	1	The County has the legal authority to complete the project.
Fiscal	0	Project requires funding support.
Environmental	1	
Social	1	
Administrative	1	
Multi-Hazard	1	Severe Weather, Severe Winter Weather, Hurricane, Nor'Easter
Timeline	0	Within 5 years
Agency Champion	1	County Facilities
Other Community Objectives	1	
<b>Total</b>	12	
<b>Priority (High/Med/Low)</b>	High	



Action Worksheet			
<b>Project Name:</b>	Frankford Wastewater Facility Upgrades		
<b>Project Number:</b>	2021-Sussex County-018		
<b>Risk / Vulnerability</b>			
<b>Hazard(s) of Concern:</b>	Hazardous Materials		
<b>Description of the Problem:</b>	The Frankford Wastewater Treatment facility requires upgrade of the force main to prevent spills of sewage.		
<b>Action or Project Intended for Implementation</b>			
<b>Description of the Solution:</b>	County Facilities will work with the Sussex County Utilities Authority to upgrade the force main at the Wastewater Facility.		
<b>Is this project related to a Critical Facility?</b>		Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
<b>Level of Protection:</b>	TBD by force main design	<b>Estimated Benefits (losses avoided):</b>	Prevention of spills
<b>Useful Life:</b>	20 years	<b>Goals Met:</b>	2
<b>Estimated Cost:</b>	\$3.5-4 million	<b>Mitigation Action Type:</b>	Structure and Infrastructure Project
<b>Plan for Implementation</b>			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	Within 5 years
<b>Estimated Time Required for Project Implementation:</b>	Within 5 years	<b>Potential Funding Sources:</b>	BRIC, County budget
<b>Responsible Organization:</b>	County Facilities, Sussex County Municipal Utilities Authority	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard Mitigation
<b>Three Alternatives Considered (including No Action)</b>			
<b>Alternatives:</b>	<b>Action</b>	<b>Estimated Cost</b>	<b>Evaluation</b>
	No Action	\$0	Problem continues.
	Build secondary facility	High	Very high cost
	Remove facility	N/A	Removal of facility not a possibility
<b>Progress Report (for plan maintenance)</b>			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			



Action Worksheet		
<b>Project Name:</b>	Frankford Wastewater Facility Upgrades	
<b>Project Number:</b>	2021-Sussex County-018	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	0	
Property Protection	1	Increase capacity of facility to prevent spills
Cost-Effectiveness	1	
Technical	1	
Political	1	
Legal	1	
Fiscal	0	Project requires funding support
Environmental	1	Prevent spills
Social	1	
Administrative	1	
Multi-Hazard	0	Hazardous Materials
Timeline	0	Within 5 years
Agency Champion	1	County Facilities, Sussex County Municipal Utilities Authority
Other Community Objectives	1	
<b>Total</b>	10	
<b>Priority (High/Med/Low)</b>	High	



## 9.2 BOROUGH OF ANDOVER

This section presents the jurisdictional annex for the Borough of Andover. The annex includes a general overview of the Borough of Andover; an assessment of the Borough of Andover’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.

### 9.2.1 Hazard Mitigation Planning Team

The Borough of Andover 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 9.2-1. Hazard Mitigation Planning Team

Primary Point of Contact		Alternate Point of Contact
Name / Title: John Hoag, Emergency Management Coordinator Address: 137 Main Street, Andover, NJ 07821 Phone Number: (862) 268-3508 Email: j.hoag@andoverboroughnj.org		Name / Title: Jessica Casella, Deputy Emergency Management Coordinator Address: 137 Main Street, Andover, NJ 07821 Phone Number: (973) 786-6688 Email: jessiepw@yahoo.com
NFIP Floodplain Administrator		
Name / Title: Harold Pellow, Engineer Address: 137 Main Street, Andover, NJ 07821 Phone Number: (973) 948-6463		
Name	Title	Method of Participation
John Hoag	Emergency Management Coordinator	Primary point of contact, attended meetings, provided information and data, contributed to mitigation strategy, reviewed annex draft and provided comments, reviewed final annex*.
Jessica Casella	Deputy Emergency Management Coordinator	Alternate point of contact, reviewed annex*
Harold Pellow	Engineer	NFIP floodplain administrator, reviewed annex*
Beth Brothman	Borough Clerk	Reviewed draft annex and provided comments.
John Morgan	Mayor	Reviewed annex*
Rod Schmitt	Building Code Official	Reviewed annex*
Michelle LaStarza	CFO	Reviewed annex*

\*Refer to Jurisdictional Annex Review Sign-Off Sheet in Appendix B.

### 9.2.2 Jurisdiction Profile

The Borough of Andover is located in southern Sussex County and bordered to the north, east and west by Andover Township and to the south by Green Township. Andover Junction Brook and Kymer Brook are two





bodies of water that flow through the Borough. The Borough has a total area of 1.47 square miles and contains one unincorporated community, Andover Junction.

According to the U.S. Census, the 2010 population for the Borough of Andover was 606. The estimated 2018 population was 594, a 2.0 percent decrease from the 2010 Census. Data from the 2018 U.S. Census American Community Survey indicate that 5.1 percent of the population is 5 years of age or younger and 16.7 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.

### 9.2.3 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 9.2-2 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 9.2-2. Recent and Expected Future Development**

Type of Development	2015		2016		2017		2018		2019	
<b>Number of Building Permits for New Construction Issued Since the Previous HMP</b>										
	<b>Total</b>	<b>Within SFHA</b>	<b>Total</b>	<b>Within SFHA</b>	<b>Total</b>	<b>Within SFHA</b>	<b>Total</b>	<b>Within SFHA</b>	<b>Total</b>	<b>Within SFHA</b>
Single and Two-Family Units	0	0	0	0	0	0	0	0	0	0
Multi-Family	0	0	0	0	0	0	0	0	0	0
Other (commercial, mixed-use, etc.)	0	0	0	0	0	0	0	0	0	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		
<b>Recent Major Development and Infrastructure from 2015 to Present</b>										
None identified										
<b>Known or Anticipated Major Development and Infrastructure in the Next Five (5) Years</b>										
None anticipated										

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

### 9.2.4 Capability Assessment

Section 5 (Capability Assessment) describes the components included in the capability assessment and their significance for hazard mitigation planning. The Borough of Andover 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 Borough of Andover 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 Borough of Andover and where hazard mitigation has been integrated.

**Table 9.2-3. 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.
<b>Codes, Ordinances, &amp; Requirements</b>					
<b>Building Code</b>	Yes	State & Local	Yes	Yes	-
<b>Comment:</b> <ul style="list-style-type: none"> <li>• 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</li> <li>• The Construction Official is responsible for this code in compliance with State Uniform Construction Code Act (N.J.S. 52:27D-119 et seq.).</li> </ul>					
<b>Zoning Code</b>	Yes	Local	Yes – if municipality has a Planning Board	Yes	-
<b>Comment:</b> <ul style="list-style-type: none"> <li>• 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.</li> <li>• The Zoning Department is responsible for this code in compliance with Chapter 134-Zoning.               <ul style="list-style-type: none"> <li>○ The purpose of this chapter is to encourage and promote the most appropriate use and logical development of land throughout the municipality; and therefore, to limit and to restrict and specify distances between the buildings and structures permitted therein, the nature and extent of their use and the nature and extent of the land usages in said districts.</li> </ul> </li> </ul>					
<b>Subdivisions</b>	Yes	Local	Yes – if municipality has a Planning Board	Yes	-
<b>Comment:</b> <ul style="list-style-type: none"> <li>• 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</li> </ul>					



	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.
<p>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.</p> <ul style="list-style-type: none"> <li>The Zoning Department is responsible for this ordinance in compliance with Chapter 121- Subdivision of Land. <ul style="list-style-type: none"> <li>The purpose of this chapter shall be to provide rules, regulations and standards to guide land subdivision in the Borough of Andover in order to promote the public health, safety, convenience and general welfare of the Borough. It shall be administered to ensure the orderly growth and development, the conservation, protection and proper use of land and adequate provision for traffic circulation, utilities and services.</li> </ul> </li> </ul>					
<b>Stormwater Management</b>	Yes	Local	Yes	Yes	-
<p><b>Comment:</b></p> <ul style="list-style-type: none"> <li>See Title 7 of the NJ Administrative Code, N.J.A.C. 7:8</li> <li>The Engineering Department is responsible for this ordinance in compliance with Chapter 115- Stormwater Control. <ul style="list-style-type: none"> <li>It is the purpose of this chapter to establish minimum stormwater management requirements and controls for "major development"</li> </ul> </li> </ul>					
<b>Post-Disaster Recovery</b>	No	-	No	-	-
<p><b>Comment:</b></p>					
<b>Real Estate Disclosure</b>	Yes	State, Division of Consumer Affairs	Yes	No	-
<p><b>Comment:</b></p> <ul style="list-style-type: none"> <li>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.</li> </ul>					
<b>Growth Management</b>	Yes	Local	Yes – if municipality has a Planning Board	Yes	-
<p><b>Comment:</b></p> <ul style="list-style-type: none"> <li>Discussed in Chapter 121: Subdivision of Land.</li> <li>State Mandated on a municipal level. See Zoning Ordinance; Also - Plan Endorsement Process via the State Development &amp; 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.</li> </ul>					
<b>Site Plan Review</b>	Yes	Local	Yes – if municipality has a Planning Board	Yes	-
<p><b>Comment:</b></p> <ul style="list-style-type: none"> <li>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 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.</li> <li>The Planning and Zoning Board is responsible for these requirements in compliance with Andover Borough Code Chapter 109.</li> </ul>					
<b>Environmental Protection</b>	Yes	-	No	Yes	-
<p><b>Comment:</b></p> <ul style="list-style-type: none"> <li>Chapter 9 Environmental Commission establishes an Environmental Commission in order to provide for the protection, development and use of natural resources, including water resources.</li> </ul>					
<b>Flood Damage Prevention</b>	Yes	State & Local	Yes	No	2021-Borough of Andover-004



	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.
<b>Comment:</b>					
<ul style="list-style-type: none"> <li>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.</li> <li>Chapter 74 Flood Damage Prevention. The Ordinance designates the Engineer as the Floodplain Administrator. The ordinance requires update to include the state mandated freeboard requirement.</li> </ul>					
<b>Wellhead Protection</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Emergency Management</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Climate Change</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Disaster Recovery Ordinance</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Disaster Reconstruction Ordinance</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Other [Special Purpose Ordinances (i.e., sensitive areas, steep slope)]</b>	No	-	-	-	-
<b>Comment:</b>					
<b>Planning Documents</b>					
<b>Comprehensive / Master Plan</b>	Yes	Local	Yes	Yes	-
<b>Comment:</b>					
<ul style="list-style-type: none"> <li>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.</li> <li>The Planning Board is responsible for this plan in compliance with Andover Borough Master Plan and NJSA 40:55D-89.</li> </ul>					
<b>Capital Improvement Plan</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Disaster Debris Management Plan</b>	No	-	No	-	2021-Borough of Andover-005
<b>Comment:</b>					
<b>Floodplain or Watershed Plan</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Stormwater Management Plan</b>	Yes	Local	Yes	Yes	-
<b>Comment:</b>					



	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.
<ul style="list-style-type: none"> <li>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.</li> <li>The Engineer is responsible for this plan in compliance with Andover Borough Stormwater Management Plan, NJSA 12:5-3, and NJAC 7:8.</li> </ul>					
<b>Stormwater Pollution Prevention Plan</b>	No	-	Yes	-	-
<b>Comment:</b>					
<ul style="list-style-type: none"> <li>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.</li> </ul>					
<b>Urban Water Management Plan</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Habitat Conservation Plan</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Economic Development Plan</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Shoreline Management Plan</b>	No	-	Yes – if located in a coastal zone	-	-
<b>Comment:</b>					
<ul style="list-style-type: none"> <li>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.</li> </ul>					
<b>Community Wildfire Protection Plan</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Community Forest Management Plan</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Transportation Plan</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Agriculture Plan</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Climate Action Plan</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Tourism Plan</b>	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.
<i>Comment:</i>					
<b>Business Development Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Other: Open Space Plan</b>	Yes	Local	No	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>The Open Space department is in compliance with Andover Borough Open Space Plan.</li> </ul>					
<b>Response/Recovery Planning</b>					
<b>Comprehensive Emergency Management Plan (CEMP) / Emergency Operations Plan (EOP)</b>	Yes	Local	Yes	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>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.</li> <li>The Emergency Management department is responsible for this plan, which was adopted in 2014.</li> </ul>					
<b>Threat &amp; Hazard Identification &amp; Risk Assessment (THIRA)</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Post-Disaster Recovery Plan</b>	Yes	Local	No	Yes	-
<i>Comment: The Emergency Management department is responsible for this plan, which was adopted in 2014.</i>					
<b>Continuity of Operations Plan</b>	Yes	Local	No	Yes	-
<i>Comment: The Emergency Management department is responsible for this plan, which was adopted in 2014.</i>					
<b>Public Health Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Other</b>	No	-	No	-	-
<i>Comment:</i>					

**Table 9.2-4. Development and Permitting Capability**

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

**ADMINISTRATIVE AND TECHNICAL CAPABILITY**

The table below summarizes potential staff and personnel resources available to the Borough of Andover.

**Table 9.2-5. Administrative and Technical Capabilities**

Staff/Personnel Resource	Available?	Department/Agency/Position
<b>Administrative Capability</b>		
Planning Board	Yes	Planning/Zoning Board





Staff/Personnel Resource	Available?	Department/Agency/Position
Mitigation Planning Committee	No	-
Environmental Board / Commission	No	-
Open Space Board / Committee	Yes	Open Space
Economic Development Commission / Committee	No	-
Warning Systems / Services (reverse 911, outdoor warning signals)	Yes	Reverse 911, siren at Fire House
Maintenance program to reduce risk	No	-
Mutual aid agreements	Yes	County, Andover Township, Byram Township and Green Township for fire response
<b>Technical/Staffing Capability</b>		
Planners or engineers with knowledge of land development and land management practices	Yes	Professional contract
Engineers or professionals trained in building or infrastructure construction practices	Yes	Professional contract
Planners or engineers with an understanding of natural hazards	Yes	Professional contract
Staff with training in benefit/cost analysis	Yes	Borough Engineer
Staff with training in green infrastructure	Yes	Borough Engineer
Staff with education/knowledge/training in low impact development	Yes	Borough Engineer
Surveyor	Yes	Engineering services
Stormwater engineer	No	-
Personnel skilled or trained in GIS applications	Yes	Borough Engineer
Local or state water quality professional	No	-
Scientist familiar with natural hazards in local area	No	-
Emergency manager	Yes	Emergency Management Coordinator
Watershed planner	No	-
Environmental specialist	No	-
Grant writers	No	-
Resilience Officer	No	-
Other: NFIP Floodplain Administrator	Yes	Borough Engineer
Other: Professionals trained in conducting damage assessments	Yes	Borough Engineer

**FISCAL CAPABILITY**

The table below summarizes financial resources available to the Borough of Andover.

**Table 9.2-6. Fiscal Capabilities**

Financial Resource	Accessible or Eligible to Use?
Community Development Block Grants (CDBG, CDBG-DR)	No
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service	Yes
Incur Debt through General Obligation Bonds	Yes
Incur Debt through Special Tax Bonds	No
Incur Debt through Private Activity Bonds	No
Withhold Public Expenditures in Hazard-Prone Areas	No



Financial Resource	Accessible or Eligible to Use?
State-Sponsored Grant Programs	No
Development Impact Fees for Homebuyers or Developers	Yes – COAH fees
Clean Water Act 319 Grants (Nonpoint Source Pollution)	No
Other: Open Space Acquisition Funding Programs	Yes

**EDUCATION AND OUTREACH CAPABILITY**

The table below summarizes the education and outreach resources available to the Borough of Andover.

**Table 9.2-7. Education and Outreach Capabilities**

Criterion	Response
Do you have a public information officer or communications office?	Yes, Town Clerk is responsible for public information.
Do you have personnel skilled or trained in website development?	Yes, Town Clerk
Do you have hazard mitigation information available on your website? -If yes, briefly describe.	Yes, information is regularly updated on the site.
Do you use social media for hazard mitigation education and outreach? -If yes, briefly describe.	Yes, Facebook
Do you have any citizen boards or commissions that address issues related to hazard mitigation? -If yes, briefly describe.	No
Do you have any other programs already in place that could be used to communicate hazard-related information? If yes, briefly describe.	Disaster/safety programs are available in local schools.

**COMMUNITY CLASSIFICATIONS**

The table below summarizes the classifications for community programs available to the Borough of Andover.

**Table 9.2-8. Community Classifications**

Program	Participating?	Classification	Date Classified
Community Rating System	No	-	-
Building Code Effectiveness Grading Schedule (BCEGS)	No	-	-
Public Protection (Fire ISO Protection Class)	Yes	7/9	1997
Storm Ready Certification	No	-	-
Firewise Community Classification	No	-	-
Sustainable Jersey	Yes	None	N/A

**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 9.2-9. Adaptive Capacity**

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

**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 Borough relies on the County and State for resources to determine the possible impacts of climate change upon the municipality. The administration is 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 9.2-10. National Flood Insurance Program Compliance**

Criterion	Response
What local department is responsible for floodplain management?	Engineering
Who is your floodplain administrator? (name, department/position)	Harold Pellow, Engineer
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 exceeds FEMA and State minimum requirements.
When was the most recent Community Assistance Visit or Community Assistance Contact?	Unknown
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? -If so, state what they are.	No
Are any RiskMAP projects currently underway in your jurisdiction? If so, state what they are.	No
Do your flood hazard maps adequately address the flood risk within your jurisdiction? -If no, state why.	Yes





Criterion	Response
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 consider attending 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. However, the Borough has considered joining CRS and would consider attending a seminar if offered.
How many flood insurance policies are in force in your jurisdiction?*	3 policies
-What is the insurance in force?	\$500,000 insurance in force
-What is the premium in force?	\$8,130 premium in force
How many total loss claims have been filed in your jurisdiction?*	1 claim
-How many claims are still open or were closed without payment?	\$4,314 in payments
-What were the total payments for losses?	
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?	Yes

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

**OPPORTUNITIES FOR FUTURE INTEGRATION**

- **Flood Damage Prevention Ordinance:** The Borough will update the Flood Damage Prevention Ordinance to include the state mandated freeboard requirement. (2021-Borough of Andover-004)
- **Disaster Debris Management Plan:** The Borough will develop a Disaster Debris Management Plan. (2021-Borough of Andover-005)

**9.2.5 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 Borough of Andover’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 9.2-11 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 9.2-11. 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 23 <sup>rd</sup> and 24 <sup>th</sup> .	Although the County was impacted, the Borough did not report impact
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 Borough was subject to municipal office closures and social distancing and masking requirements.

Source: FEMA 2020, NOAA NCEI 2020





### 9.2.6 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 Borough of Andover 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 Borough of Andover 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 Borough of Andover has significant exposure.

#### REPETITIVE FLOOD LOSSES

The following summarizes the repetitive and severe repetitive flood losses in the Borough of Andover.

- Number of repetitive loss (RL) properties: 0
- Number of severe repetitive loss (SRL) properties: 0
- Number of RL/SRL properties that have been mitigated: None

Source: FEMA 2019

#### 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 9.2-12. Critical Facilities and Lifelines Flood Exposure

Name	Type	Exposure	
		1% Event	0.2% Event
None identified			

Source: Sussex County Planning Partnership 2020

#### IDENTIFIED ISSUES AND PROBLEM AREAS

The jurisdiction has identified the following vulnerabilities within their community:

- The Fire House requires backup power.
- The Water Tower requires retrofit and wildfire protection.
- The Borough municipal building’s roof requires higher standards for snow load upon replacement.
- The Flood Damage Prevention Ordinance requires update to include freeboard.
- The Borough 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 Borough of Andover 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 Borough of Andover. The Borough of Andover 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 Borough of Andover indicated the following reasons why hazard rankings have changed since the 2016 HMP:

- The Borough changed the hazard ranking for flood from medium to low, noting a lack of events and exposure.
- The Borough agreed with the remainder of the calculated hazard rankings.

**Table 9.2-13. Borough of Andover Hazard Ranking**

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

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

### 9.2.7 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 9.2-15 and Table 9.2-16 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 9.2-14. 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	Enter 2021 HMP Action #
Andover Boro-1 (revised old #6)	To ensure continuity of operations, purchase and install generators within the Borough: <ul style="list-style-type: none"> <li>• Municipal water system</li> <li>• Municipal building Shelter</li> </ul>	Mayor, Water Department, OEM	Complete		



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 #
Andover Boro-2 (new)	Provide information on all types of hazards, preparedness and mitigation, and responses in the Borough newsletter.	Borough	Ongoing Capability, also occurs on webpages, social media, etc.		
Andover Boro-3 (old #1)	Retrofit roof to meet current standards for snow load on Andover Borough Fire Department building located on Route 206.	Station Commander	Complete		
Andover Boro-4 (old #2)	Install 300 yards of berm on Kymer Brooke to protect Andover Borough Fire Department located on Route 206.	DPW Supervisor	No Progress, no longer considered necessary.		
Andover Boro-5 (revised old #6)	When the roof is ready to be replaced on the municipal building, the Borough will incorporate the current snow load standards	Borough	No Progress	X	2021-Borough of Andover-003

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

- None identified

**PROPOSED HAZARD MITIGATION INITIATIVES FOR THE PLAN UPDATE**

The Borough of Andover 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 Borough of Andover 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 9.2-15 summarizes the comprehensive-range of specific mitigation initiatives the Borough of Andover 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 9.2-16 provides a summary of the prioritization of all proposed mitigation initiatives for this HMP update.



Table 9.2-15. 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-Borough of Andover-001	Fire House Backup Power	<b>Problem:</b> Backup power sources are necessary to maintain critical services for critical facilities. The Fire House located on Route 206 lacks a backup power source. This prevents the building from being used as a backup sheltering location.	Existing	Severe Weather, Severe Winter Weather, Hurricane, Nor'Easter	1	Fire Department, OEM	FEMA HMGP and BRIC, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Assistance to Firefighters Grant Program, Fire Department Budget	Ensures continuity of operations of Fire Department and allows for sheltering	\$75,000	Within 5 years	High	SIP	ES
		<b>Solution:</b> The Borough and the Fire House will partner to apply for grant funding to purchase and install a 100kW generator and necessary electrical components to supply backup power to the Fire House. Once installed, the Fire Department will be responsible for maintenance.											
2021-Borough of Andover-002	Water Tower Retrofit	<b>Problem:</b> The Water Tower requires retrofit to continue to be able to maintain water service. Vegetation around the base of the tower needs to be cleared.	Existing	Drought, Wildfire	1, 2	OEM, Engineer	HMGP, BRIC, USDA Community Facilities Grant Program, Borough budget	Ensures continuity of operations of water tower, protects from wildfire impacts	High	Within 3 years	High	SIP, NSP	PP, NR
		<b>Solution:</b> The Borough will complete retrofits and upgrades to the Water Tower. The Borough will clear vegetation around the Tower to prevent overgrowth and lower wildfire risk.											
2021-Borough of Andover-003	Borough Municipal Building Retrofit	<b>Problem:</b> The Borough municipal building roof is not designed to withstand current snow load standards. Failure of the roof would result in loss of the primary Borough building and disrupt critical services.	Existing	Severe Winter Weather	2, 6	Administration, Engineer	HMGP, BRIC, USDA Community Facilities Grant	Protection of building from damage, maintain	Medium	Within 5 years	High	SIP	PP



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
		<b>Solution:</b> When the roof is ready to be replaced on the municipal building, the Borough will incorporate the current snow load standards during the design and installation of the replacement roof.					Program, Borough budget	continuity of operations.					
2021-Borough of Andover-004	Flood Damage Prevention Ordinance Update	<b>Problem:</b> The Borough’s Flood Damage Prevention Ordinance lacks language to include the state mandated freeboard requirement. <b>Solution:</b> The Borough will update the Flood Damage Prevention Ordinance to include the state mandated freeboard requirement.	New	Flood	2	Administration	Borough budget	Meet state standards	Staff time	Within 6 months	High	LPR	PR
2021-Borough of Andover-005	Disaster Debris Management Plan	<b>Problem:</b> The Borough lacks a Disaster Debris Management Plan. <b>Solution:</b> The Borough will develop and adopt a Disaster Debris Management Plan. The Plan will include any necessary mutual aid discussions to supplement the Borough’s capabilities.	N/A	All Hazards	5	OEM, Administration	Borough budget	Increased disaster capabilities	Staff time	2 years	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 9.2-16. 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-Borough of Andover-001	Fire House Backup Power	1	1	1	1	1	1	0	1	1	1	1	0	1	1	12	High ⚠
2021-Borough of Andover-002	Water Tower Retrofit	1	1	1	1	1	1	0	1	1	1	1	1	1	1	13	High
2021-Borough of Andover-003	Borough Municipal Building Retrofit	1	1	1	1	1	1	0	1	1	1	0	0	1	1	11	High
2021-Borough of Andover-004	Flood Damage Prevention Ordinance Update	0	1	1	1	1	1	1	1	1	1	0	1	1	1	12	High
2021-Borough of Andover-005	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 9.2-17. 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			X
Disease Outbreak					X			X
Drought		X		X	X			X
Earthquake					X			X
Flood	X				X			X
Geologic					X			X
Hazardous Materials					X			X
Hurricane and Tropical Storm					X			X
Invasive Species					X			X
Nor'Easter					X			X
Severe Weather		X			X			X
Severe Winter Weather					X			X
Wildfire		X		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 9.2-1. Borough of Andover Hazard Area Extent and Location Map 1

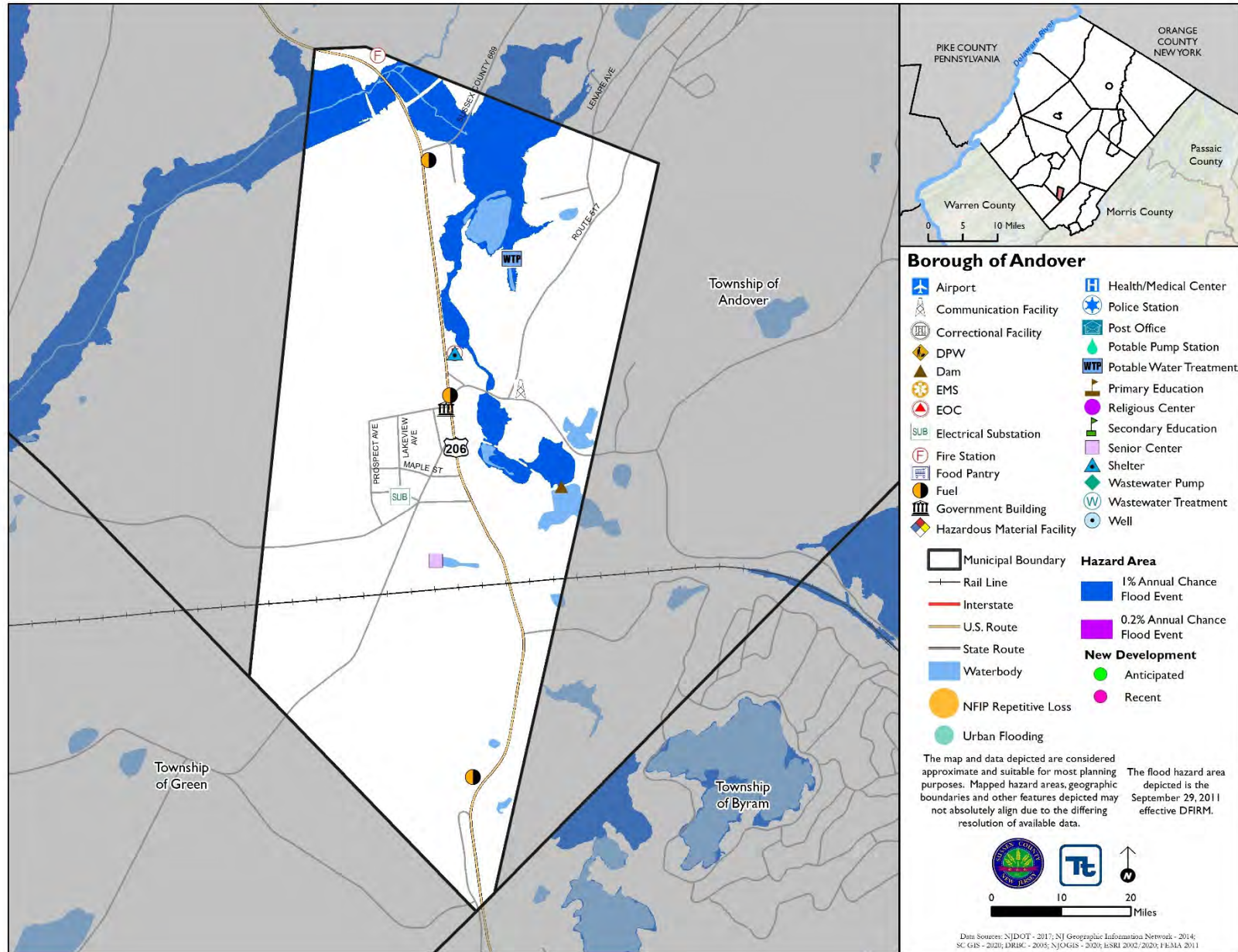




Figure 9.2-2. Borough of Andover Hazard Area Extent and Location Map 2

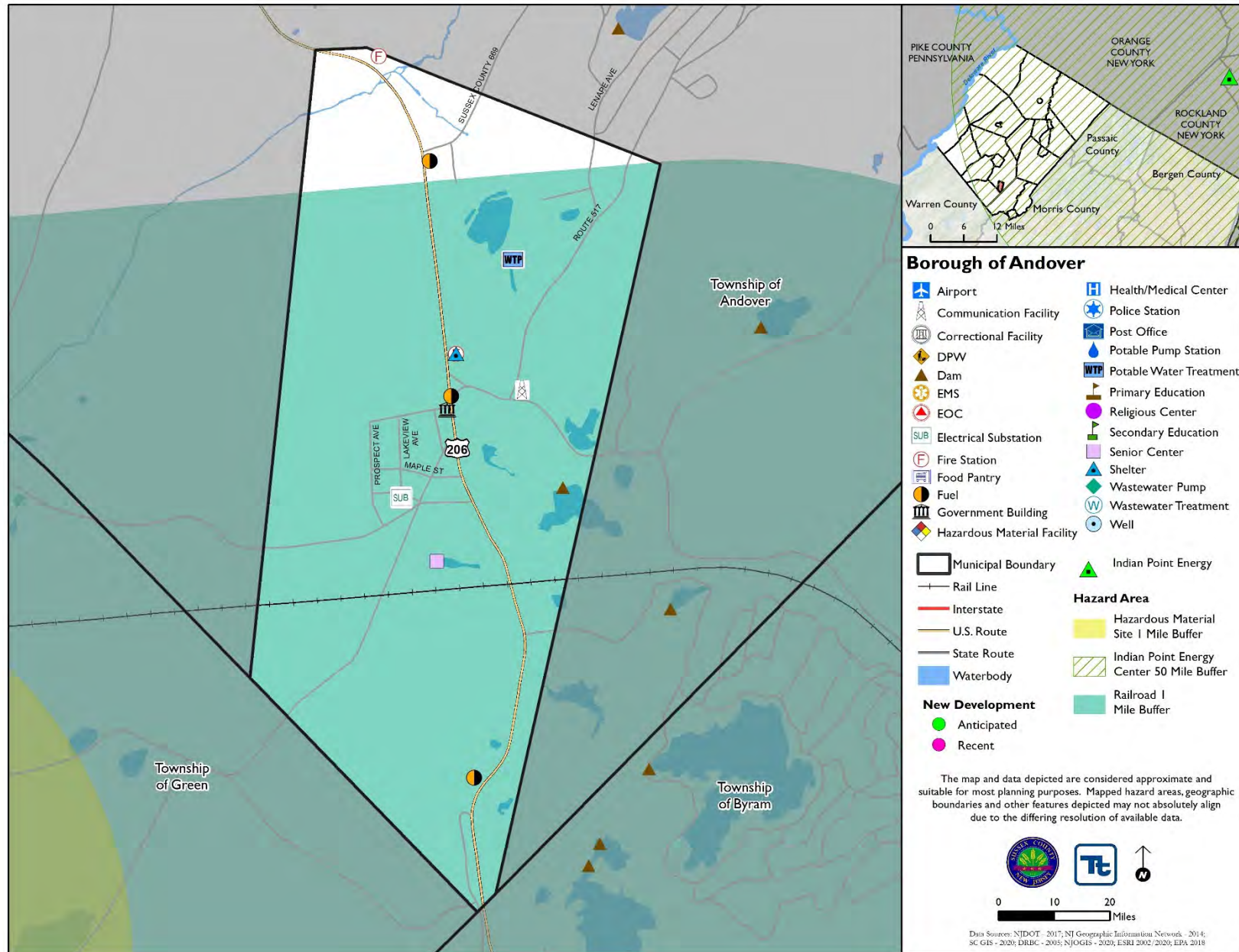
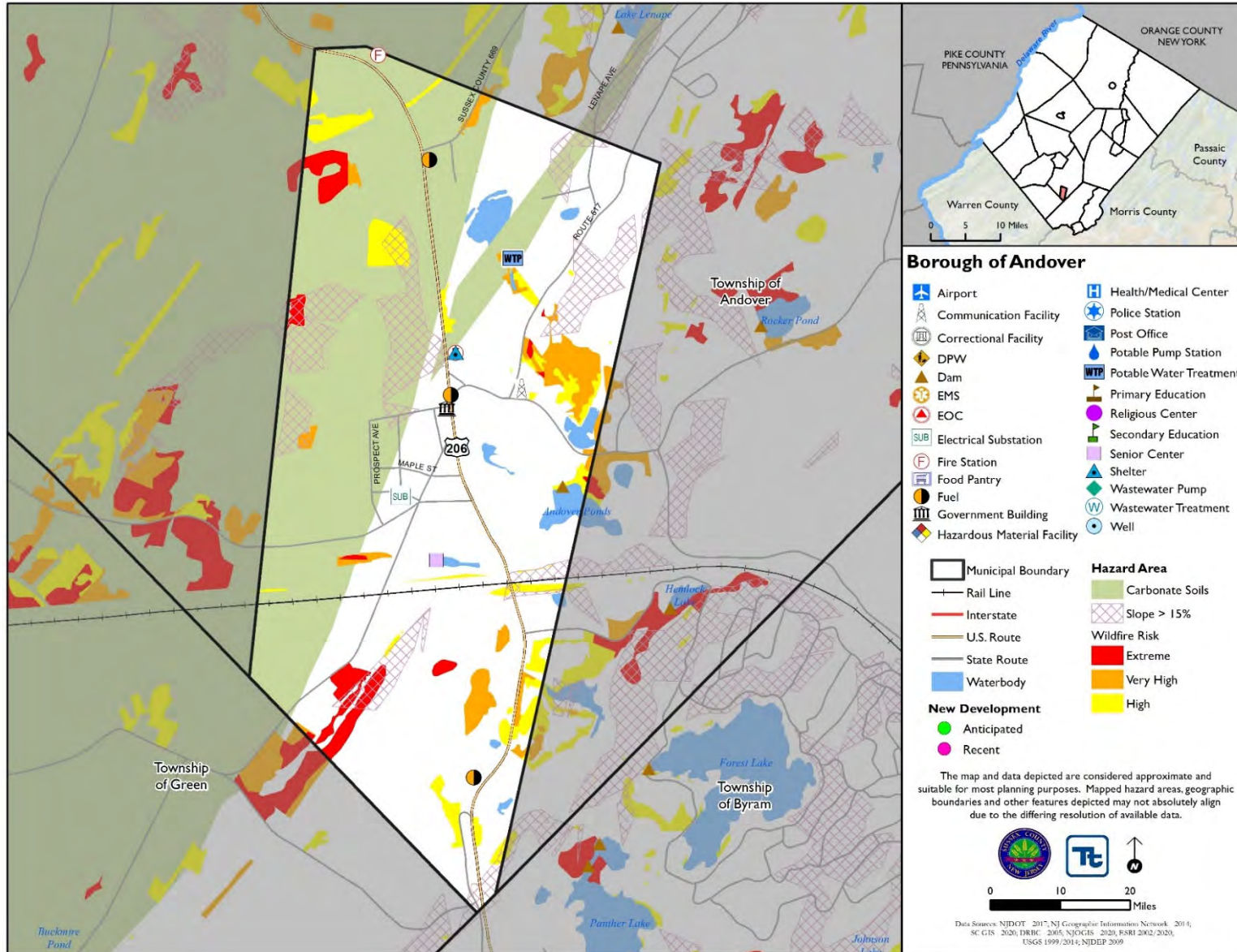




Figure 9.2-3. Borough of Andover Hazard Area Extent and Location Map 3





Action Worksheet			
<b>Project Name:</b>	Fire House Backup Power		
<b>Project Number:</b>	2021-Borough of Andover-001		
<b>Risk / Vulnerability</b>			
<b>Hazard(s) of Concern:</b>	Severe Weather, Severe Winter Weather, Hurricane, Nor'Easter		
<b>Description of the Problem:</b>	Backup power sources are necessary to maintain critical services for critical facilities. The Fire House located on Route 206 lacks a backup power source. This prevents the building from being used as a backup sheltering location.		
<b>Action or Project Intended for Implementation</b>			
<b>Description of the Solution:</b>	The Borough and the Fire House will partner to apply for grant funding to purchase and install a 100kW generator and necessary electrical components to supply backup power to the Fire House. Once installed, the Fire Department will be responsible for maintenance.		
<b>Is this project related to a Critical Facility?</b>	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
<b>Level of Protection:</b>	N/A	<b>Estimated Benefits (losses avoided):</b>	Ensures continuity of operations of Fire Department and allows for sheltering
<b>Useful Life:</b>	20 years	<b>Goals Met:</b>	1, 3
<b>Estimated Cost:</b>	\$75,000	<b>Mitigation Action Type:</b>	Structure and Infrastructure Projects (SIP)
<b>Plan for Implementation</b>			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	Within 5 years
<b>Estimated Time Required for Project Implementation:</b>	1 year	<b>Potential Funding Sources:</b>	FEMA HMGP and BRIC, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Assistance to Firefighters Grant Program, Fire Department Budget
<b>Responsible Organization:</b>	Fire Department, Borough Administration	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard Mitigation, Emergency Management
<b>Three Alternatives Considered (including No Action)</b>			
<b>Alternatives:</b>	<b>Action</b>	<b>Estimated Cost</b>	<b>Evaluation</b>
	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
<b>Progress Report (for plan maintenance)</b>			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			



Action Worksheet		
<b>Project Name:</b>	Fire House Backup Power	
<b>Project Number:</b>	2021-Borough of Andover-001	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
<b>Life Safety</b>	1	Project will protect critical services of Fire House and allow for sheltering.
<b>Property Protection</b>	1	Project will protect building from power loss.
<b>Cost-Effectiveness</b>	1	
<b>Technical</b>	1	
<b>Political</b>	1	
<b>Legal</b>	1	The Borough has the legal authority to complete the project.
<b>Fiscal</b>	0	Project requires funding support.
<b>Environmental</b>	1	
<b>Social</b>	1	
<b>Administrative</b>	1	
<b>Multi-Hazard</b>	1	Severe Weather, Severe Winter Weather, Hurricane, Nor'Easter
<b>Timeline</b>	0	Within 5 years
<b>Agency Champion</b>	1	Fire Department, Borough Administration
<b>Other Community Objectives</b>	1	
<b>Total</b>	12	
<b>Priority (High/Med/Low)</b>	High	



Action Worksheet			
<b>Project Name:</b>	Water Tower Retrofit		
<b>Project Number:</b>	2021-Borough of Andover-002		
<b>Risk / Vulnerability</b>			
<b>Hazard(s) of Concern:</b>	Drought, Wildfire		
<b>Description of the Problem:</b>	The Water Tower requires retrofit to continue to be able to maintain water service. Vegetation around the base of the tower needs to be cleared.		
<b>Action or Project Intended for Implementation</b>			
<b>Description of the Solution:</b>	The Borough will complete retrofits and upgrades to the Water Tower. The Borough will clear vegetation around the Tower to prevent overgrowth and lower wildfire risk.		
<b>Is this project related to a Critical Facility?</b>	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
<b>Level of Protection:</b>	Modern standards for water tower design	<b>Estimated Benefits (losses avoided):</b>	Ensures continuity of operations of water tower, protects from wildfire impacts
<b>Useful Life:</b>	20 years	<b>Goals Met:</b>	1, 2
<b>Estimated Cost:</b>	Medium	<b>Mitigation Action Type:</b>	Structure and Infrastructure Projects (SIP)
<b>Plan for Implementation</b>			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	Within 3 years
<b>Estimated Time Required for Project Implementation:</b>	1 year	<b>Potential Funding Sources:</b>	HMGP, BRIC, USDA Community Facilities Grant Program, Borough budget
<b>Responsible Organization:</b>	OEM, Engineer	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard Mitigation
<b>Three Alternatives Considered (including No Action)</b>			
<b>Alternatives:</b>	<b>Action</b>	<b>Estimated Cost</b>	<b>Evaluation</b>
	No Action	\$0	Problem continues.
	Rebuild water tower	High	Costly and not necessary
	Build secondary water tower to new standards	High	Costly and not necessary
<b>Progress Report (for plan maintenance)</b>			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			



Action Worksheet		
<b>Project Name:</b>	Water Tower Retrofit	
<b>Project Number:</b>	2021-Borough of Andover-002	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
<b>Life Safety</b>	1	Project will protect critical services of water tower and maintain water service
<b>Property Protection</b>	1	Project will protect water tower from wildfire
<b>Cost-Effectiveness</b>	1	
<b>Technical</b>	1	
<b>Political</b>	1	
<b>Legal</b>	1	The Borough has the legal authority to complete the project.
<b>Fiscal</b>	0	Project requires funding support.
<b>Environmental</b>	1	
<b>Social</b>	1	
<b>Administrative</b>	1	
<b>Multi-Hazard</b>	1	Drought, Wildfire
<b>Timeline</b>	1	Within 3 years
<b>Agency Champion</b>	1	OEM, Engineer
<b>Other Community Objectives</b>	1	Protection of critical services
<b>Total</b>	13	
<b>Priority (High/Med/Low)</b>	High	





Action Worksheet			
<b>Project Name:</b>	Borough Municipal Building Retrofit		
<b>Project Number:</b>	2021-Borough of Andover-003		
<b>Risk / Vulnerability</b>			
<b>Hazard(s) of Concern:</b>	Severe Winter Weather		
<b>Description of the Problem:</b>	The Borough municipal building roof is not designed to withstand current snow load standards. Failure of the roof would result in loss of the primary Borough building and disrupt critical services.		
<b>Action or Project Intended for Implementation</b>			
<b>Description of the Solution:</b>	When the roof is ready to be replaced on the municipal building, the Borough will incorporate the current snow load standards during the design and installation of the replacement roof.		
<b>Is this project related to a Critical Facility?</b>	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
<b>Level of Protection:</b>	Industry snow load standards	<b>Estimated Benefits (losses avoided):</b>	Ensures continuity of operations of municipal building
<b>Useful Life:</b>	20 years	<b>Goals Met:</b>	2, 6
<b>Estimated Cost:</b>	Medium	<b>Mitigation Action Type:</b>	Structure and Infrastructure Projects (SIP)
<b>Plan for Implementation</b>			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	Within 5 years
<b>Estimated Time Required for Project Implementation:</b>	1 year	<b>Potential Funding Sources:</b>	HMGP, BRIC, USDA Community Facilities Grant Program, Borough budget
<b>Responsible Organization:</b>	Administration, Engineer	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard Mitigation
<b>Three Alternatives Considered (including No Action)</b>			
<b>Alternatives:</b>	<b>Action</b>	<b>Estimated Cost</b>	<b>Evaluation</b>
	No Action	\$0	Problem continues.
	Rebuild facility to new standards	High	Costly and not necessary
	Build secondary facility protected to new standards	High	Costly and not necessary
<b>Progress Report (for plan maintenance)</b>			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			



Action Worksheet		
<b>Project Name:</b>	Borough Municipal Building Retrofit	
<b>Project Number:</b>	2021-Borough of Andover-003	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Project will protect critical services of municipal building
Property Protection	1	Project will protect municipal building from winter storm damage.
Cost-Effectiveness	1	
Technical	1	
Political	1	
Legal	1	The Borough has the legal authority to complete the project.
Fiscal	0	Project requires funding support.
Environmental	1	
Social	1	
Administrative	1	
Multi-Hazard	0	Severe Winter Weather
Timeline	0	Within 5 years
Agency Champion	1	Administration, Engineer
Other Community Objectives	1	Protection of critical services
<b>Total</b>	11	
<b>Priority (High/Med/Low)</b>	High	



## 9.3 TOWNSHIP OF ANDOVER

This section presents the jurisdictional annex for the Township of Andover. The annex includes a general overview of the Township of Andover; an assessment of the Township of Andover’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.

### 9.3.1 Hazard Mitigation Planning Team

The Township of Andover 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 9.3-1. Hazard Mitigation Planning Team**

Primary Point of Contact		Alternate Point of Contact
Name / Title: Chief Eric Danielson, Emergency Management Coordinator Address: 134 Newton-Sparta Road, Newton, NJ 07860 Phone Number: (862) 266-1396 Email: edanielson@atpd.org		Name / Title: Ptl. Georgios Laoudis, Deputy Coordinator Address: 134 Newton-Sparta Road, Newton, NJ 07860 Phone Number: (862) 881-6032 Email: glaoudis@atpd.org
NFIP Floodplain Administrator		
Name / Title: Cory Stoner, Township Engineer Address: 17 Plains Road Augusta, NJ 07822 Phone Number: (973) 948-6463 Email: cstoner@hpellow.com		
Name	Title	Method of Participation
Chief Eric Danielson	Emergency Management Coordinator	Primary point of contact, provided information and data for annex development, contributed to mitigation strategy, reviewed the annex*
Ptl. Georgios Laoudis	Deputy Coordinator	Alternate point of contact, provided information and data for annex development, contributed to mitigation strategy, attended the kickoff meeting and annex training
Corey Stoner	Township Engineer	NFIP Floodplain Administrator, reviewed annex*
Patricia L. Bussow	Mayor	Reviewed annex*
Tony Grisaffi	CFO	Reviewed annex*
Jim Miller	Building Code Official	Reviewed annex*
Jessica Caldwell	Land Use Planner	Reviewed annex*
Darren Dickerson	Public Works Director	Reviewed annex*
Kyle T. Wilson	Fire Department	Reviewed annex*

\*Refer to Jurisdictional Annex Review Sign-Off Sheet in Appendix B.



### 9.3.2 Jurisdiction Profile

Andover Township is located in southern Sussex County and bordered to the north by the Townships of Hampton and Lafayette, to the south by the Townships of Green and Byram, to the east by the Township of Sparta and to the west by the Town of Newton and Fredon Township. Brighton, Clearwater, Pinkeyville, Springdale, Whitehall and Wawayanda are unincorporated communities in the Township. It has a total area of 20.7 square miles. Paulins Kill, Kymer Brook, Tar Hill Brook, Pequest River, and Andover Junction Brook are the bodies of water that flow through Andover Township.

According to the U.S. Census, the 2010 population for the Township of Andover was 6,319. The estimated 2018 population was 5,996, a 5.1 percent decrease from the 2010 Census. Data from the 2018 U.S. Census American Community Survey indicate that 5.1 percent of the population is 5 years of age or younger and 23.2 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.

### 9.3.3 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 9.14-2 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 9.3-2. 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	6	0	5	0	4	0	4	0	2	0
Multi-Family	0	0	0	0	0	0	0	0	0	0
Other (commercial, mixed-use, etc.)	0	0	0	0	0	0	0	0	0	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										
Pace Glass	Commercial	1		1045 Limecrest Road		Nuclear Incident Hazard Area, Carbonate Soil		Construction in progress		
Perona Farms Addition	Commercial	1		350 Andover Sparta Road		Nuclear Incident Hazard Area		Construction in progress		
Darla Enterprises	Commercial	1		40 Newton-Sparta Road		Nuclear Incident Hazard Area, Hazardous Material Hazard Area		Approved by Board		
LAC Realty Corp (AG Pizza)	Commercial	1		131 Newton-Sparta Road		Nuclear Incident Hazard Area		Completed		



Rupa Management LLC	Commercial	1	241 Newton-Sparta Road	Nuclear Incident Hazard Area	Completed
<b>Known or Anticipated Major Development and Infrastructure in the Next Five (5) Years</b>					
None anticipated					

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

### 9.3.4 Capability Assessment

Section 5 (Capability Assessment) describes the components included in the capability assessment and their significance for hazard mitigation planning. The Township of Andover 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 Andover 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 Andover and where hazard mitigation has been integrated.

**Table 9.3-3. 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.
<b>Codes, Ordinances, &amp; Requirements</b>					
<b>Building Code</b>	Yes	State & Local	Yes	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>• 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</li> <li>• This code follows State Uniform Construction Code Act (N.J.S. 52:27D-119 et seq.).</li> </ul>					
<b>Zoning Code</b>	Yes	Local	Yes – if municipality has a Planning Board	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.
<p><b>Comment:</b></p> <ul style="list-style-type: none"> <li>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.</li> <li>The Land Use Board is responsible for this code in compliance with Chapter 190.</li> </ul>					
Subdivisions	Yes	Local	Yes – if municipality has a Planning Board	Yes	-
<p><b>Comment:</b></p> <ul style="list-style-type: none"> <li>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.</li> <li>The Land Use Board is responsible for this ordinance in compliance with Chapter 159.</li> </ul>					
Stormwater Management	Yes	Local	Yes	Yes	-
<p><b>Comment:</b></p> <ul style="list-style-type: none"> <li>See Title 7 of the NJ Administrative Code, N.J.A.C. 7:8</li> <li>The DPW is responsible for this ordinance in compliance with Chapter 150.</li> </ul>					
Post-Disaster Recovery	No	-	No	-	-
<p><b>Comment:</b></p>					
Real Estate Disclosure	No	State, Division of Consumer Affairs	Yes	No	-
<p><b>Comment:</b> 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.</p>					
Growth Management	Yes	Local	Yes – if municipality has a Planning Board	No	-
<p><b>Comment:</b></p> <ul style="list-style-type: none"> <li>State Mandated on a municipal level. See Zoning Ordinance ; Also - Plan Endorsement Process via the State Development &amp; 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.</li> <li>The Andover Township Planning Board is responsible for these ordinances in compliance with a part of the Master Plan.</li> </ul>					
Site Plan Review	Yes	Local	Yes – if municipality has a Planning Board	No	-
<p><b>Comment:</b></p> <ul style="list-style-type: none"> <li>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 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</li> </ul>					



	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.
<p>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.</p> <ul style="list-style-type: none"> <li>The Land Use Board is responsible for these requirements in compliance with Chapter 131.</li> </ul>					
<b>Environmental Protection</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Flood Damage Prevention</b>	Yes	Federal, State & Local	Yes	Yes	2021-Andover Township-009
<p><i>Comment:</i></p> <ul style="list-style-type: none"> <li>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.</li> <li>Chapter 55- Flood Damage Prevention</li> <li>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:               <ul style="list-style-type: none"> <li>A. To protect human life and health;</li> <li>B. To minimize expenditure of public money for costly flood control projects;</li> <li>C. To minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;</li> <li>D. To minimize prolonged business interruptions;</li> <li>E. To 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;</li> <li>F. To help maintain a stable tax base by providing for the alternate use and development of areas of special flood hazard so as to minimize future flood blight areas;</li> <li>G. To ensure that potential buyers are notified that property is in an area of special flood hazard; and</li> <li>H. To ensure that those who occupy the areas of special flood hazard assume responsibility for their actions.</li> </ul> </li> <li>The ordinance lacks the state mandated freeboard requirement.</li> </ul>					
<b>Wellhead Protection</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Emergency Management</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Climate Change</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Disaster Recovery Ordinance</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Disaster Reconstruction Ordinance</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Other [Special Purpose Ordinances (i.e., sensitive areas, steep slope)]</b>	Yes	Local	No	No	-
<i>Comment:</i> The Land Use Board is responsible for these ordinances in compliance with Chapter 150-11.					
<b>Planning Documents</b>					
<b>Comprehensive / Master Plan</b>	Yes	Local	Yes	No	-
<p><i>Comment:</i></p> <ul style="list-style-type: none"> <li>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</li> </ul>					



	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.
<p>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.</p> <ul style="list-style-type: none"> <li>The Plan was last reexamined in 2010.</li> <li>The Andover Township Land Use Board is responsible for this plan.</li> </ul>					
<b>Capital Improvement Plan</b>	Yes	Local	No	No	-
<i>Comment: The Andover Township is responsible for this plan in compliance with Resolution.</i>					
<b>Disaster Debris Management Plan</b>	No	-	No	-	2021-Andover Township-008
<i>Comment:</i>					
<b>Floodplain or Watershed Plan</b>	No	-	No	-	-
<b>Stormwater Management Plan</b>	Yes	Local	Yes	Yes	-
<p><i>Comment:</i></p> <ul style="list-style-type: none"> <li>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.</li> <li>The Andover Township and DPW is responsible for this plan in compliance with Chapter 150 Stormwater Management.</li> </ul>					
<b>Stormwater Pollution Prevention Plan</b>	No	-	Yes	-	-
<p><i>Comment:</i></p> <ul style="list-style-type: none"> <li>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. The latest rule amendments took effect January 1, 2018.</li> </ul>					
<b>Urban Water Management Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Habitat Conservation Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Economic Development Plan</b>	Yes	Local	No	Yes	-
<i>Comment: The Andover Township is responsible for this plan in compliance with Chapter 3-70 of the Municipal Code.</i>					
<b>Shoreline Management Plan</b>	No	-	Yes – if located in a coastal zone	-	-
<p><i>Comment:</i></p> <ul style="list-style-type: none"> <li>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.</li> </ul>					
<b>Community Wildfire Protection Plan</b>	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.
<i>Comment:</i>					
Community Forest Management Plan	No	-	No	-	-
<i>Comment:</i>					
Transportation Plan	No	-	No	-	-
<i>Comment:</i>					
Agriculture Plan	No	-	No	-	-
<i>Comment:</i>					
Climate Action Plan	No	-	No	-	-
<i>Comment:</i>					
Tourism Plan	No	-	No	-	-
<i>Comment:</i>					
Business Development Plan	No	-	No	-	-
<i>Comment:</i>					
Other: Open Space Plan	Yes	Local	No	No	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>The Andover Township is responsible for this plan in compliance with Resolution.</li> </ul>					
<b>Response/Recovery Planning</b>					
Comprehensive Emergency Management Plan (CEMP) / Emergency Operations Plan (EOP)	Yes	Local	Yes	No	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>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.</li> <li>The Office of Emergency Management is responsible for this plan.</li> </ul>					
Threat & Hazard Identification & Risk Assessment (THIRA)	No	-	No	-	-
<i>Comment:</i>					
Post-Disaster Recovery Plan	No	-	No	-	-
<i>Comment:</i>					
Continuity of Operations Plan	No	-	No	-	-
<i>Comment:</i>					
Public Health Plan	No	-	No	-	-
<i>Comment:</i>					
Other	No	-	No	-	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li></li> </ul>					

**Table 9.3-4. Development and Permitting Capability**

Criterion	Response
Does your jurisdiction issue development permits? - If no, who does? If yes, which department?	Yes, The Construction Official grants the permits per Chapter 55 of the Municipal Code



Criterion	Response
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, the 2016 Housing Element & Fair Share Plan stated that the estimated total housing units in 2014 was 2,168 and due to current land use and NJDEP restrictions, any additional development would be limited.

**ADMINISTRATIVE AND TECHNICAL CAPABILITY**

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

**Table 9.3-5. Administrative and Technical Capabilities**

Staff/Personnel Resource	Available?	Department/Agency/Position
<b>Administrative Capability</b>		
Planning Board	Yes	Land Use Board
Mitigation Planning Committee	No	-
Environmental Board / Commission	Yes	Environmental Commission
Open Space Board / Committee	Yes	Open space committee
Economic Development Commission / Committee	Yes	Economic Advisory Committee
Warning Systems / Services (reverse 911, outdoor warning signals)	Yes	Police Dispatch Center
Maintenance program to reduce risk	Yes	AT DPW
Mutual aid agreements	Yes	Police/Fire/EMS/DPW
<b>Technical/Staffing Capability</b>		
Planners or engineers with knowledge of land development and land management practices	Yes	Both Twp planner and Twp engineer
Engineers or professionals trained in building or infrastructure construction practices	Yes	DCA is Twp construction officials
Planners or engineers with an understanding of natural hazards	Yes	DCA
Staff with training in benefit/cost analysis	No	-
Staff with training in green infrastructure	No	-
Staff with education/knowledge/training in low impact development	No	-
Surveyor	No	Subcontracted as necessary by engineer
Stormwater engineer	No	-
Personnel skilled or trained in GIS applications	No	Refer to Sussex County GIS Dept
Local or state water quality professional	No	-
Scientist familiar with natural hazards in local area	No	-
Emergency manager	Yes	AT OEM
Watershed planner	No	-
Environmental specialist	No	-
Grant writers	No	-
Resilience Officer	No	-
Other: NFIP Floodplain Administrator	Yes	Construction Official (as per Township Code)

**FISCAL CAPABILITY**





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

**Table 9.3-6. Fiscal Capabilities**

Financial Resource	Accessible or Eligible to Use?
Community Development Block Grants (CDBG, CDBG-DR)	No
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service	No
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
State-Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	Yes
Clean Water Act 319 Grants (Nonpoint Source Pollution)	No
Other: Open Space Acquisition Funding Programs	Yes

**EDUCATION AND OUTREACH CAPABILITY**

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

**Table 9.3-7. 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.	Yes
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.	No
Do you have any other programs already in place that could be used to communicate hazard-related information? If yes, briefly describe.	Yes, disaster/safety programs in/for schools

**COMMUNITY CLASSIFICATIONS**

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

**Table 9.3-8. Community Classifications**

Program	Participating?	Classification	Date Classified
Community Rating System	No	-	-
Building Code Effectiveness Grading Schedule (BCEGS)	Yes	Zoning/code enforcement	Unknown
Public Protection (Fire ISO Protection Class)	Yes	5	2014
Storm Ready Certification	No	-	-
Firewise Community Classification	No	-	-





Program	Participating?	Classification	Date Classified
Sustainable Jersey	No	-	-

**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 9.3-9. 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. The administration 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 9.3-10. National Flood Insurance Program Compliance**

Criterion	Response
What local department is responsible for floodplain management?	Engineering Department
Who is your floodplain administrator? (name, department/position)	Corey Stoner, Township Engineer
Are any certified floodplain managers on staff in your jurisdiction?	No
What is the date that your flood damage prevention ordinance was last amended?	July 11, 2011. The flood damage prevention ordinance requires update to include the state’s freeboard requirement.





Criterion	Response
Does your floodplain management program meet or exceed minimum requirements? -If exceeds, in what ways?	The program meets the minimum requirements.
When was the most recent Community Assistance Visit or Community Assistance Contact?	November 24, 1987
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.	No
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 also stated that he would consider attending continuing education and/or certification training on floodplain management if it were offered in the County.
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. The jurisdiction is not interested in joining the CRS program.
How many flood insurance policies are in force in your jurisdiction?*	4 policies
-What is the insurance in force?	\$1,260,000 insurance in force
-What is the premium in force?	\$1,924 premium in force
How many total loss claims have been filed in your jurisdiction?*	2 claims
-How many claims are still open or were closed without payment?	\$304 in payments
-What were the total payments for losses?	
Do you maintain a list of properties that have been damaged by flooding?	Yes
Do you maintain a list of property owners interested in flood mitigation?	No

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

#### ADDITIONAL AREAS OF EXISTING INTEGRATION

- **Township Website:** The Township hosts a municipal website (<https://www.andovertwp.org/>) which includes a municipal directory, announcements, and other community information.

#### OPPORTUNITIES FOR FUTURE INTEGRATION

- **Incorporate Hazard Mitigation in Budgeting:** The Township will budget for future mitigation projects in both the Township budget and Capital Improvement Budget (2021-Andover Township-003).
- **Resilience Committee and Advisor:** The Township will establish a community resilience committee and advisor (2021-Andover Township-004).
- **Continuity of Operations Plan:** The Township will develop and adopt a Continuity of Operations Plan (2021-Andover Township-005).
- **FireWise Program:** The Township will enroll and maintain status within the FireWise program (2021-Andover Township-006).
- **Hazard Outreach Improvements:** The Township will expand mitigation education and outreach efforts through handouts, newsletters, social media, and the Township website (2021-Andover Township-007).





- **Disaster Debris Management Plan:** The Township will develop and adopt a Disaster Debris Management Plan (2021-Andover Township-008).
- **Flood Damage Prevention Ordinance:** The Township will update the Flood Damage Prevention Ordinance to include freeboard (2021-Andover Township-009).

### 9.3.5 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 Andover’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 9.14-11 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 9.3-11. 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 23 <sup>rd</sup> and 24 <sup>th</sup> .	Although the County was impacted, the Township did not report damages.
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 was impacted by social distancing and masking requirements.

Source: FEMA 2020, NOAA NCEI 2020

### 9.3.6 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 Andover 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 Andover 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 Andover has significant exposure.

#### REPETITIVE FLOOD LOSSES

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

- Number of repetitive loss (RL) properties: 0
- Number of severe repetitive loss (SRL) properties: 0
- Number of RL/SRL properties that have been mitigated: None have been identified





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 9.3-12. Critical Facilities and Lifelines Flood Exposure**

Name	Type	Exposure	
		1% Event	0.2% Event
None identified			

Source: Sussex County Planning Partnership 2020

**IDENTIFIED ISSUES AND PROBLEM AREAS**

The jurisdiction has identified the following vulnerabilities within their community:

- Stormwater flooding is a problem at Pierce Road.
- Stormwater flooding is a problem at Old Creamery Road & Hemlock Avenue.
- The Township requires funding to fund mitigation projects in house or provide match for grants.
- The Township requires better coordination and staff knowledge on community resilience to inform hazard mitigation planning and project implementation.
- The Township lacks a Continuity of Operations Plan.
- The Township has wildfire risk but is not enrolled in the FireWise program.
- The Township’s outreach on hazard mitigation topics requires expansion.
- The Township lacks a Disaster Debris Management Plan.
- The flood damage prevention ordinance requires update to include the state’s freeboard requirement.

**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 Andover 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 Andover. The Township of Andover 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 Andover agreed with the calculated hazard rankings.

**Table 9.3-13. Township of Andover Hazard Ranking**

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





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

### 9.3.7 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 9.14-15 and Table 9.14-16 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 9.3-14. 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	Enter 2021 HMP Action #
Andover Twp-1 (LOI; new)	Ensure continuity of operations at critical facilities and municipal buildings. Identified at this time: Install backup generator for critical infrastructure that includes the Township firehouse (shelter), town hall and DPW.	Township and OEM	Complete; Town hall, firehouse and the DPW all had backup natural gas generators installed. This was funded via grant.		
Andover Twp-2 (new)	Pierce Road – stormwater retention basin	Township and Engineer	No Progress	X	2021-Andover Township-001
Andover Twp-3 (new)	Pinkeyville Road – stormwater retention basin	Township and Engineer	Complete; Pinkneyville Road had road improvements completed including drainage.....completed via partial funding from grant.		
Andover Twp-4 (new)	Budget for future mitigation projects in both the Township budget and Capital Improvement Budget.	OEM Director and Township Administrator	In Progress	X	2021-Andover Township-003
Andover Twp-5 (new)	Identify critical and essential Township facilities for location in hazard areas; identify mitigation actions to protect these structures from future damage.	OEM Director and Township Administrator	Ongoing Capability through HMP planning process		
Andover Twp-6 (new)	The Township will establish a community resilience committee and advisor.	OEM Director and Township Administrator	No Progress	X	2021-Andover Township-004





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 #
Andover Twp-7 (new)	Improve outreach to local schools, colleges and universities; establish relationships; assist with community service and hazard mitigation activities.	OEM Director and Township Administrator	Complete; the Township has constant communication and contact with local schools. Increased security has been established at both locations with a lockdown alert system and assisted them with the implementation process. Conducted active shooter training on school grounds to include them as stakeholders. Completed via school funding.		
Andover Twp-8 (new)	The Township will develop a COOP and it will integrate mitigation.	OEM Director and Township Administrator	No Progress	X	2021-Andover Township-005
Andover Twp-9 (old #3)	Implementation of Fire Wise community program	Township Fire and OEM	In Progress	X	2021-Andover Township-006
Andover Twp-10 (old #4)	Upgrade roof of Long Pond School to current snow load and high wind standards	Andover Regional Board of Education / OEM	Complete; Long Pond School roof was upgraded by school board - completed via school funding.		
Andover Twp-11 (old #5)	Upgrade roof of FMB School to current snow load and high wind standards	Andover Regional Board of Education / OEM	Complete; FMB School roof was upgraded by school board - completed via school funding.		
Andover Twp-12 (old #6)	Inundation study for Hidden Valley Lake Dam / Bonnie Glen Court	Hidden Valley Lake Association	Complete; Hidden Valley Lake Association did study and implemented a Emergency Plan for the lake - completed on their own funding. Local OEM assisted with emergency planning.		
Andover Twp-13 (old #7)	Inundation study for Lake Lenape Dam / Old Creamery Road	Hidden Valley Lake Association	Complete; Lake Lenape did emergency plan and also recently replaced dam infrastructure - completed on their own funding. Local OEM assisted with emergency plan.		
Andover Twp-14 (old #8)	Stormwater retention basin – Old Creamery Rd & Hemlock Ave	Township and Engineer	No Progress	X	2021-Andover Township-002
Andover Twp-15	Expand mitigation education and outreach efforts through	OEM	In Progress	X	2021-Andover Township-007



2016 Action Number (revised old #9)	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 #
	handouts, newsletters, social media, and Township website.				

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

- None identified

**PROPOSED HAZARD MITIGATION INITIATIVES FOR THE PLAN UPDATE**

The Township of Andover 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 Andover 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 9.14-15 summarizes the comprehensive-range of specific mitigation initiatives the Township of Andover 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 9.14-16 provides a summary of the prioritization of all proposed mitigation initiatives for this HMP update.



Table 9.3-15. 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-Andover Township -001	Pierce Road Stormwater Retention Basin	<b>Problem:</b> Stormwater flooding is a problem at Pierce Road.	New	Flood, Severe Weather	2	Engineer, Public Works	HMGP, BRIC, Township budget	Reduction in flood risk	High	Within 5 years	High	SIP	SP
		<b>Solution:</b> The Township will design and install a stormwater retention basin on Pierce Road.											
2021-Andover Township -002	Old Creamery Rd & Hemlock Ave Stormwater Retention Basin	<b>Problem:</b> Stormwater flooding is a problem at Old Creamery Road & Hemlock Avenue.	New	Flood, Severe Weather	2	Engineer, Public Works	HMGP, BRIC, Township budget	Reduction in flood risk	High	Within 5 years	High	SIP	SP
		<b>Solution:</b> The Township will design and install a stormwater retention basin on Old Creamery Road & Hemlock Avenue.											
2021-Andover Township -003	Incorporate Hazard Mitigation in Budgeting	<b>Problem:</b> The Township requires funding to fund mitigation projects in house or provide match for grants.	Both	All Hazards	5	OEM Director and Township Administrator	Township budget, Finance Department	Increased financial capability	Medium	1 year	Medium	LPR	PP, SP, PL, NR
		<b>Solution:</b> The Township will budget for future mitigation projects in both the Township budget and Capital Improvement Budget.											
2021-Andover Township -004	Resilience Committee and Advisor	<b>Problem:</b> The Township requires better coordination and staff knowledge on community resilience to inform hazard mitigation planning and project implementation.	Both	All Hazards	1, 2, 3, 4, 5, 6, 7	OEM Director, Township Administrator	Township budget	Increased resilience knowledge and capabilities	High	Within 5 years	Medium	LPR	PR
		<b>Solution:</b> The Township will establish a community resilience committee and advisor.											
2021-Andover Township -005	Continuity of Operations Plan	<b>Problem:</b> The Township lacks a Continuity of Operations Plan.	Existing	All Hazards	3, 5, 6	OEM, Administration	Township budget	Increased emergency capability	Low	1 year	Medium	LPR	ES
		<b>Solution:</b> The Township will develop and adopt a Continuity of Operations Plan.											
2021-Andover Township -006	FireWise Program	<b>Problem:</b> The Township has wildfire risk but is not enrolled in the FireWise program.	Both	Wildfire	1, 2, 3	Township Fire and OEM	Township budget	Increase wildfire protection	Staff time	Within 5 years	Medium	LPR	PP, PR
		<b>Solution:</b> The Township will enroll and maintain status within the FireWise program.											



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-Andover Township -007	Hazard Outreach Improvements	<b>Problem:</b> The Township’s outreach on hazard mitigation topics requires expansion.	N/A	All hazards	4	OEM	Township budget	Educated public	\$1,000	Within 1 year	High	EAP	PI
		<b>Solution:</b> The Township will expand mitigation education and outreach efforts through handouts, newsletters, social media, and the Township website.											
2021-Andover Township -008	Disaster Debris Management Plan	<b>Problem:</b> The Township lacks a Disaster Debris Management Plan.	Existing	All hazards	3, 5, 6	OEM, Public Works	Township budget	Increased disaster capability	Staff time	1 year	High	LPR	ES
		<b>Solution:</b> The Township will develop and adopt a Disaster Debris Management Plan.											
2021-Andover Township -009	Flood Damage Prevention Ordinance Update	<b>Problem:</b> The Township’s Flood Damage Prevention Ordinance lacks the state mandated freeboard requirement.	New	Flood	2	FPA, Administration	Township budget	Meet state standards, reduce future flood risk	Staff time	6 months	High	LPR	PR
		<b>Solution:</b> The Township will update the Flood Damage Prevention Ordinance to include the freeboard requirement.											

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 9.3-16. 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-Andover Township-001	Pierce Road Stormwater Retention Basin	0	1	0	1	1	1	0	1	1	0	1	0	1	1	9	High ⚠
2021-Andover Township-002	Old Creamery Rd & Hemlock Ave Stormwater Retention Basin	0	1	0	1	1	1	0	1	1	0	1	0	1	1	9	High
2021-Andover Township-003	Incorporate Hazard Mitigation in Budgeting	0	0	1	1	0	1	1	0	0	0	1	1	1	1	8	Medium
2021-Andover Township-004	Resilience Committee and Advisor	1	1	0	1	1	1	1	1	1	1	1	0	1	1	12	High
2021-Andover Township-005	Continuity of Operations Plan	1	1	1	1	1	1	1	0	1	1	1	1	1	1	13	High
2021-Andover Township-006	FireWise Program	1	1	0	1	1	1	1	1	0	0	0	0	0	1	8	Medium
2021-Andover Township-007	Hazard Outreach Improvements	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	High
2021-Andover Township-008	Disaster Debris Management Plan	0	1	1	1	1	1	1	1	1	1	1	1	1	1	13	High
2021-Andover Township-009	Flood Damage Prevention Ordinance Update	0	1	1	1	1	1	1	1	1	1	0	1	1	1	12	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 9.3-17. 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		X		X			X
Disease Outbreak	X		X		X			X
Drought	X		X		X			X
Earthquake	X		X		X			X
Flood	X		X		X	X		X
Geologic	X		X		X			X
Hazardous Materials	X		X		X			X
Hurricane and Tropical Storm	X		X		X			X
Invasive Species	X		X		X			X
Nor'Easter	X		X		X			X
Severe Weather	X		X		X	X		X
Severe Winter Weather	X		X		X			X
Wildfire	X	X	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 9.3-1. Township of Andover Hazard Area Extent and Location Map 1

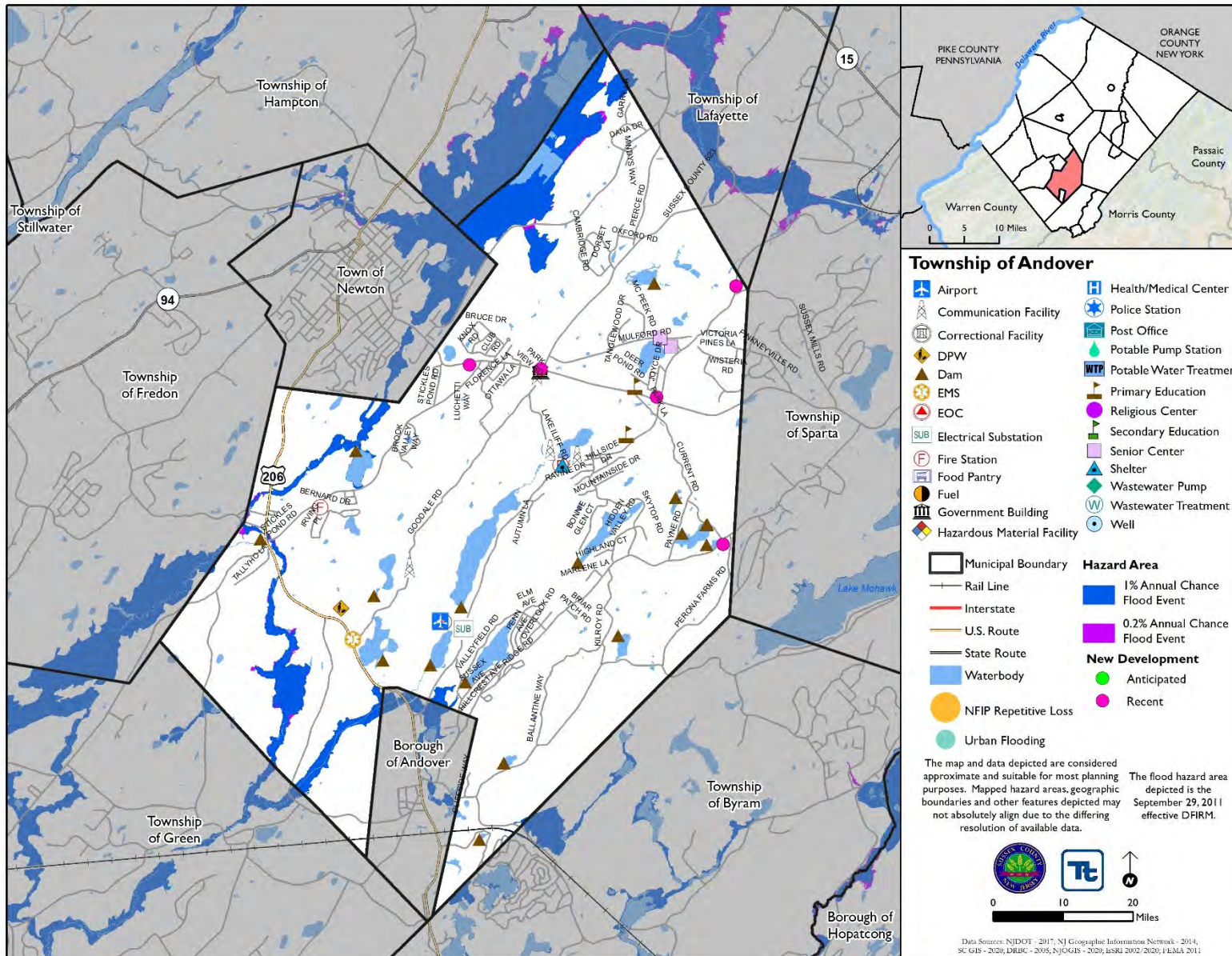






Figure 9.3-2. Township of Andover Hazard Area Extent and Location Map 2

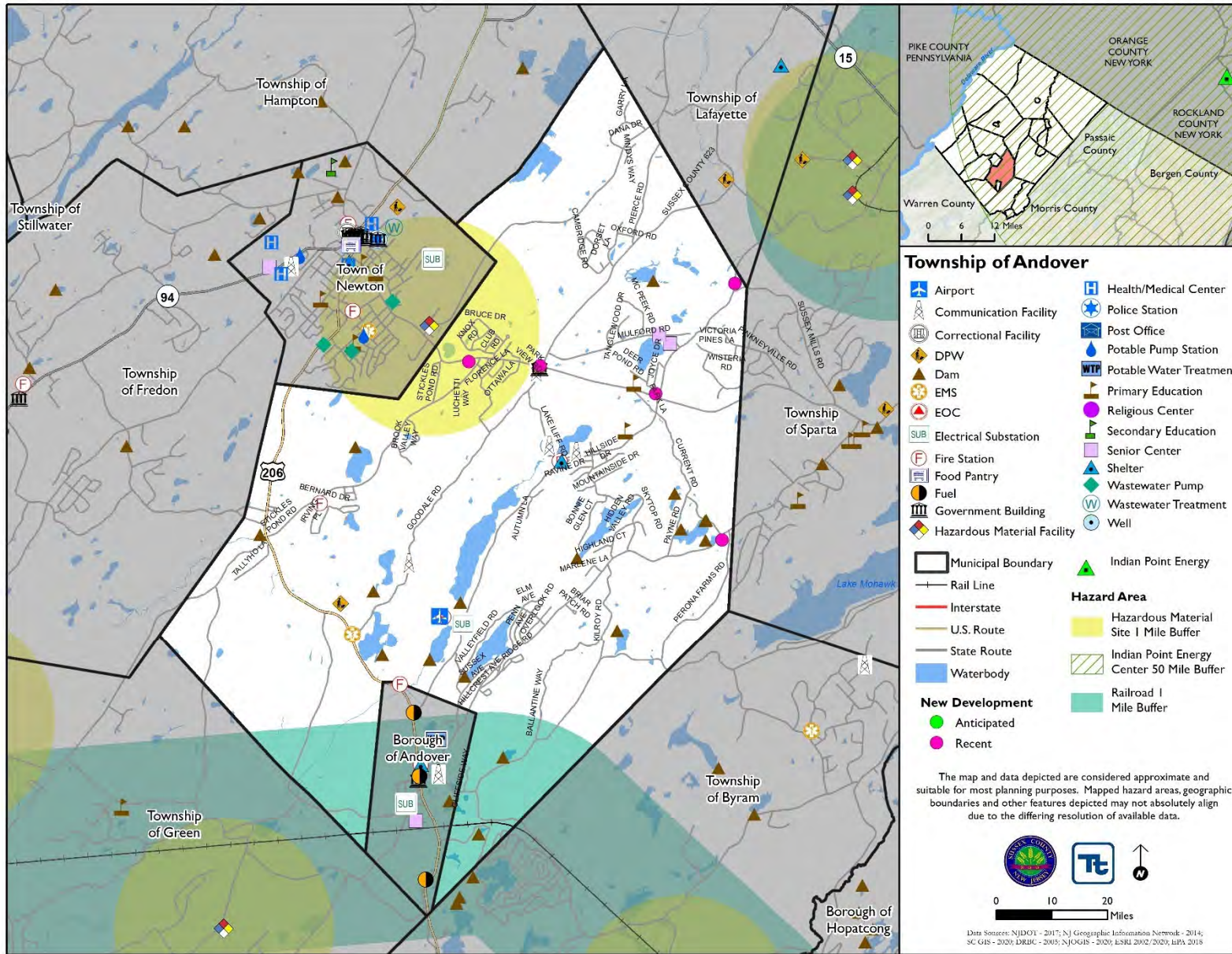
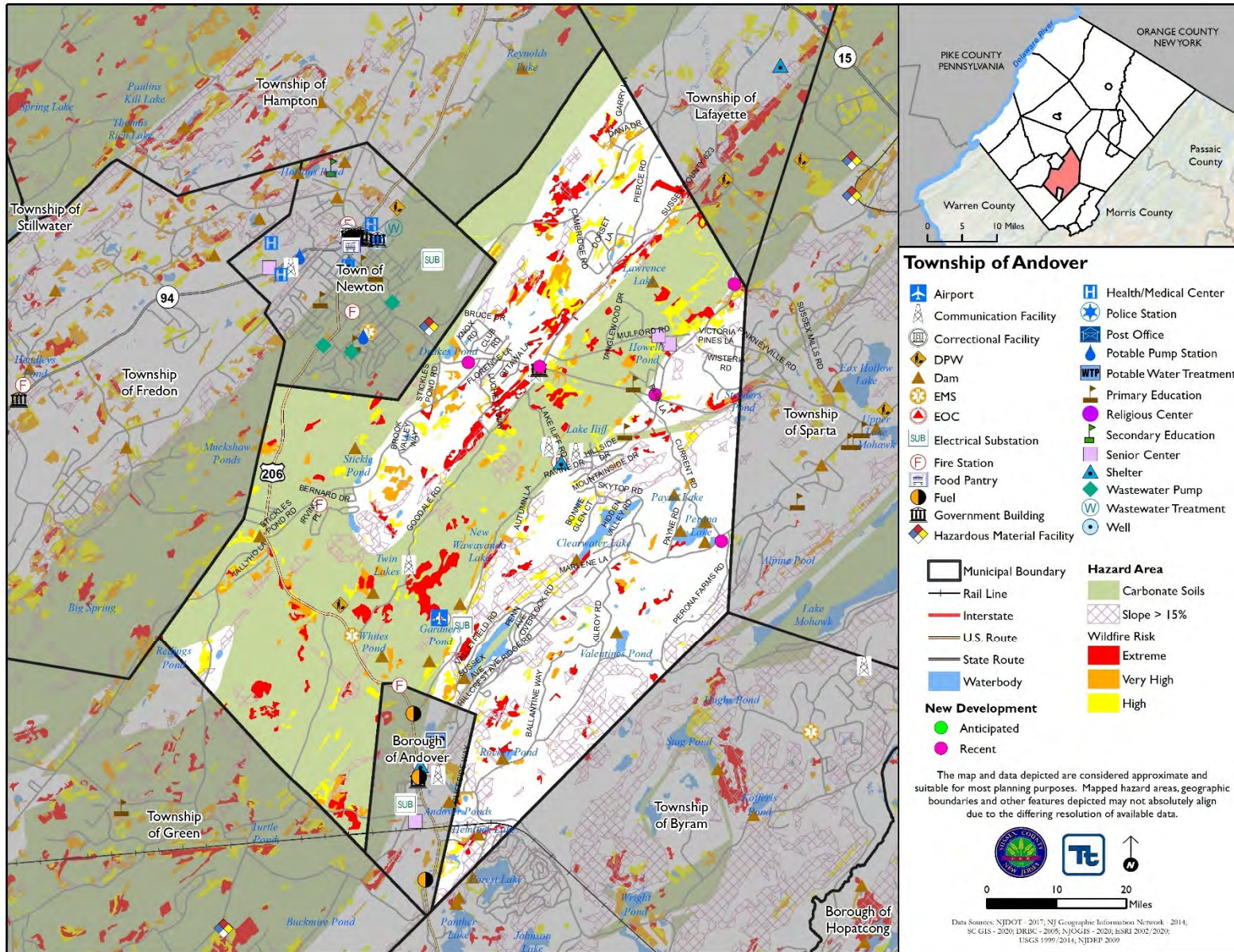




Figure 9.3-3. Township of Andover Hazard Area Extent and Location Map 3





Action Worksheet			
<b>Project Name:</b>	Pierce Road Stormwater Retention Basin		
<b>Project Number:</b>	2021-Andover Township-001		
Risk / Vulnerability			
<b>Hazard(s) of Concern:</b>	Flood, Severe Weather		
<b>Description of the Problem:</b>	Stormwater flooding is a problem at Pierce Road.		
Action or Project Intended for Implementation			
<b>Description of the Solution:</b>	The Township Engineer will design and install a stormwater retention basin on Pierce Road. Public Works will be responsible for upkeep and maintenance of the basin.		
<b>Is this project related to a Critical Facility or Lifeline?</b>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
<b>Level of Protection:</b>	TBD by design specifications	<b>Estimated Benefits (losses avoided):</b>	Reduction in flood risk
<b>Useful Life:</b>	30 years	<b>Goals Met:</b>	2
<b>Estimated Cost:</b>	High	<b>Mitigation Action Type:</b>	Structure and Infrastructure Projects
Plan for Implementation			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	Within 5 years
<b>Estimated Time Required for Project Implementation:</b>	6 months	<b>Potential Funding Sources:</b>	HMGP, BRIC, Township budget
<b>Responsible Organization:</b>	Engineer, Public Works	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard mitigation, Stormwater management
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues
	Elevate roadway	\$500,000	Costly and may not solve problem
	Relocate roadway	N/A	Not possible
Progress Report (for plan maintenance)			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			



Action Worksheet		
<b>Project Name:</b>	Pierce Road Stormwater Retention Basin	
<b>Project Number:</b>	2021-Andover Township-001	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	0	
Property Protection	1	Protects roadway 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	1	
Administrative	0	
Multi-Hazard	1	Flood, Severe Weather
Timeline	0	Within 5 years
Agency Champion	1	Engineer, Public Works
Other Community Objectives	1	
<b>Total</b>	10	
<b>Priority (High/Med/Low)</b>	High	



Action Worksheet			
<b>Project Name:</b>	Old Creamery Rd & Hemlock Ave Stormwater Retention Basin		
<b>Project Number:</b>	2021-Andover Township-002		
Risk / Vulnerability			
<b>Hazard(s) of Concern:</b>	Flood, Severe Weather		
<b>Description of the Problem:</b>	Stormwater flooding is a problem at Old Creamery Road & Hemlock Avenue.		
Action or Project Intended for Implementation			
<b>Description of the Solution:</b>	The Township Engineer will design and install a stormwater retention basin at Old Creamery Road & Hemlock Avenue. Public Works will be responsible for upkeep and maintenance of the basin.		
<b>Is this project related to a Critical Facility or Lifeline?</b>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
<b>Level of Protection:</b>	TBD by design specifications	<b>Estimated Benefits (losses avoided):</b>	Reduction in flood risk
<b>Useful Life:</b>	30 years	<b>Goals Met:</b>	2
<b>Estimated Cost:</b>	High	<b>Mitigation Action Type:</b>	Structure and Infrastructure Projects
Plan for Implementation			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	Within 5 years
<b>Estimated Time Required for Project Implementation:</b>	6 months	<b>Potential Funding Sources:</b>	HMGP, BRIC, Township budget
<b>Responsible Organization:</b>	Engineer, Public Works	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard mitigation, Stormwater management
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues
	Elevate roadway	\$500,000	Costly and may not solve problem
	Relocate roadway	N/A	Not possible
Progress Report (for plan maintenance)			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			



Action Worksheet		
<b>Project Name:</b>	Old Creamery Rd & Hemlock Ave Stormwater Retention Basin	
<b>Project Number:</b>	2021-Andover Township-002	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	0	
Property Protection	1	Protects roadway 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	1	
Administrative	0	
Multi-Hazard	1	Flood, Severe Weather
Timeline	0	Within 5 years
Agency Champion	1	Engineer, Public Works
Other Community Objectives	1	
<b>Total</b>	10	
<b>Priority (High/Med/Low)</b>	High	



## 9.4 BOROUGH OF BRANCHVILLE

This section presents the jurisdictional annex for the Borough of Branchville. The annex includes a general overview of the Borough of Branchville; an assessment of the Borough of Branchville’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.

### 9.4.1 Hazard Mitigation Planning Team

The Borough of Branchville 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 9.4-1. Hazard Mitigation Planning Team**

Primary Point of Contact		Alternate Point of Contact
Name / Title: Jeff Lewis, OEM Coordinator Address: 5 Main Street, P.O. Box 840, Branchville, NJ 07826 Phone Number: (973) 479-7203 Email: jlewis310@embarqmail.com		Name / Title: Kate Leissler, Borough Clerk Address: 5 Main Street, P.O. Box 840, Branchville, NJ 07826 Phone Number: (973) 948-4626 Email: branchvilleclerk@yahoo.com
NFIP Floodplain Administrator		
Name / Title: Dave Simmons, Consultant/Engineer Address: 17 Plains Road Augusta, New Jersey 07822 Phone Number: (973) 948-6463 Email: DSimmmons@hpellow.com		
Name	Title	Method of Participation
Jeff Lewis	Emergency Management Coordinator	Primary point of contact, attended the annex training, risk assessment meeting and mitigation workshop; assisted with annex development by providing data and information; updated the mitigation strategy development; reviewed annex*
Kate Leissler	Borough Clerk	Alternate point of contact
Dave Simmons	Consultant/Engineer	NFIP floodplain administrator
Anthony Frato Sr.	Mayor	Reviewed annex*
Harold E. Pello	Consultant/Engineer and Land Use Planner	Reviewed annex*
Christine Rolef	Fiscal/CFO	Reviewed annex*
Mike Robinson	Construction Official	Reviewed annex*
Michel Little	Public Works Director	Reviewed annex*
Lt. J. Shotwell	Police Station Commander	Reviewed annex*
Jon Frato	Fire Chief	Reviewed annex*

\*Refer to Jurisdictional Annex Review Sign-Off Sheet in Appendix B.





### 9.4.2 Jurisdiction Profile

The Borough of Branchville is located in northwestern Sussex County and surrounded entirely by the Township of Frankford. Culvers Creek and Dry Brook both flow through the Borough. The Borough has a total area of 0.6 square miles.

According to the U.S. Census, the 2010 population for the Borough of Branchville was 841. The estimated 2018 population was 896, a 6.5 percent increase from the 2010 Census. Data from the 2018 U.S. Census American Community Survey indicate that 6.9 percent of the population is 5 years of age or younger and 14.3 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.

### 9.4.3 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 9.4-2 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 9.4-2. Recent and Expected Future Development**

Type of Development	2015		2016		2017		2018		2019	
<b>Number of Building Permits for New Construction Issued Since the Previous HMP</b>										
	<b>Total</b>	<b>Within SFHA</b>	<b>Total</b>	<b>Within SFHA</b>	<b>Total</b>	<b>Within SFHA</b>	<b>Total</b>	<b>Within SFHA</b>	<b>Total</b>	<b>Within SFHA</b>
Single and Two-Family Units	0	0	0	0	0	0	0	0	0	0
Multi-Family	0	0	0	0	0	0	0	0	0	0
Other (commercial, mixed-use, etc.)	0	0	0	0	0	0	0	0	0	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		
<b>Recent Major Development and Infrastructure from 2015 to Present</b>										
None										
<b>Known or Anticipated Major Development and Infrastructure in the Next Five (5) Years</b>										
None anticipated										

\* Only location-specific hazard zones or vulnerabilities identified.

SFHA = Special Flood Hazard Area

### 9.4.4 Capability Assessment

Section 5 (Capability Assessment) describes the components included in the capability assessment and their significance for hazard mitigation planning. The Borough of Branchville 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 Borough of Branchville 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 Borough of Branchville and where hazard mitigation has been integrated.

**Table 9.4-3. 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.
<b>Codes, Ordinances, &amp; Requirements</b>					
<b>Building Code</b>	Yes	State & Local	Yes	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>• 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</li> <li>• The Mayor and Council are responsible for this code in compliance with State Uniform Construction Code Act (N.J.S. 52:27D-119 et seq.).</li> <li>• State Uniform Construction Code Act (N.J.S. 52:27D-119 et seq.)</li> </ul>					
<b>Zoning Code</b>	Yes	Local	Yes – if municipality has a Planning Board	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>• 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.</li> <li>• The Mayor and Council are responsible for this code in compliance with Chapter 123- Zoning. New zoning procedures recognize natural hazard areas.</li> </ul>					
<b>Subdivisions</b>	Yes	State	Yes – if municipality has a Planning Board	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>• 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</li> </ul>					



	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.
<p><i>any county having a county planning board shall provide for the review of all subdivisions of land within the county by said county planning board and for the approval of those subdivisions affecting county road or drainage facilities as set forth and limited hereinafter in this section.</i></p> <ul style="list-style-type: none"> <li>The Mayor and Council are responsible for this ordinance in compliance with Chapter 104- Subdivision of Land.</li> </ul>					
<b>Stormwater Management</b>	Yes	Local	Yes	Yes	-
<p><b>Comment:</b></p> <ul style="list-style-type: none"> <li>See Title 7 of the NJ Administrative Code, N.J.A.C. 7:8</li> <li>The Mayor and Council are responsible for this ordinance in compliance with Chapter 121-6.</li> <li>Ecode Chapter 121 Stormwater Management: <a href="https://ecode360.com/8956544">https://ecode360.com/8956544</a>. Adopted by the Mayor and the Council of the Borough of Branchville 3-15-2006 by Ord. No. 3-2006. Amendments noted where applicable.</li> </ul>					
<b>Post-Disaster Recovery</b>	No	-	No	-	-
<p><b>Comment:</b></p>					
<b>Real Estate Disclosure</b>	Yes	State, Division of Consumer Affairs	Yes	Yes	-
<p><b>Comment:</b></p> <ul style="list-style-type: none"> <li>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.</li> </ul>					
<b>Growth Management</b>	Yes	Local	Yes – if municipality has a Planning Board	Yes	-
<p><b>Comment:</b></p> <ul style="list-style-type: none"> <li>State Mandated on a municipal level. See Zoning Ordinance ; Also – Plan Endorsement Process via the State Development &amp; 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.</li> <li>The Mayor Council is responsible for this code in compliance with Chapter 123- Zoning. New zoning procedures recognize natural hazard areas.</li> </ul>					
<b>Site Plan Review</b>	Yes	Local	Yes – if municipality has a Planning Board	Yes	-
<p><b>Comment:</b></p> <ul style="list-style-type: none"> <li>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 any county having a county planning board shall provide for the review of all subdivisions of land within the county by said county planning board and for the approval of those subdivisions affecting county road or drainage facilities as set forth and limited hereinafter in this section. 40:27-6.10 In order that county planning boards shall have a complete file of the planning and zoning ordinances of all municipalities in the county, each municipal clerk shall file with the county planning board a copy of the planning and zoning ordinances of the municipality in effect on the effective date of this act and shall notify the county planning board of the introduction of any revision or amendment of such an ordinance which affects lands adjoining county roads or other county lands, or lands lying within 200 feet of a municipal boundary, or proposed facilities or public lands shown on the county master plan or official county map. Such notice shall be given to the county planning board at least 10 days prior to the public hearing thereon by personal delivery or by certified mail of a copy of the official notice of the public hearing together with a copy of the proposed ordinance.</li> <li>The Mayor and Council are responsible for these requirements in compliance with Chapter 97-3.</li> </ul>					
<b>Environmental Protection</b>	No	-	No	-	-
<p><b>Comment:</b></p>					
<b>Flood Damage Prevention</b>	Yes	Local	Yes	Yes	2021-Branchville-005
<p><b>Comment:</b></p> <ul style="list-style-type: none"> <li>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</li> </ul>					



	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.
<p><i>the NFIP requires a floodplain ordinance. Regulations for the Flood Control Hazards Act were adopted in 2007 and amended effective June 20, 2016.</i></p> <ul style="list-style-type: none"> <li><i>The Mayor and Council are responsible for this ordinance in compliance with Chapter 64- Flood Damage Prevention. 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:</i> <ul style="list-style-type: none"> <li><i>Protect human life and health; Minimize expenditure of public money for costly flood control projects; Minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public; Minimize prolonged business interruptions; Minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets and bridges located in areas of special flood hazard; Help maintain a stable tax base by providing for the second use and development of areas of special flood hazard so as to minimize future flood blight areas; Ensure that potential buyers are notified that property is in an area of special flood hazard; and Ensure that those who occupy the areas of special flood hazard assume responsibility for their actions.</i></li> </ul> </li> <li><i>Damage of any origin sustained by a structure whereby the cost of restoring the structure to its before-damaged condition would equal or exceed 50% of the market value of the structure before the damage occurred.</i></li> </ul>					
<b>Wellhead Protection</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Emergency Management</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Climate Change</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Disaster Recovery Ordinance</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Disaster Reconstruction Ordinance</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Municipal Separate Storm Sewer System (MS4)</b>	Yes	Local	Yes	Yes	-
<i>Comment:</i>					
<b>Other [Special Purpose Ordinances (i.e., sensitive areas, steep slope)]</b>	Yes	Local	No	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li><i>The Borough is responsible for these ordinances in compliance with Chapter 111 – Trees and Shrubbery and Chapter 131 – Flooding and Standing Water.</i></li> </ul>					
<b>Planning Documents</b>					
<b>Comprehensive / Master Plan</b>	Yes	Local	Yes	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li><i>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 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.</i></li> <li><i>The Mayor and Council are responsible for this plan in compliance with Code Chapters: Chapter 97-19.</i></li> </ul>					
<b>Capital Improvement Plan</b>	Yes	Local	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.
<i>Comment: The Mayor and Council are responsible for this plan in compliance with Code Chapters: Chapter 104-B.</i>					
<b>Disaster Debris Management Plan</b>	No	-	No	-	2021-Branchville-003
<i>Comment:</i>					
<b>Floodplain or Watershed Plan</b>	Yes	County	No	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>The Mayor and Council are responsible for this plan. Water Resources Plan for the Delaware River Basin (Basin Plan).</li> </ul>					
<b>Stormwater Management Plan</b>	Yes	Local	Yes	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>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.</li> <li>The Mayor and Council are responsible for this plan in compliance with Chapter 121 Storm Water Management.</li> </ul>					
<b>Stormwater Pollution Prevention Plan</b>	Yes	Local	Yes	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>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.</li> </ul>					
<b>Urban Water Management Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Habitat Conservation Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Economic Development Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Shoreline Management Plan</b>	No	-	Yes – if located in a coastal zone	-	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>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.</li> </ul>					
<b>Community Wildfire Protection Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Community Forest Management Plan</b>	No	-	No	-	-
<i>Comment:</i>					



	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.
<b>Transportation Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Agriculture Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Climate Action Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Tourism Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Business Development Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Other</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Response/Recovery Planning</b>					
<b>Comprehensive Emergency Management Plan (CEMP) / Emergency Operations Plan (EOP)</b>	Yes	Local	Yes	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>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.</li> <li>The Mayor, Council, and Office of Emergency Management are responsible for this plan.</li> </ul>					
<b>Threat &amp; Hazard Identification &amp; Risk Assessment (THIRA)</b>	Yes	State	No	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>According to 44 CFR 201.4 (c)(2), states are required to undertake a risk assessment that provides the factual basis for developing a mitigation strategy. The State of New Jersey risk assessment shall include an overview of the location of all-natural hazards that can affect the State, including information on previous occurrences of hazard events as well as the probability of future hazard events, using maps where appropriate.</li> <li>All information on the risk assessment can be found in Section 5, as well as the referenced supporting appendices. For ease of review, the vulnerability assessment follows each hazard profile, so that all information about a specific hazard is continuous. This section describes the identification of hazards, Presidential disaster declarations, hazard profiles, and the vulnerability assessment.</li> </ul>					
<b>Post-Disaster Recovery Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Continuity of Operations Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Public Health Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Other Plans</b>	No	-	No	-	-
<i>Comment:</i>					

**Table 9.4-4. Development and Permitting Capability**

Criterion	Response
Does your jurisdiction issue development permits? - If no, who does? If yes, which department?	Yes, Zoning Department





Criterion	Response
Does your jurisdiction have the ability to track permits by hazard area?	Yes
Does your jurisdiction have a buildable lands inventory? -If yes, please describe briefly. -If no, please quantitatively describe the level of buildout in the jurisdiction.	Yes, the Borough completed a Housing Element and a buildable lands inventory.

**ADMINISTRATIVE AND TECHNICAL CAPABILITY**

The table below summarizes potential staff and personnel resources available to the Borough of Branchville.

**Table 9.4-5. Administrative and Technical Capabilities**

Staff/Personnel Resource	Available?	Department/Agency/Position
<b>Administrative Capability</b>		
Planning Board	Yes	Planning Board
Mitigation Planning Committee	No	Mayor & Council
Environmental Board / Commission	No	Mayor & Council
Open Space Board / Committee	No	Mayor & Council
Economic Development Commission / Committee	No	Mayor & Council
Warning Systems / Services (reverse 911, outdoor warning signals)	Yes	OEM- Reverse 9-1-1; Borough Clerk
Maintenance program to reduce risk	No	Mayor & Council
Mutual aid agreements	Yes	Mayor Council OEM Fire Chief
<b>Technical/Staffing Capability</b>		
Planners or engineers with knowledge of land development and land management practices	Yes	Mayor & Council
Engineers or professionals trained in building or infrastructure construction practices	Yes	Mayor & Council
Planners or engineers with an understanding of natural hazards	Yes	Mayor & Council
Staff with training in benefit/cost analysis	No	-
Staff with training in green infrastructure	Yes	Harold Pellow & Associates
Staff with education/knowledge/training in low impact development	Yes	Harold Pellow & Associates
Surveyor	Yes	Mayor & Council
Stormwater engineer	Yes	Harold Pellow & Associates
Personnel skilled or trained in GIS applications	No	State
Local or state water quality professional	Yes	Harold Pellow & Associates
Scientist familiar with natural hazards in local area	No	State
Emergency manager	Yes	OEM
Watershed planner	No	-
Environmental specialist	No	-
Grant writers	No	-
Resilience Officer	No	-
Other: NFIP Floodplain Administrator	Yes	Construction Official
Other: Professionals trained in conducting damage assessments	Yes	Mayor & Council

**FISCAL CAPABILITY**





The table below summarizes financial resources available to the Borough of Branchville.

**Table 9.4-6. Fiscal Capabilities**

Financial Resource	Accessible or Eligible to Use?
Community Development Block Grants (CDBG, CDBG-DR)	Yes
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service	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
State-Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	Yes
Clean Water Act 319 Grants (Nonpoint Source Pollution)	No
Other	No

**EDUCATION AND OUTREACH CAPABILITY**

The table below summarizes the education and outreach resources available to the Borough of Branchville.

**Table 9.4-7. Education and Outreach Capabilities**

Criterion	Response
Do you have a public information officer or communications office?	Yes- Clerk, Mayor, OEM
Do you have personnel skilled or trained in website development?	Yes- Clerk, Outside contractor
Do you have hazard mitigation information available on your website? -If yes, briefly describe.	Yes- if needed, flooding and hazard events can be added
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.	No
Do you have any other programs already in place that could be used to communicate hazard-related information? If yes, briefly describe.	Yes- Borough newsletter

**COMMUNITY CLASSIFICATIONS**

The table below summarizes the classifications for community programs available to the Borough of Branchville.

**Table 9.4-8. Community Classifications**

Program	Participating?	Classification	Date Classified
Community Rating System	No	-	-
Building Code Effectiveness Grading Schedule (BCEGS)	No	-	-
Public Protection (Fire ISO Protection Class)	Yes	6/10	Not known
Storm Ready Certification	No	-	-





Program	Participating?	Classification	Date Classified
Firewise Community Classification	No	-	-
Sustainable Jersey	No	-	-

**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 9.4-9. Adaptive Capacity**

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

**NATIONAL FLOOD INSURANCE PROGRAM**

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

**Table 9.4-10. National Flood Insurance Program Compliance**

Criterion	Response
What local department is responsible for floodplain management?	Engineering
Who is your floodplain administrator? (name, department/position)	Dave Simmons, Consultant/Engineer
Are any certified floodplain managers on staff in your jurisdiction?	No
What is the date that your flood damage prevention ordinance was last amended?	August 3, 2011
Does your floodplain management program meet or exceed minimum requirements? -If exceeds, in what ways?	The program meets minimum requirements.







Criterion	Response
When was the most recent Community Assistance Visit or Community Assistance Contact?	None
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.	No
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 consider attending training and/or continuing education training if offered in the County.
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. However, the Borough would attend a CRS seminar if offered locally.
How many flood insurance policies are in force in your jurisdiction?*	4 policies
-What is the insurance in force?	\$1,291,000 insurance in force
-What is the premium in force?	\$2,036 premium in force
How many total loss claims have been filed in your jurisdiction?*	9 claims
-How many claims are still open or were closed without payment?	\$57,589 in payments
-What were the total payments for losses?	
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

**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 Borough of Branchville’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 9.4-11 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 9.4-11. 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 Weather and Snowstorm	Yes	A major nor'easter, produced record snowfall and blizzard conditions in parts of New Jersey on January 23 <sup>rd</sup> and 24 <sup>th</sup> .	Although the County was impacted, the Borough did not report impact
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 Borough was subject to municipal office closures and social distancing and masking requirements.

Source: FEMA 2020, NOAA NCEI 2020





### 9.4.5 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 Borough of Branchville 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 Borough of Branchville 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 Borough of Branchville has significant exposure.

#### REPETITIVE FLOOD LOSSES

The following summarizes the repetitive and severe repetitive flood losses in the Borough of Branchville.

- Number of repetitive loss (RL) properties: 2
- 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 9.4-12. Critical Facilities and Lifelines Flood Exposure**

Name	Type	Exposure	
		1% Event	0.2% Event
None identified			

Source: Sussex County Planning Partnership 2020

#### IDENTIFIED ISSUES AND PROBLEM AREAS

The jurisdiction has identified the following vulnerabilities within their community:

- The town hall and well house do not have adequate backup power to operate during a hazard event. The town hall is an essential facility that acts as the emergency operation center for the municipality, while the well house is critical for public utilities that are required to be fully operating at all times.
- The existing embankments along Dry Brook are relatively low and are prone to overflow, causing potential widespread flooding to surrounding properties. In previous years, due to Severe Weathers, the brook has flooded main roads entering and existing town, in addition to forcing hundreds of residents to evacuate.
- The municipality has previously experienced severe flooding in its brooks and streams that pass through the borough, including Dry Brook and Culvers Creek. In one year, the municipality experienced all in and outbound road closures due to stream flooding and a hundred residents forced to evacuate their





homes as a result. The resulting debris from these types of events continue to be an issue to the municipality.

- There are two repetitive loss properties that are located in a 100-year flood zone.
- The Borough’s Flood Damage Prevention Ordinance does not have any information in regard to the state’s one foot freeboard requirement.

**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 Borough of Branchville 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 Borough of Branchville. The Borough of Branchville 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 Borough of Branchville assented to the proposed hazard ranking based on updated data. Dam failure, earthquake, and wildfire were reduced from “Medium” to “Low”, and Hazardous Materials was reduced from “High” to “Medium”.

**Table 9.4-13. Borough of Branchville Hazard Ranking**

Dam Failure	Disease Outbreak	Drought	Earthquake	Flood	Geologic	
Low	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

**9.4.6 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 9.4-15 and Table 9.4-16 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 9.4-14. 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	Enter 2021 HMP Action #
Branchville-1 (old #3)	Raise embankments along 70 feet of the Dry Brook near Borough baseball field.	Borough Engineer	In Progress	X	2021-Branchville-002
Branchville-2 (new)	Future rezoning procedures will recognize natural hazard areas that will allow greater intensity or density of use.	Borough Administration	Ongoing Capability		
Branchville-3 (new)	Establish a community resilience committee and advisor.	Borough Administration	No Progress		
Branchville-4 (new)	Support the mitigation of vulnerable structures via retrofit (e.g. elevation, flood-proofing) or acquisition/relocation to protect structures from future damage, with repetitive loss and severe repetitive loss properties as a priority when applicable. Phase 1: Identify appropriate candidates and determine most cost-effective mitigation option. Phase 2: Work with the property owners to implement selected action based on available funding and local match availability.	Engineering via NFIP FPA with NJOEM, FEMA support	In Progress	X	2021-Branchville-004
Branchville-5 (revised old #6)	Provide information on all types of hazards, preparedness and mitigation measures, and responses on the Borough website.	Borough	Completed		

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

- None identified.

**PROPOSED HAZARD MITIGATION INITIATIVES FOR THE PLAN UPDATE**

The Borough of Branchville 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 Borough of Branchville 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 9.4-15 summarizes the comprehensive-range of specific mitigation initiatives the Borough of Branchville 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 9.4-16 provides a summary of the prioritization of all proposed mitigation initiatives for this HMP update.



Table 9.4-15. 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-Branchville-001	Generator Installation	<p><b>Problem:</b> The Borough Hall and well house do not have adequate backup power to operate during a hazard event. The town hall is an essential facility that acts as the emergency operation center for the municipality, while the well house is critical for public utilities that are required to be fully operating at all times.</p> <p><b>Solution:</b> The Borough would like to install 3 phase multi-fuel source generators to power each respective facility. The Borough engineer would need to conduct a needs assessment to determine the technical energy capacity needed before determining the proper generator needed for installation. The engineer would then be tasked to purchase and install the generator at each facility. The Borough board shall assist as needed.</p>	New	Severe Weather, Severe Winter Weather	1, 3, 5, 6	Borough Engineer	HMGP, BRIC, municipal funding	Continued operations	\$200k	3 years	High	SIP	PP, ES
2021-Branchville-002	Dry Brook Embankments	<p><b>Problem:</b> The existing embankments along Dry Brook are relatively low and are prone to overflow, causing potential widespread flooding to surrounding properties. In previous years, due to severe storm events, the brook has flooded main roads entering and existing town, in addition to forcing hundreds of residents to evacuate.</p> <p><b>Solution:</b> The Borough DPW and engineer will raise embankments along 70 feet of the Dry Brook near Borough baseball field. This will decrease flooding within the municipality and reduce overflow of creek during extreme weather events.</p>	Existing	Flood	1, 2, 3, 5	Borough DPW/ Engineer	HMGP, BRIC, municipal budget	Reduced flooding along Dry Brook	Medium	3 years	High	SIP, NSP	SP, NR
2021-Branchville-003	Disaster Debris Management Plan	<p><b>Problem:</b> The Borough has previously experienced severe flooding in its brooks and streams that pass through the borough, including Dry Brook and Culvers Creek. In one year, the</p>	Existing	All Hazards	2, 3, 4, 5, 6	Borough Engineer & DPW	Borough Funds	Facilitate municipal recovery	Medium	1 year	High	LPR	PR



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
		<p>municipality experienced all in and outbound road closures due to stream flooding and a hundred residents forced to evacuate their homes as a result. The resulting debris from these types of events continue to be an issue to the municipality.</p> <p><b>Solution:</b> The Borough will develop a disaster debris management plan that can be used to properly manage the debris after Severe Weathers and flooding. Having specific guidance can help municipal and business owners determine what needs to be done with excess debris. The Borough board shall lead the initiative to develop this plan, along with assistance from the DPW and engineer for technical guidance.</p>						r from disaster.					
2021-Branchville-004	Repetitive Loss Properties	<p><b>Problem:</b> Frequent flooding events have resulted in damages to residential properties. These properties have been repetitively flooded as documented by paid NFIP claims. The Borough has 2 repetitive loss properties but other properties may be impacted by flooding as well.</p> <p><b>Solution:</b> Conduct outreach to 10 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).</p>	Existing	Flood, Severe Weather	1, 2, 3, 4, 5, 6, 7	NFIP Floodplain Administrator, supported by homeowners	FEMA HMGP and FMA, local cost share by residents	Eliminates flood damage to homes and residents, creates open space for the municipality increasing flood storage.	Low	3 years	High	SIP	PP
2020-Branchville-005	Incorporate Freeboard into FDPO	<p><b>Problem:</b> The Borough’s Flood Damage Prevention Ordinance does not have any information in regard to the state’s mandated freeboard requirement.</p>	Existing	Flood	1, 2, 3, 4, 5, 6, 7	Borough Board	Municipal Budget	State Compliance	Low	1 year	High	LPR	PR





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
		<p><b>Solution:</b> The municipality will update its flood damage prevention ordinance using the model flood prevention ordinance from the State of New Jersey Department of Environmental Protection:  <a href="https://www.nj.gov/dep/floodcontrol/molord.htm">https://www.nj.gov/dep/floodcontrol/molord.htm</a></p>											

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:

BRIC	Building Resilient Infrastructure and Communities
FMA	Flood Mitigation Assistance Grant Program
HMGF	Hazard Mitigation Grant 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 9.4-16. 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-Branchville-001	Generator Installation	1	1	1	1	1	1	-1	0	0	1	1	1	1	0	9	High
2021-Branchville-002	Dry Brook Embankments	1	1	1	0	1	1	-1	1	1	1	1	1	0	1	10	High
2021-Branchville-003	Disaster Debris Management Plan	1	1	1	0	1	1	0	1	1	0	1	1	1	1	11	High
2021-Branchville-004	Repetitive Loss Properties	1	1	1	1	1	1	0	1	0	0	1	0	1	1	10	High
2021-Branchville-005	Incorporate Freeboard into FDPO	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	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 9.4-17. 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			X
Disease Outbreak					X			X
Drought					X			X
Earthquake					X			X
Flood	X	X		X	X	X	X	X
Geologic					X			X
Hazardous Materials					X			X
Hurricane and Tropical Storm	X				X			X
Invasive Species					X			X
Nor’Easter					X			X
Severe Weather	X	X			X			X
Severe Winter Weather	X	X			X			X
Wildfire					X			X

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

- RED** high ranked hazard
- ORANGE** medium ranked hazard
- YELLOW** low ranked hazard



Figure 9.4-1. Borough of Branchville Hazard Area Extent and Location Map 1

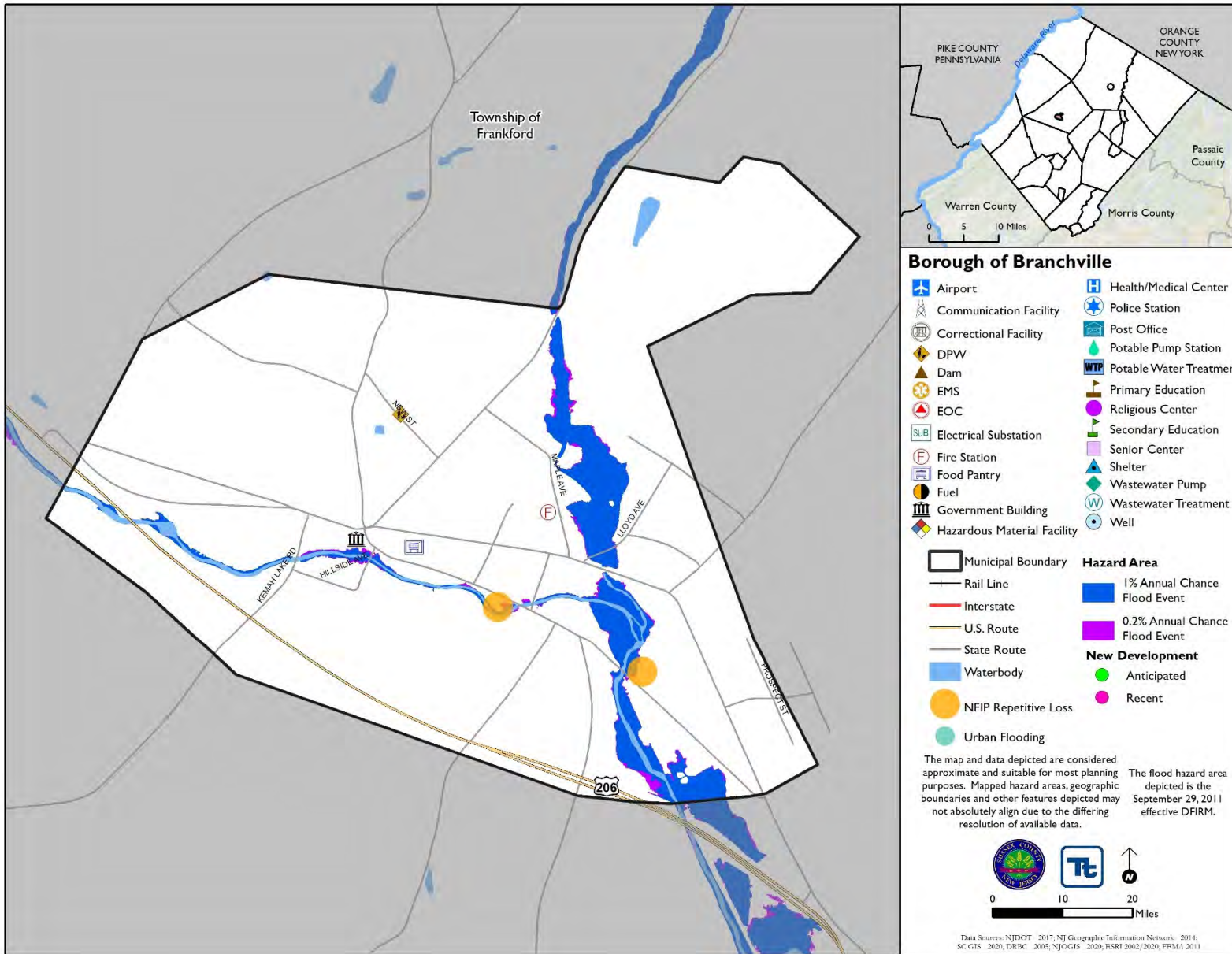




Figure 9.4-2. Borough of Branchville Hazard Area Extent and Location Map 2

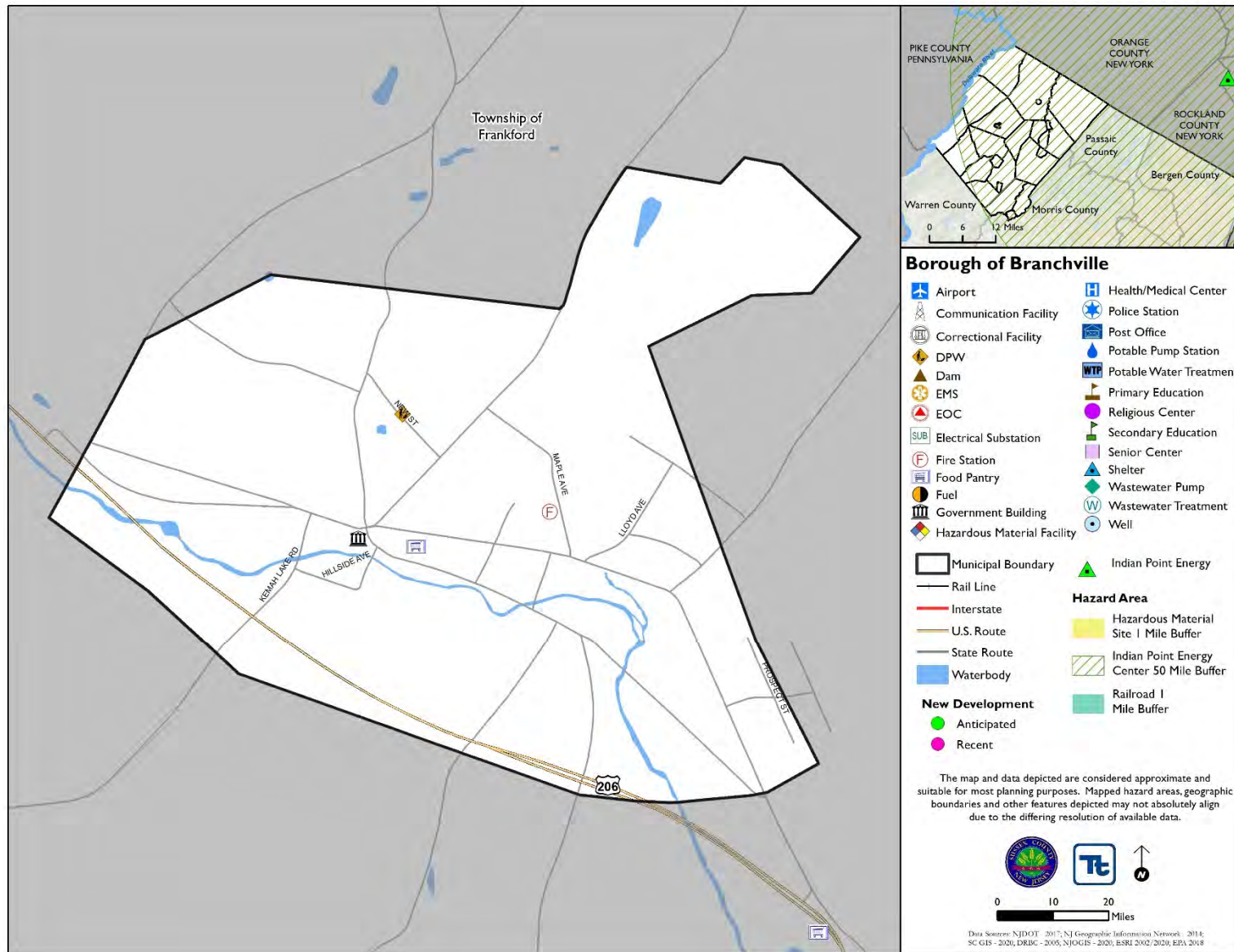
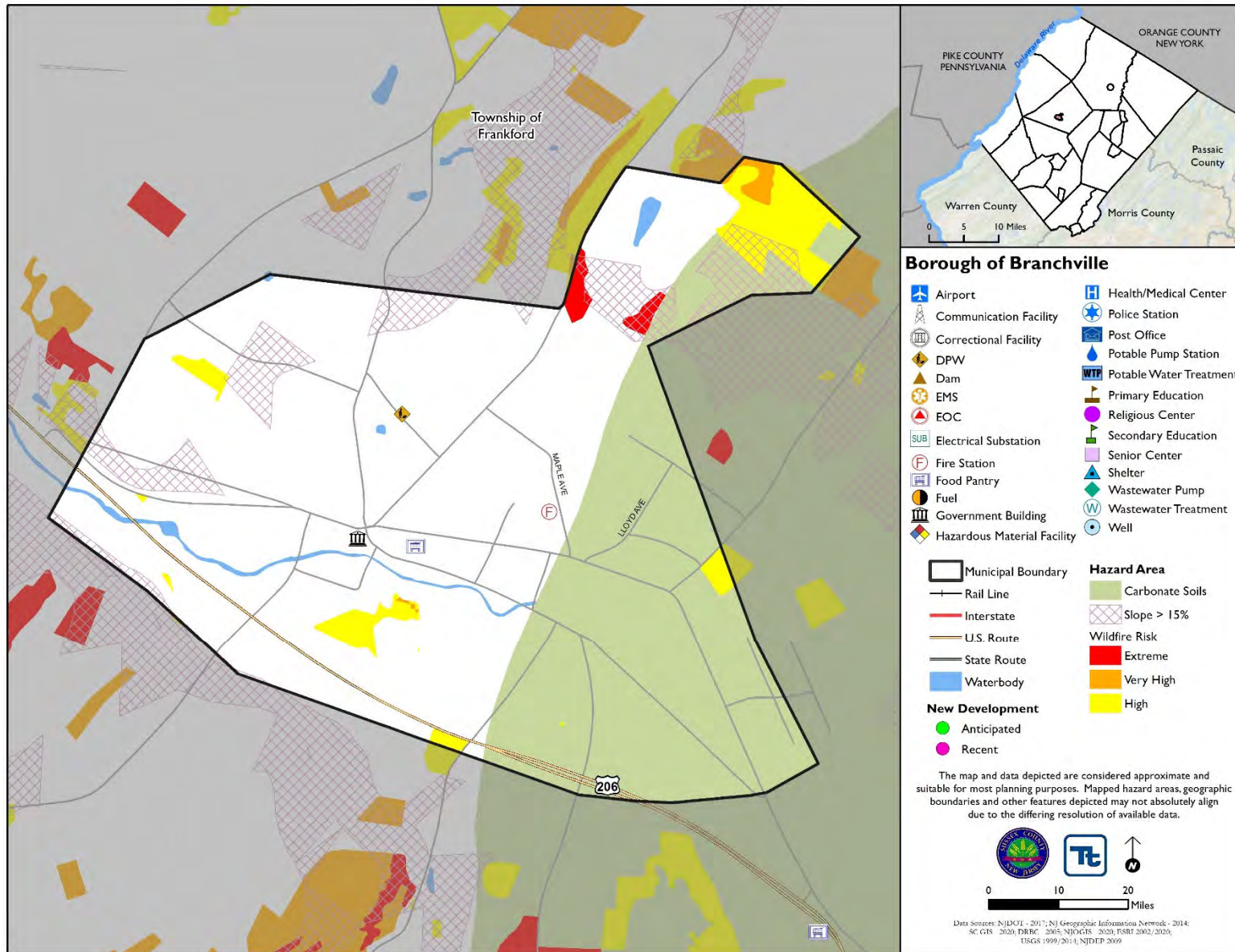




Figure 9.4-3. Borough of Branchville Hazard Area Extent and Location Map 3





Action Worksheet			
<b>Project Name:</b>	Generator Installation		
<b>Project Number:</b>	2021-Branchville-001		
Risk / Vulnerability			
<b>Hazard(s) of Concern:</b>	Severe Weather, Severe Winter Weather		
<b>Description of the Problem:</b>	The Borough Hall and well house do not have adequate backup power to operate during a hazard event. The Borough Hall is an essential facility that acts as the emergency operation center for the municipality, while the well house is critical for public utilities that are required to be fully operating at all times.		
Action or Project Intended for Implementation			
<b>Description of the Solution:</b>	The Borough would like to install 3 phase multi-fuel source generators to power each respective facility. The Borough engineer would need to conduct a needs assessment to determine the technical energy capacity needed before determining the proper generator needed for installation. The engineer would then be tasked to purchase and install the generator at each facility. The Borough board shall assist as needed.		
<b>Is this project related to a Critical Facility or Lifeline?</b>	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
<b>Level of Protection:</b>	500-year flood	<b>Estimated Benefits (losses avoided):</b>	Continued operations
<b>Useful Life:</b>	20 years	<b>Goals Met:</b>	1, 3, 5, 6
<b>Estimated Cost:</b>	\$100k for each	<b>Mitigation Action Type:</b>	Structural and Infrastructure Projects
Plan for Implementation			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	6 months once funding secured
<b>Estimated Time Required for Project Implementation:</b>	3 years	<b>Potential Funding Sources:</b>	HMGP; BRIC; municipal budget
<b>Responsible Organization:</b>	Borough Engineer	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard mitigation
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	Develop backup office space/ new facility that has backup power	High	Staff would need to relocate during storm – not feasible
	Purchase solar power	High	Expensive and subject to weather
	Backup power source	Medium	Least expensive and continued operation
Progress Report (for plan maintenance)			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			



Action Worksheet		
<b>Project Name:</b>	Generator Installation	
<b>Project Number:</b>	2021-Branchville-001	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	The increases resilience of critical facility
Property Protection	1	The increases resilience of critical facility
Cost-Effectiveness	1	This project is cost effective
Technical	1	The municipality has the ability to determine generator needs
Political	1	There is no political opposition
Legal	1	There are no legal challenges
Fiscal	-1	The municipality needs funding
Environmental	0	There are no adverse impacts on the environment
Social	0	This has no negative social impact
Administrative	1	
Multi-Hazard	1	This addresses multiple hazards
Timeline	1	The project is feasible within the given timeframe
Agency Champion	1	Borough Engineer
Other Community Objectives	0	None at this time
<b>Total</b>	9	
<b>Priority (High/Med/Low)</b>	High	



Action Worksheet			
<b>Project Name:</b>	Dry Brook Embankments		
<b>Project Number:</b>	2021-Branchville-002		
Risk / Vulnerability			
<b>Hazard(s) of Concern:</b>	Flood		
<b>Description of the Problem:</b>	The existing embankments along Dry Brook are relatively low and are prone to overflow, causing potential widespread flooding to surrounding properties. In previous years, due to severe weather events, the brook has flooded main roads entering and existing town, in addition to forcing hundreds of residents to evacuate.		
Action or Project Intended for Implementation			
<b>Description of the Solution:</b>	The Borough DPW and engineer will raise embankments along 70 feet of the Dry Brook near Borough baseball field. This will decrease flooding within the municipality and reduce overflow of creek during extreme weather events.		
<b>Is this project related to a Critical Facility or Lifeline?</b>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
<b>Level of Protection:</b>	500-year storm	<b>Estimated Benefits (losses avoided):</b>	Reduced flood loss
<b>Useful Life:</b>	30 years	<b>Goals Met:</b>	1, 2, 3, 5
<b>Estimated Cost:</b>	Medium	<b>Mitigation Action Type:</b>	Structural and Infrastructure Projects/ Natural System Protection
Plan for Implementation			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	6 months once funding secured
<b>Estimated Time Required for Project Implementation:</b>	1 year	<b>Potential Funding Sources:</b>	HMGP, BRIC; municipal budget
<b>Responsible Organization:</b>	Borough Engineer, DPW	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Mitigation
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	Raise all roads to prevent future flooding	High	Cost too high and unreasonable
	Bury Dry Creek	High	Cost too high and unreasonable
	Increase embankment height	Low-Medium	Best solution
Progress Report (for plan maintenance)			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			





Action Worksheet		
<b>Project Name:</b>	Dry Brook Embankments	
<b>Project Number:</b>	2021-Branchville-002	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	The increases resilience of critical facility
Property Protection	1	The increases resilience of critical facility
Cost-Effectiveness	1	This project is cost effective
Technical	0	The municipality has the ability to design solution
Political	1	
Legal	1	
Fiscal	-1	The municipality needs funding
Environmental	1	There are no adverse impacts on the environment
Social	1	This has no negative social impact
Administrative	1	
Multi-Hazard	1	This addresses multiple hazards
Timeline	1	The project is feasible within the given timeframe
Agency Champion	0	Borough Engineer, DPW
Other Community Objectives	1	None at this time
<b>Total</b>	10	
<b>Priority (High/Med/Low)</b>	High	



Action Worksheet			
<b>Project Name:</b>	Repetitive Loss Properties		
<b>Project Number:</b>	2021- Branchville-004		
Risk / Vulnerability			
<b>Hazard(s) of Concern:</b>	Flood, Severe Weather		
<b>Description of the Problem:</b>	Frequent flooding events have resulted in damages to residential properties. These properties have been repetitively flooded as documented by paid NFIP claims. The Borough has 2 repetitive loss properties but other properties may be impacted by flooding as well.		
Action or Project Intended for Implementation			
<b>Description of the Solution:</b>	Conduct outreach to 10 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).		
<b>Is this project related to a Critical Facility or Lifeline?</b>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
<b>Level of Protection:</b>	1% annual chance flood event + freeboard ( <i>in accordance with flood ordinance</i> )	<b>Estimated Benefits (losses avoided):</b>	Eliminates flood damage to homes and residents, creates open space for the municipality increasing flood storage.
<b>Useful Life:</b>	Acquisition: Lifetime Elevation: 30 years (residential)	<b>Goals Met:</b>	1, 2, 3, 4, 5, 6, 7
<b>Estimated Cost:</b>	\$1Million	<b>Mitigation Action Type:</b>	Structure and Infrastructure Project
Plan for Implementation			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	6-12 months
<b>Estimated Time Required for Project Implementation:</b>	Three years	<b>Potential Funding Sources:</b>	FEMA HMGP and FMA, local cost share by residents
<b>Responsible Organization:</b>	NFIP Floodplain Administrator, supported by homeowners	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard Mitigation
Three Alternatives Considered (including No Action)			
<b>Alternatives:</b>	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues
	Elevate homes	\$500,000	When this area floods, the entire area is impacted; elevating homes would not eliminate the problem and still lead to road closures and impassable roads
	Elevate roads	\$500,000	Elevated roadways would not protect the homes from flood damages
Progress Report (for plan maintenance)			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			



Action Worksheet		
<b>Project Name:</b>	Repetitive Loss Properties	
<b>Project Number:</b>	2021- Branchville-004	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Families moved out of high-risk flood areas.
Property Protection	1	Properties removed from high-risk flood areas.
Cost-Effectiveness	1	Cost-effective project
Technical	1	Technically feasible project
Political	1	
Legal	1	The Borough has the legal authority to conduct the project.
Fiscal	0	Project will require grant funding.
Environmental	1	
Social	0	Project would remove families from the flood prone areas of the Borough.
Administrative	0	
Multi-Hazard	1	Flood, Severe Weather
Timeline	0	
Agency Champion	1	NFIP Floodplain Administrator, supported by homeowners
Other Community Objectives	1	
<b>Total</b>	10	
<b>Priority (High/Med/Low)</b>	High	



## 9.5 TOWNSHIP OF BYRAM

This section presents the jurisdictional annex for the Township of Byram. The annex includes a general overview of the Township of Byram; an assessment of the Township of Byram’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.

### 9.5.1 Hazard Mitigation Planning Team

The Township of Byram 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 9.5-1. Hazard Mitigation Planning Team*

Primary Point of Contact		Alternate Point of Contact
Name / Title: Joseph Sabatini, Township Manager Address: 10 Mansfield Drive, Stanhope, NJ 07874 Phone Number: (973) 347-2500 ext 129 Email: jsabatini@byramtwp.org		Name / Title: Alex Rubenstein, Mayor Address: 10 Mansfield Drive, Stanhope, NJ 07874 Phone Number: (862) 268-0288 Email: arubenstein@byramtwp.org
NFIP Floodplain Administrator		
Name / Title: Peter Karcher, Construction Official Address: 10 Mansfield Drive, Stanhope, NJ 07874 Phone Number: (908) 416-1126 Email: pkarcher@byramtwp.org		
Name	Title	Method of Participation
Joseph Sabatini	Township Manager	Primary point of contact, reviewed annex*
Alex Rubenstein	Mayor	Alternate point of contact
Peter Karcher	Construction Official	NFIP Floodplain Administrator, reviewed annex*
Thomas Koundry	Emergency Management Coordinator	Provided data and information, contributed to the mitigation strategy, reviewed annex*
Phillip Crosson	Byram Township Deputy Manager	Provided data and information, contributed to the mitigation strategy
Cory L. Stoner	Engineer	Reviewed annex*
Ashleigh Frueholz	CFO	Reviewed annex*
Paul Gleitz	Planner	Reviewed annex*
Michael Orgera	Public Works Director	Reviewed annex*
Chief Kenneth Burke	Police Chief	Reviewed annex*
Todd Rudloff	Fire Chief	Reviewed annex*

\*Refer to Jurisdictional Annex Review Sign-Off Sheet in Appendix B



### 9.5.2 Jurisdiction Profile

Byram Township is located in southern Sussex County. The Township is bordered to the north by the Townships of Andover and Sparta, to the east by the Borough of Hopatcong, to the west by Green and Andover Townships and to the south by Stanhope and Warren County. Numerous unincorporated communities are found within the Township and include: Roseville, Whitehall, Cranberry Lake, Waterloo, and Lockwood. Andover Junction Brook, Musconetcong River, and Lubbers Run all flow through the Township. The Township is known as "The Township of Lakes" because of the two dozen lakes and ponds located throughout. Byram covers more than 22.48 square miles. Additionally, the Township is located within the New Jersey Highlands Region.

According to the U.S. Census, the 2010 population for the Township of Byram was 8,350. The estimated 2018 population was 8,010, a 4.1 percent decrease from the 2010 Census. Data from the 2018 U.S. Census American Community Survey indicate that 4.7 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.

### 9.5.3 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 9.5-2 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 9.5-2. Recent and Expected Future Development**

Type of Development	2015		2016		2017		2018		2019	
<b>Number of Building Permits for New Construction Issued Since the Previous HMP</b>										
	<b>Total</b>	<b>Within SFHA</b>	<b>Total</b>	<b>Within SFHA</b>	<b>Total</b>	<b>Within SFHA</b>	<b>Total</b>	<b>Within SFHA</b>	<b>Total</b>	<b>Within SFHA</b>
Single and Two-Family Units	1	0	0	0	2	0	0	0	2	0
Multi-Family	0	0	0	0	0	0	0	0	0	0
Other (commercial, mixed-use, etc.)	8	0	3	0	3	0	1	0	3	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		
<b>Recent Major Development and Infrastructure from 2015 to Present</b>										
Quick Check	Commercial	2		Block 41 Lot 89		Nuclear Incident Hazard Area		Completed		
<b>Known or Anticipated Major Development and Infrastructure in the Next Five (5) Years</b>										
WaWa	Commercial	2		75 Route 206 South		Nuclear Incident Hazard Area		Approved by Planning Board on 1/28/2021		
Anty Trucking & Rigging	Commercial	1		9 Lackawana Drive		Nuclear Incident Hazard Area, Hazardous Material Incident Hazard Area		Planning stages		

\* Only location-specific hazard zones or vulnerabilities identified.



SFHA = Special Flood Hazard Area

### 9.5.4 Capability Assessment

Section 5 (Capability Assessment) describes the components included in the capability assessment and their significance for hazard mitigation planning. The Township of Byram 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 Byram 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 Byram and where hazard mitigation has been integrated.

**Table 9.5-3. 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.
<b>Codes, Ordinances, &amp; Requirements</b>					
<b>Building Code</b>	Yes	State & Local	Yes	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>• 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</li> <li>• This code complies with State Uniform Construction Code Act (N.J.S. 52:27D-119 et seq.).</li> </ul>					
<b>Zoning Code</b>	Yes	Local	Yes – if municipality has a Planning Board	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>• 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.</li> <li>• The Planning Board and Township Council are responsible for this code in compliance with Chapter 240: Zoning.</li> <li>• The code complies with Municipal Ord. Chapter 240 (4/5/79) and various amendments.</li> </ul>					





	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.
					<ul style="list-style-type: none"> <li>The ordinance includes provisions to secure safety from fire, flood, panic and other natural and man-made disasters, provide sufficient space in appropriate locations for a variety of agricultural, residential, recreational, commercial and industrial uses and open spaces, both public and private, according to their respective environmental requirements in order to meet the needs of all New Jersey citizens, and promote the conservation of historic sites and districts, open space, energy resources and valuable natural resources in the state and to prevent urban sprawl and degradation of the environment through improper use of land.</li> </ul>
<b>Subdivisions</b>	Yes	Local	Yes – if municipality has a Planning Board	Yes	-
<b>Comment:</b> <ul style="list-style-type: none"> <li>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.</li> <li>The Planning Board and Township Council are responsible for this code in compliance with Chapter 240: Zoning.</li> <li>The code complies with Municipal Ord. Chapter 215 (4/5/79) and various amendments.</li> </ul>					
<b>Stormwater Management</b>	Yes	State & Local	Yes	Yes	-
<b>Comment:</b> <ul style="list-style-type: none"> <li>See Title 7 of the NJ Administrative Code, N.J.A.C. 7:8</li> <li>The Township Council and NJDEP are responsible for this ordinance in compliance with Chapter 211: Stormwater Control; Tier 1 Stormwater Permit (annual).</li> <li>This ordinance complies with Municipal Ord. Chapter 211 (4/3/06) and annual NJDEP Tier 1 Stormwater Permit.</li> </ul>					
<b>Post-Disaster Recovery</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Real Estate Disclosure</b>	Yes	State, Division of Consumer Affairs	Yes	No	-
<b>Comment:</b> <ul style="list-style-type: none"> <li>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.</li> </ul>					
<b>Growth Management</b>	Yes	State & Local	Yes – if municipality has a Planning Board	No	-
<b>Comment:</b> <ul style="list-style-type: none"> <li>These ordinances have been updated from 2002 to present.</li> <li>The Planning Board, Township Council, and Highlands Council are responsible for these ordinances in compliance with 2002 Township Smart Growth Plan; 2004 Township Master Plan; 2006 zoning ordinances based on 2004 Township Master Plan; Master Plan Highlands Element 10/12/14; full Highlands Conformance now underway.</li> <li>State Mandated on a municipal level. See Zoning Ordinance ; Also - Plan Endorsement Process via the State Development &amp; 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.</li> </ul>					
<b>Site Plan Review</b>	Yes	Local	Yes – if municipality has a Planning Board	Yes	-
<b>Comment:</b> <ul style="list-style-type: none"> <li>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</li> </ul>					



	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.
<p><i>review of all subdivisions of land within the county by said county planning board and for the approval of those subdivisions affecting county road or drainage facilities as set forth and limited hereinafter in this section. 40:27-6.10 In order that county planning boards shall have a complete file of the planning and zoning ordinances of all municipalities in the county, each municipal clerk shall file with the county planning board a copy of the planning and zoning ordinances of the municipality in effect on the effective date of this act and shall notify the county planning board of the introduction of any revision or amendment of such an ordinance which affects lands adjoining county roads or other county lands, or lands lying within 200 feet of a municipal boundary, or proposed facilities or public lands shown on the county master plan or official county map. Such notice shall be given to the county planning board at least 10 days prior to the public hearing thereon by personal delivery or by certified mail of a copy of the official notice of the public hearing together with a copy of the proposed ordinance.</i></p> <ul style="list-style-type: none"> <li>• <i>The Planning Board and Township Council are responsible for these requirements in compliance with Chapter 215: Subdivision and Site Plan.</i></li> <li>• <i>These requirements comply with Municipal Ord. Chapter 215 (4/5/79) and various amendments.</i></li> </ul>					
<b>Environmental Protection</b>	Yes	State & Local	No	Yes	-
<p><b>Comment:</b></p> <ul style="list-style-type: none"> <li>• <i>Governed by DEP and Local Ordinances</i> <ul style="list-style-type: none"> <li>○ <i>Chapter 19 Environmental Commission</i></li> <li>○ <i>Chapter 167 Littering and Dumping</i></li> <li>○ <i>Chapter 169 Hazardous Materials</i></li> <li>○ <i>Chapter 208 Soil Removal</i></li> </ul> </li> </ul>					
<b>Flood Damage Prevention</b>	Yes	Federal, State & Local	Yes	Yes	2021-Byram-008
<p><b>Comment:</b></p> <ul style="list-style-type: none"> <li>• <i>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.</i></li> <li>• <i>This ordinance follows Township Ord. Chapt.135: Flood Damage Prevention.</i></li> <li>• <i>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:</i> <ul style="list-style-type: none"> <li>○ <i>A. Protect human life and health;</i></li> <li>○ <i>B. Minimize expenditure of public money for costly flood-control projects;</i></li> <li>○ <i>C. Minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;</i></li> <li>○ <i>D. Minimize prolonged business interruptions;</i></li> <li>○ <i>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;</i></li> <li>○ <i>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;</i></li> <li>○ <i>G. Ensure that potential buyers are notified that property is in an area of special flood hazard; and</i></li> <li>○ <i>H. Ensure that those who occupy the areas of special flood hazard assume responsibility for their actions.</i></li> </ul> </li> <li>• <i>The ordinance currently lacks the state's 1-foot freeboard requirement.</i></li> </ul>					
<b>Wellhead Protection</b>	Yes	Local	No	Yes	-
<p><b>Comment:</b></p> <ul style="list-style-type: none"> <li>• <i>The Zoning Ordinance includes an article on Highlands Area Land Use which discusses wellhead protection areas.</i></li> </ul>					
<b>Emergency Management</b>	Yes	State/Local	No	Yes	-
<p><b>Comment:</b></p> <ul style="list-style-type: none"> <li>• <i>Chapter 32 Emergency Management</i></li> </ul>					
<b>Climate Change</b>	No	-	No	-	-
<p><b>Comment:</b></p>					
<b>Disaster Recovery Ordinance</b>	No	-	No	-	-
<p><b>Comment:</b></p>					
<b>Disaster Reconstruction Ordinance</b>	No	-	No	-	-
<p><b>Comment:</b></p>					





	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.
<b>Municipal Separate Storm Sewer System (MS4)</b>	Yes	Local	No	Yes	
<b>Comment:</b>					
<ul style="list-style-type: none"> <li>The Township Council is responsible for this ordinance in compliance with Chapter 203: Separate Storm Sewer System and Municipal Ord. Chapter 203 (12/19/05).</li> </ul>					
<b>Other [Special Purpose Ordinances (i.e., sensitive areas, steep slope)]</b>	Yes	Local	No	Yes	
<b>Comment:</b>					
<ul style="list-style-type: none"> <li>The Planning Board and Township Council are responsible for these ordinances in compliance with Ord. 240-29.2: Tract Disturbance; also Master Plan Highlands Element (10/2/14) and full Highlands Conformance (now underway). These ordinances were amended on November 15, 2004.</li> </ul>					
<b>Planning Documents</b>					
<b>Comprehensive / Master Plan</b>	Yes	Local	Yes	Yes	-
<b>Comment:</b>					
<ul style="list-style-type: none"> <li>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.</li> <li>This plan was adopted on December 16, 2004. It was re-examined in March of 2012.</li> <li>The Planning Board is responsible for this plan in compliance with Byram Twp. Master Plan 2004; Master Plan Re-examination Report 2012.</li> </ul>					
<b>Capital Improvement Plan</b>	Yes	Local	No	Yes	-
<b>Comment:</b> The Township Council is responsible for this plan in compliance with 2015 Municipal Budget—3-yr. Plan.					
<b>Disaster Debris Management Plan</b>	No	-	No	-	2021-Byram-007
<b>Comment:</b>					
<b>Floodplain or Watershed Plan</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Stormwater Management Plan</b>	Yes	Local	Yes	Yes	-
<b>Comment:</b>					
<ul style="list-style-type: none"> <li>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.</li> <li>The Township Council is responsible for this plan in compliance with Municipal Stormwater Mgt. Plan (Sept.2005); Ordinance Chapter 211, Stormwater Control.</li> <li>This plan was adopted on April 3, 2006 according to Municipal Ordinance 211.</li> </ul>					
<b>Stormwater Pollution Prevention Plan</b>	Yes	Local	Yes	Yes	-
<b>Comment:</b>					
<ul style="list-style-type: none"> <li>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</li> </ul>					



	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.
<p><i>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.</i></p>					
<b>Urban Water Management Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Habitat Conservation Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Economic Development Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Shoreline Management Plan</b>	No	-	Yes – if located in a coastal zone	-	-
<p><i>Comment:</i></p> <ul style="list-style-type: none"> <li><i>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. 7:27E-1 et seq.</i></li> </ul>					
<b>Community Wildfire Protection Plan</b>	Yes	Local	No	Yes	-
<i>Comment:</i>					
<b>Community Forest Management Plan</b>	Yes	Local	No	Yes	-
<i>Comment:</i>					
<b>Transportation Plan</b>	Yes	Local	No	Yes	-
<p><i>Comment:</i></p> <ul style="list-style-type: none"> <li><i>The Planning Board is responsible for this plan in compliance with Master Plan Circulation Element 2004.</i></li> </ul>					
<b>Agriculture Plan</b>	Yes	County	No	-	-
<i>Comment:</i>					
<b>Climate Action Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Tourism Plan</b>	Yes	Local	No	Yes	-
<p><i>Comment:</i></p> <ul style="list-style-type: none"> <li><i>Eco Tourism Plan is incorporated as part of the Open Space Recreation Plan.</i></li> </ul>					
<b>Business Development Plan</b>	Yes	Local	No	No	-
<i>Comment:</i>					
<b>Other: Open Space Plan</b>	Yes	Local	No	Yes	-
<p><i>Comment:</i></p> <ul style="list-style-type: none"> <li><i>This plan was adopted in October of 2000 and was updated in November of 2010.</i></li> <li><i>The Township Open Space Committee is responsible for this plan in compliance with Open Space and Recreation Plan (2000) and OS and Recreation Plan Update (2010).</i></li> </ul>					
<b>Other: Stream Corridor Management Plan</b>	Yes	Local	No	Yes	-
<p><i>Comment:</i></p> <ul style="list-style-type: none"> <li><i>This plan was adopted in June of 1997 and updated on December 18, 2000.</i></li> </ul>					



	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.
<ul style="list-style-type: none"> <li>The Township Environmental Commission is responsible for this plan in compliance with Lubbers Run Greenway Project: A Stream Corridor Study (1997 and 2000).</li> </ul>					
<b>Watershed Management or Protection Plan</b>	Yes	State & Local	Yes	Yes	-
<b>Comment:</b> <ul style="list-style-type: none"> <li>The Planning Board and Council are responsible for this plan in compliance with Lakefront Development Plan 2003; Highlands Conformance Process (underway).</li> </ul>					
<b>Response/Recovery Planning</b>					
<b>Comprehensive Emergency Management Plan (CEMP) / Emergency Operations Plan (EOP)</b>	Yes	Local	Yes	Yes	
<b>Comment:</b> <ul style="list-style-type: none"> <li>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.</li> <li>The Township Council and Emergency Management Coordinator are responsible for this plan in compliance with Municipal Ordinance Chapter 32: Emergency Management and the 2015 EOP update.</li> <li>This plan was adopted on October 2, 1974 and amended on November 19, 1990 according to Municipal Ordinance Chapter 32. The plan was then updated in 2019</li> </ul>					
<b>Threat &amp; Hazard Identification &amp; Risk Assessment (THIRA)</b>	Yes	Local	No	Yes	-
<b>Comment:</b>					
<b>Post-Disaster Recovery Plan</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Continuity of Operations Plan</b>	Yes	Local	No	Yes	-
<b>Comment:</b> <ul style="list-style-type: none"> <li>Township Policies are in place for continuity of operations</li> </ul>					
<b>Public Health Plan</b>	Yes	County	Yes	Yes	-
<b>Comment:</b> <ul style="list-style-type: none"> <li>The Public Health plan is administered by Sussex County Health Department.</li> </ul>					
<b>Other Plans: Smart Growth Plan 2002</b>	Yes	Local	No	Yes	-
<b>Comment:</b> <ul style="list-style-type: none"> <li>The Planning Board is responsible for these plans in compliance with Byram Township Smart Growth Plan (2002).</li> </ul>					

**Table 9.5-4. Development and Permitting Capability**

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

**ADMINISTRATIVE AND TECHNICAL CAPABILITY**

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

**Table 9.5-5. Administrative and Technical Capabilities**

Staff/Personnel Resource	Available?	Department/Agency/Position
<b>Administrative Capability</b>		





Staff/Personnel Resource	Available?	Department/Agency/Position
Planning Board	Yes	Municipal Ordinance Chapter 45: 1/19/77, 11/19/90; Amendment 5/4/95
Mitigation Planning Committee	Yes	Hazard Mitigation Planning Team: Township Council and Municipal Department Heads
Environmental Board / Commission	Yes	Municipal Ordinance Chapter 19 (10/2/74)
Open Space Board / Committee	Yes	Municipal Ordinance Chapter 42 (1/20/2000)
Economic Development Commission / Committee	Yes	Municipal Ordinance Chapter 16 (10/21/85)
Warning Systems / Services (reverse 911, outdoor warning signals)	Yes	Nixle, various Social media platforms
Maintenance program to reduce risk	Yes	Superintendent of Department of Public Works
Mutual aid agreements	Yes	Lakeland Emergency Squad & Byram Township Fire Department
<b>Technical/Staffing Capability</b>		
Planners or engineers with knowledge of land development and land management practices	Yes	Municipal and Planning Board Engineer; Consulting Land Use Planner
Engineers or professionals trained in building or infrastructure construction practices	Yes	Construction Official and Sub-Code Officials
Planners or engineers with an understanding of natural hazards	Yes	Construction Official and Sub-Code Officials
Staff with training in benefit/cost analysis	Yes	Township Manager; Township Engineer, Township Risk Manager
Staff with training in green infrastructure	Yes	Construction Official and Sub-Code Officials
Staff with education/knowledge/training in low impact development	Yes	Construction Official
Surveyor	Yes	Within Office of Township Engineer.
Stormwater engineer	Yes	Cory Stoner – Harold E. Pellow & associates
Personnel skilled or trained in GIS applications	Yes	Municipal/Planning Board Engineer
Local or state water quality professional	Yes	Sussex County Water Quality Board
Scientist familiar with natural hazards in local area	No	-
Emergency manager	Yes	Emergency Management Coordinator
Watershed planner	No	-
Environmental specialist	Yes	Environmental Commission – Forester is Gracie & Harrigan Consulting Foresters
Grant writers	Yes	Municipal Staff
Resilience Officer	No	-
Other: NFIP Floodplain Administrator	Yes	Construction Official
Other: Professionals trained in conducting damage assessments	Yes	Construction Official, Municipal Engineer

**FISCAL CAPABILITY**

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

**Table 9.5-6. Fiscal Capabilities**

Financial Resource	Accessible or Eligible to Use?
Community Development Block Grants (CDBG, CDBG-DR)	No
Capital Improvements Project Funding	Yes, Township Council
Authority to Levy Taxes for Specific Purposes	Yes, Township Council
User Fees for Water, Sewer, Gas or Electric Service	Yes (sewer fees), Township Council
Incur Debt through General Obligation Bonds	Yes, Township Council





Financial Resource	Accessible or Eligible to Use?
Incur Debt through Special Tax Bonds	No
Incur Debt through Private Activity Bonds	No
Withhold Public Expenditures in Hazard-Prone Areas	Yes, Township Planning Board and Council.
State-Sponsored Grant Programs	Yes, Township Council.
Development Impact Fees for Homebuyers or Developers	No
Clean Water Act 319 Grants (Nonpoint Source Pollution)	No
Other: Open Space Acquisition Funding Programs	Yes, Township Council and Open Space Committee

**EDUCATION AND OUTREACH CAPABILITY**

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

**Table 9.5-7. Education and Outreach Capabilities**

Criterion	Response
Do you have a public information officer or communications office?	Yes, Township Manager
Do you have personnel skilled or trained in website development?	No
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.	No
Do you have any other programs already in place that could be used to communicate hazard-related information? If yes, briefly describe.	No

**COMMUNITY CLASSIFICATIONS**

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

**Table 9.5-8. Community Classifications**

Program	Participating?	Classification	Date Classified
Community Rating System	No	-	-
Building Code Effectiveness Grading Schedule (BCEGS)	Yes	3 – 1 and 2 family residential properties 3 – commercial and industrial properties	2009
Public Protection (Fire ISO Protection Class)	Yes	Class 06/6X	June 2014
Storm Ready Certification	No	-	-
Firewise Community Classification	No	-	-
Sustainable Jersey	Yes	Not certified	Joined program 5/4/2009

**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 9.5-9. Adaptive Capacity**

Hazard	Adaptive Capacity (Capabilities) - Strong/Moderate/Weak
Dam Failure	Moderate
Disease Outbreak	Moderate
Drought	Weak
Earthquake	Weak
Flood	Moderate
Geologic	Unsure
Hazardous Materials	Moderate
Hurricane and Tropical Storm	Moderate
Invasive Species	Moderate
Nor’Easter	Moderate
Severe Weather	Moderate
Severe Winter Weather	Moderate
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? No

**NATIONAL FLOOD INSURANCE PROGRAM**

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

**Table 9.5-10. National Flood Insurance Program Compliance**

Criterion	Response
What local department is responsible for floodplain management?	Construction Official/Building Department
Who is your floodplain administrator? (name, department/position)	Peter Karcher, Construction Official
Are any certified floodplain managers on staff in your jurisdiction?	Construction Official/Building Department
What is the date that your flood damage prevention ordinance was last amended?	August 2011
Does your floodplain management program meet or exceed minimum requirements? -If exceeds, in what ways?	The program meets minimum requirements.
When was the most recent Community Assistance Visit or Community Assistance Contact?	January 12, 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?	No





Criterion	Response
If so, state what they are.	
Do your flood hazard maps adequately address the flood risk within your jurisdiction? -If no, state why.	YES – FEMA maps
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?	Other than the lack of a general education/outreach program regarding flood hazards and risk, the Township lacks funding and resources to conduct a broader floodplain management program. The Township would welcome any opportunities to improve training and support for the FPA and Township staff to identify and mitigate floodprone areas.
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. However, the Township has considered joining CRS and would attend a CRS seminar if offered locally.
How many flood insurance policies are in force in your jurisdiction?*	22 policies
-What is the insurance in force?	\$5,666,800 insurance in force
-What is the premium in force?	\$20,214 premium in force
How many total loss claims have been filed in your jurisdiction?*	14 claims
-How many claims are still open or were closed without payment?	\$129,878 in payments
-What were the total payments for losses?	
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

Reference: FEMA 2020

**OPPORTUNITIES FOR FUTURE INTEGRATION**

- **Flood Damage Prevention Ordinance:** The Township will update the Flood Damage Prevention Ordinance to include the state mandated freeboard requirement. (2021-Byram-008)
- **Disaster Debris Management Plan:** The Township will develop a Disaster Debris Management Plan. (2021-Byram007)

**9.5.5 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 Byram’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 9.5-11 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 9.5-11. 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 23 <sup>rd</sup> and 24 <sup>th</sup> .	Although the County was impacted, the Township did not report major impacts.
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 was subject to temporary closures and social distancing and masking mandates.
August 4, 2020	4574DR Tropical Storm Isaias	Yes	A Major tropical storm produced high, damaging winds and significant rainfall	The Township was subject to numerous downed trees and power lines. Equipment damage was also experienced.

Source: FEMA 2020, NOAA NCEI 2020

### 9.5.6 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 Byram 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 Byram 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 Byram has significant exposure.

#### REPETITIVE FLOOD LOSSES

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

- Number of repetitive loss (RL) properties: 3
- Number of severe repetitive loss (SRL) properties: 0
- Number of RL/SRL properties that have been mitigated: 0

Source: FEMA 2019

#### 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 9.5-12. Critical Facilities and Lifelines Flood Exposure

Name	Type	Exposure	
		1% Event	0.2% Event
Byram Twp Pump Station 5	Wastewater Pump	X	X
Byram Twp Pump Station 6	Wastewater Pump	X	X
Byram Twp Interm. School	Shelter	X	X
Byram Lakes Elem. School	Shelter	X	X
22-17 Lake Lackawanna Dam	Dam	X	X
22-36 Panther Lake Dam	Dam	X	X
22-50 Cub Lake Dam	Dam	X	X
22-99 Forest Lake Dam	Dam	X	X
22-159 Tomahawk Lake Dam	Dam	X	X
22-196 Johnson Lake Dam	Dam	X	X
22-246 Kofferls Pond Dam	Dam	X	X
24-100 Frenche's Pond Dam	Dam	X	X
24-101 Reservoir Lake Dam	Dam	X	X

Source:

Note:

\*Identified lifeline

**IDENTIFIED ISSUES AND PROBLEM AREAS**

The jurisdiction has identified the following vulnerabilities within their community:

- There is no ingress/egress to East Brookwood in the event of an issue that would block Brookwood Road at the intersection of Route 206.
- East Brookwood Estates experiences drainage issues.
- The Township has flood risk. Staff could benefit from additional training.
- Little Paint Way experiences slow drainage and flooding issues attributed to undersized culverts.
- The Township has 17 dams which may pose a risk to life and property.
- 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 three repetitive loss properties but other properties may be impacted by flooding as well.
- The Township lacks a standalone Disaster Debris Management Plan.
- The Township Flood Damage Prevention Ordinance lacks the state mandated freeboard requirement.

**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 Byram 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 Byram. The Township of Byram 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 Byram indicated the following hazard rankings.

**Table 9.5-13. Township of Byram Hazard Ranking**

<b>Dam Failure</b>	<b>Disease Outbreak</b>	<b>Drought</b>	<b>Earthquake</b>	<b>Flood</b>	<b>Geologic</b>	
High	High	Medium	Medium	High	Low	
<b>Hazardous Materials</b>	<b>Hurricane and Tropical Storm</b>	<b>Invasive Species</b>	<b>Nor’Easter</b>	<b>Severe Weather</b>	<b>Severe Winter Weather</b>	<b>Wildfire</b>
High	High	Medium	High	High	High	Medium

### 9.5.7 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 9.5-15 and Table 9.5-16 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 9.5-14. 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	Enter 2021 HMP Action #
Byram-1 (new)	Engineering study of East Brookwood Estates drainage issues.	Township Engineer, DPW, Planning Board	In Progress	X	2021-Byram-002
Byram-2 (new)	Have designated NFIP Floodplain Administrator (FPA), and the Town's Emergency Management Council, become a Certified Floodplain Manager (CFM) through the Association of State Floodplain Managers (ASFPM) and New Jersey Association for Floodplain Management (NJAFM), and pursue relevant continuing education training such as FEMA Benefit-Cost Analysis (BCA) and Substantial Damage Estimation (SDE).	NFIP FPA, Emergency Management Coordinator, Emergency Management Council	In Progress	X	2021-Byram-003
Byram-3 (new)	Ensure continuity of operations at critical facilities:	Township, Engineer, DPW	Completed		



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 #
	Purchase and install a generator for critical facility (radio communications for police/fire/emergency departments).				
Byram-4 (old #10)	Upgrade and improve culverts on Little Paint Way.	DPW Supervisor	In Progress	X	2021-Byram-004
Byram-5 (old #13)	Implement Fire Wise Program in the Township.	Township Engineer	Ongoing Capability		
Byram-6 (old #14)	Conduct all-hazards public education and outreach program for hazard mitigation and preparedness.	Township	Ongoing Capability		
Byram-7 (new)	Educate flood prone property owners; pursue acquisition/elevation of one repetitive loss property	Township	Ongoing Capability		
Byram-8 (new)	Review status of all 17 dams in Township and identify if inundation studies for these dams needs to be conducted.	Township of Byram; NJDEP Dam Safety	In Progress	X	2021-Byram-005
Byram-9 (revised old #1)	Support the mitigation of vulnerable structures via retrofit (e.g. elevation, flood-proofing) or acquisition/relocation to protect structures from future damage, with repetitive loss and severe repetitive loss properties as a priority when applicable. Phase 1: Identify appropriate candidates and determine most cost-effective mitigation option. Phase 2: Work with the property owners to implement selected action based on available funding and local match availability.	Engineering via NFIP FPA with NJOEM, FEMA support	In Progress	X	2021-Byram-006

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

- None identified

**PROPOSED HAZARD MITIGATION INITIATIVES FOR THE PLAN UPDATE**

The Township of Byram 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 Byram 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 9.5-15 summarizes the comprehensive-range of specific mitigation initiatives the Township of Byram 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 9.5-16 provides a summary of the prioritization of all proposed mitigation initiatives for this HMP update.



Table 9.5-15. 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-Byram-001	East Brookwood Alternative Emergency Ingress/Egress	<b>Problem:</b> There is no ingress/egress to East Brookwood in the event of an issue that would block Brookwood Road at the intersection of Route 206.	Existing	All Hazards	1, 3	Engineer, Public Works, OEM	HMGP, Capital Improvements	Emergency access to community maintained	High	Within 5 years	High	SIP	ES
		<b>Solution:</b> The Township will develop an alternate ingress/egress to East Brookwood in the event of an issue that would block Brookwood Road at the intersection of Route 206.											
2021-Byram-002	East Brookwood Estates Drainage	<b>Problem:</b> East Brookwood Estates experiences drainage issues.	Existing	Flood, Severe Weather	2, 4	Township Engineer, DPW, Planning Board	HMGP, BRIC, municipal budget	Reduced flood risk	Medium	2 years	High	LPR, SIP	SP, PP
		<b>Solution:</b> The Township will conduct an engineering study of East Brookwood Estates drainage issues and pursue identified cost-effective mitigation actions identified by the study.											
2021-Byram-003	Floodplain Management Capabilities	<b>Problem:</b> The Township has flood risk. Staff could benefit from additional training. <b>Solution:</b> Have designated NFIP Floodplain Administrator (FPA), and the Town’s Emergency Management Council, become a Certified Floodplain Manager (CFM) through the Association of State Floodplain Managers (ASFPM) and New Jersey Association for Floodplain Management (NJAFM), and pursue relevant continuing education training such as FEMA Benefit-Cost Analysis (BCA) and Substantial Damage Estimation (SDE).	N/A	Flood	5	NFIP FPA, Emergency Management Coordinator, Emergency Management Council	Township budget	Increased municipal capabilities	Low	2 years	High	LPR, EAP	PR, PI
2021-Byram-004	Upgrade and Improve Culverts on Little Paint Way	<b>Problem:</b> Little Paint Way experiences slow drainage and flooding issues, attributed to undersized culverts.	Existing	Flood, Severe Weather	2	Engineer, DPW Supervisor	HMGP, BRIC, Township budget	Reduction in culvert damages and flood risk. Access maintained.	\$125,000	2 years	High	SIP	SP
		<b>Solution:</b> The Engineer will survey the existing culverts and determine what culvert improvements are necessary. The DPW Supervisor will then carry out the identified culvert improvements.											



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-Byram-005	Dam Inundation	<b>Problem:</b> The Township has 17 dams which may pose a risk to life and property.	Existing	Dam Failure	7	Township of Byram; NJDEP Dam Safety	NJDEP Dam Safety	Protect ion from dam failure	High	With in 5 years	Medium	LPR, EAP	PR, NR
		<b>Solution:</b> Review status of all 17 dams in Township and identify if inundation studies for these dams needs to be conducted.											
2021-Byram-006	Repetitive Loss Mitigation	<b>Problem:</b> 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 3 repetitive loss properties but other properties may be impacted by flooding as well.	Existing	Flood, Severe Weather	2	NFIP Floodplain Administrator, supported by homeowners	FEMA HMGP and FMA, local cost share by residents	Elimin ates flood damage to homes and residents, creates open space for the municipality increasing flood storage .	\$1 Million	3 years	High	SIP	PP
		<b>Solution:</b> Conduct outreach to 10 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).											
2021-Byram-007	Disaster Debris Management Plan	<b>Problem:</b> The Township lacks a standalone Disaster Debris Management Plan.	Existing	All Hazards	5	OEM, Public Works	Township budget	Increased disaster response capabilities	Low	2 years	High	LPR	ES
		<b>Solution:</b> The Township will develop and adopt a standalone Disaster Debris Management Plan.											
2021-Byram-008	Flood Damage Prevention Ordinance Update	<b>Problem:</b> The Township Flood Damage Prevention Ordinance lacks the state mandated freeboard requirement.	New	Flood	2	FPA, Administration	Township budget	Meet state standards	Staff time	6 months	High	LPR	PR
		<b>Solution:</b> The Township will update the Ordinance to include freeboard.											

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
HMGF	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 9.5-16. 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-Byram-001	East Brookwood Alternative Emergency Ingress/Egress	1	1	1	1	1	1	0	1	1	1	1	1	1	1	12	High ⚠
2021-Byram-002	East Brookwood Estates Drainage	0	1	0	1	1	1	0	1	1	1	1	0	1	1	10	High
2021-Byram-003	Floodplain Management Capabilities	1	1	1	1	1	1	1	1	1	1	0	1	1	1	13	High
2021-Byram-004	Upgrade and Improve Culverts on Little Paint Way	1	1	1	1	1	1	0	1	1	1	1	1	1	1	13	High
2021-Byram-005	Dam Inundation	1	1	1	1	1	1	1	1	1	1	0	0	1	1	12	High
2021-Byram-006	Repetitive Loss Mitigation	1	1	1	1	1	1	0	1	0	0	1	0	1	1	10	High
2021-Byram-007	Disaster Debris Management Plan	0	1	1	1	1	1	1	1	1	1	1	1	1	1	13	High
2021-Byram-008	Flood Damage Prevention Ordinance Update	0	1	1	1	1	1	1	1	1	1	0	1	1	1	12	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 9.5-17. 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	X			X			X
Disease Outbreak					X			X
Drought					X			X
Earthquake					X			X
Flood	X	X	X		X	X	X	X
Geologic					X			X
Hazardous Materials					X			X
Hurricane and Tropical Storm					X			X
Invasive Species					X			X
Nor’Easter					X			X
Severe Weather		X			X	X		X
Severe Winter Weather					X			X
Wildfire					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 9.5-1. Township of Byram Hazard Area Extent and Location Map 1

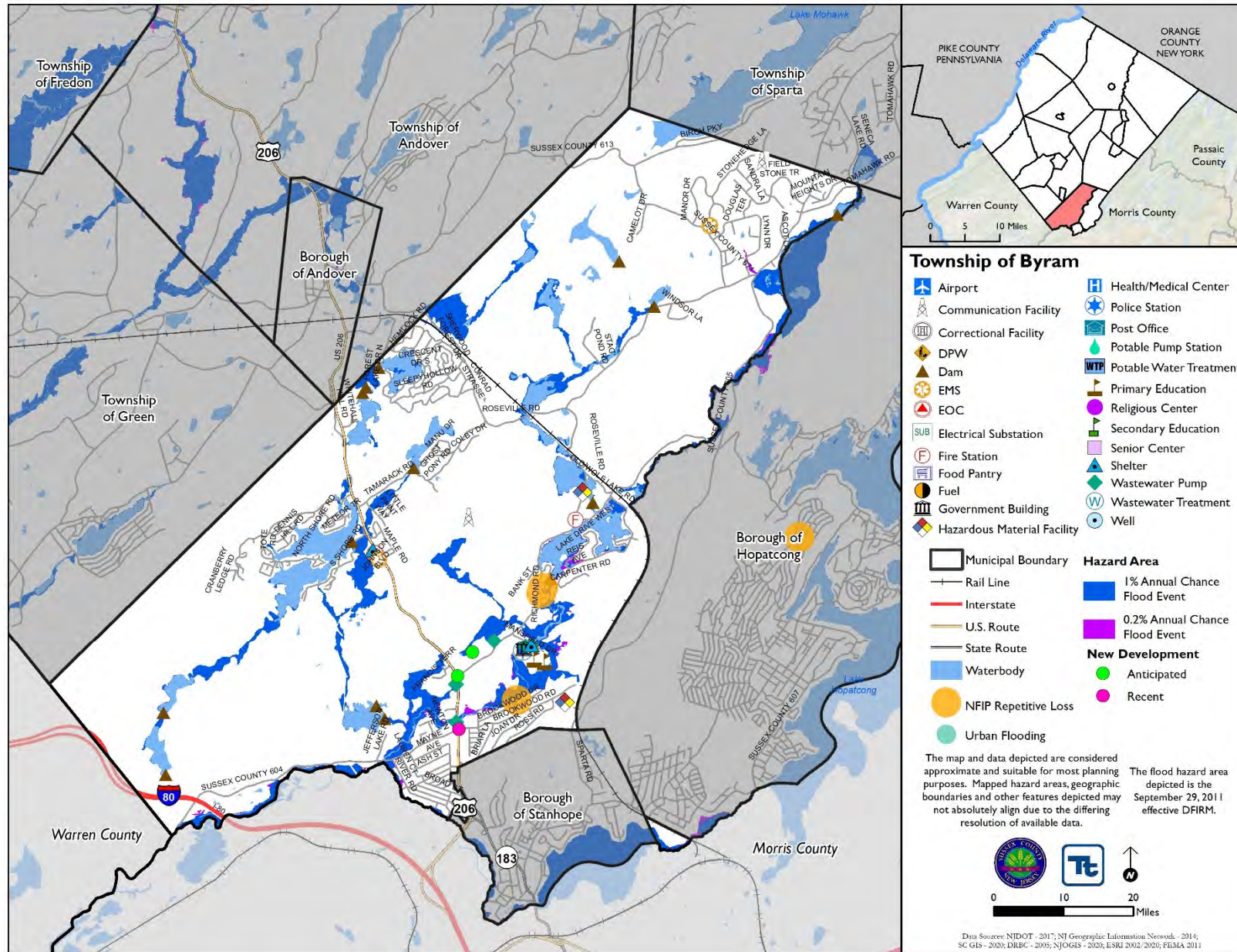
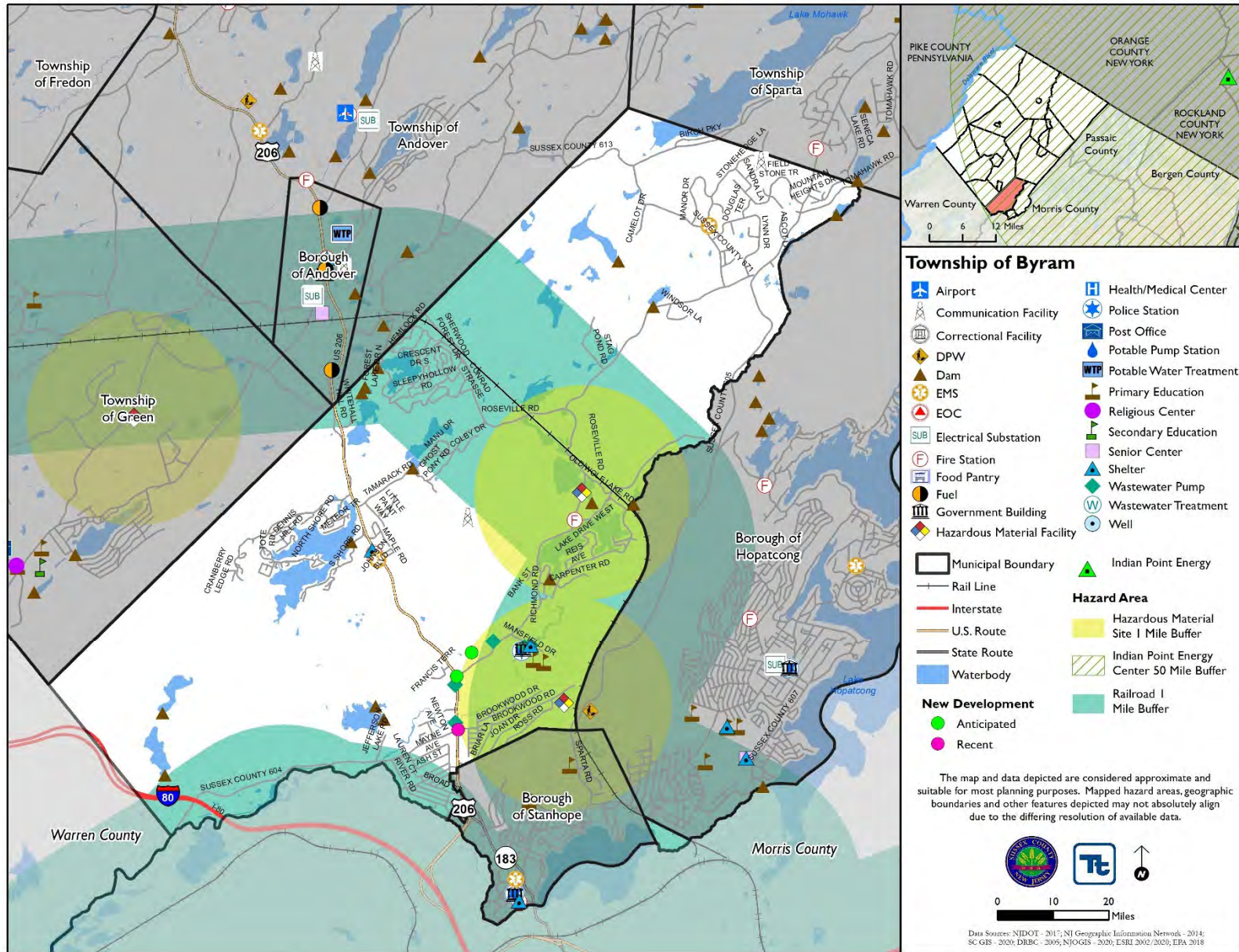




Figure 9.5-2. Township of Byram Hazard Area Extent and Location Map 2



**Township of Byram**

Airport	Health/Medical Center
Communication Facility	Police Station
Correctional Facility	Post Office
DPW	Potable Pump Station
EMS	Potable Water Treatment
EOC	Primary Education
Electrical Substation	Religious Center
Fire Station	Secondary Education
Food Pantry	Senior Center
Fuel	Shelter
Government Building	Wastewater Pump
Hazardous Material Facility	Wastewater Treatment
Municipal Boundary	Well
Rail Line	Indian Point Energy
Interstate	Hazardous Material Site 1 Mile Buffer
U.S. Route	Indian Point Energy Center 50 Mile Buffer
State Route	Railroad 1 Mile Buffer
Waterbody	
<b>New Development</b>	
Anticipated	
Recent	

The map and data depicted are considered approximate and suitable for most planning purposes. Mapped hazard areas, geographic boundaries and other features depicted may not absolutely align due to the differing resolution of available data.

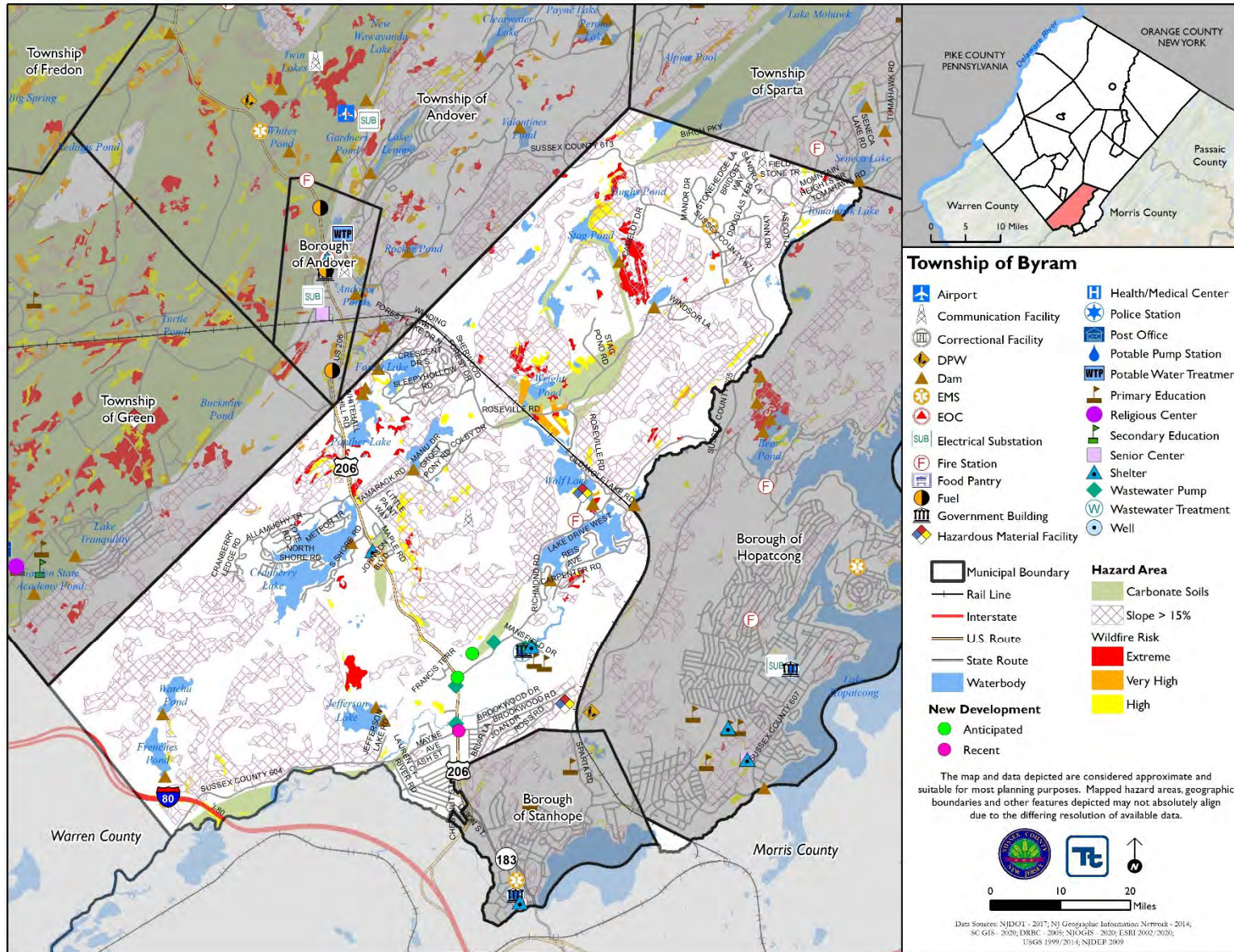
0 10 20 Miles

Data Source: NJDOT - 2017; NJ Geographic Information Network - 2014; SC GIS - 2020; DRBC - 2005; NJOGIS - 2020; ESRI 2002, 2020; EPA 2018





Figure 9.5-3 Township of Byram Hazard Area Extent and Location Map 3





Action Worksheet			
<b>Project Name:</b>	East Brookwood Alternative Emergency Ingress/Egress		
<b>Project Number:</b>	2021-Byram-001		
Risk / Vulnerability			
<b>Hazard(s) of Concern:</b>	All Hazards		
<b>Description of the Problem:</b>	There is no ingress/egress to East Brookwood in the event of an issue that would block Brookwood Road at the intersection of Route 206.		
Action or Project Intended for Implementation			
<b>Description of the Solution:</b>	The Township will develop an alternate ingress/egress to East Brookwood in the event of an issue that would block Brookwood Road at the intersection of Route 206.		
<b>Is this project related to a Critical Facility?</b>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
<b>Level of Protection:</b>	N/A	<b>Estimated Benefits (losses avoided):</b>	Emergency access to community maintained
<b>Useful Life:</b>	20 years	<b>Goals Met:</b>	1
<b>Estimated Cost:</b>	High	<b>Mitigation Action Type:</b>	Structure and Infrastructure Project
Plan for Implementation			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	Within 5 years
<b>Estimated Time Required for Project Implementation:</b>	1 year	<b>Potential Funding Sources:</b>	HMGP, Capital Improvements
<b>Responsible Organization:</b>	Engineer, Public Works, OEM	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard Mitigation, Capital Improvement
Three Alternatives Considered (including No Action)			
<b>Alternatives:</b>	<b>Action</b>	<b>Estimated Cost</b>	<b>Evaluation</b>
	No Action	\$0	Problem continues.
	Buyout neighborhood	High	Costly, social negative impacts
	Widen Brookwood Road	Medium	Unlikely to solve problem during an event
Progress Report (for plan maintenance)			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			



Action Worksheet		
<b>Project Name:</b>	East Brookwood Alternative Emergency Ingress/Egress	
<b>Project Number:</b>	2021-Byram-001	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Emergency access maintained
Property Protection	1	
Cost-Effectiveness	1	
Technical	1	
Political	1	
Legal	1	The Township has the legal authority to complete the project.
Fiscal	0	The project requires grant funding support.
Environmental	1	
Social	1	
Administrative	1	
Multi-Hazard	1	All Hazards
Timeline	1	
Agency Champion	1	Engineer, Public Works, OEM
Other Community Objectives	1	
<b>Total</b>	12	
<b>Priority (High/Med/Low)</b>	High	



Action Worksheet			
<b>Project Name:</b>	East Brookwood Estates Drainage		
<b>Project Number:</b>	2021-Byram-002		
Risk / Vulnerability			
<b>Hazard(s) of Concern:</b>	Flood, Severe Weather		
<b>Description of the Problem:</b>	East Brookwood Estates experiences drainage issues.		
Action or Project Intended for Implementation			
<b>Description of the Solution:</b>	The Township will conduct an engineering study of East Brookwood Estates drainage issues and pursue identified cost-effective mitigation actions identified by the study.		
<b>Is this project related to a Critical Facility or Lifeline?</b>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
<b>Level of Protection:</b>	TBD by engineering study	<b>Estimated Benefits (losses avoided):</b>	Reduction in flood risk
<b>Useful Life:</b>	TBD by engineering study	<b>Goals Met:</b>	2, 4
<b>Estimated Cost:</b>	Medium	<b>Mitigation Action Type:</b>	Local Plans and Regulations, Structure and Infrastructure Projects
Plan for Implementation			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	Within 5 years
<b>Estimated Time Required for Project Implementation:</b>	5 years	<b>Potential Funding Sources:</b>	HMGP, BRIC, municipal budget
<b>Responsible Organization:</b>	Township Engineer, DPW, Planning Board	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard mitigation planning, Stormwater management planning
Three Alternatives Considered (including No Action)			
<b>Alternatives:</b>	<b>Action</b>	<b>Estimated Cost</b>	<b>Evaluation</b>
	No Action	\$0	Current problem continues
	Elevate roadways	\$500,000	Costly and may not solve problem
	Relocate roadways	N/A	Not possible
Progress Report (for plan maintenance)			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			



Action Worksheet		
<b>Project Name:</b>	East Brookwood Estates Drainage	
<b>Project Number:</b>	2021-Byram-002	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	0	.
Property Protection	1	Reduction in flooding risk
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	1	Project would reduce flooding impacts.
Administrative	1	
Multi-Hazard	1	Flood, Severe Weather
Timeline	0	
Agency Champion	1	Township Engineer, DPW, Planning Board
Other Community Objectives	1	
<b>Total</b>	10	
<b>Priority (High/Med/Low)</b>	High	





Action Worksheet			
<b>Project Name:</b>	Upgrade and Improve Culverts on Little Paint Way		
<b>Project Number:</b>	2021-Byram-004		
Risk / Vulnerability			
<b>Hazard(s) of Concern:</b>	Flood, Severe Weather		
<b>Description of the Problem:</b>	Little Paint Way experiences slow drainage and flooding issues which blocks access to a 26-home neighborhood. There is insufficient capacity in drainage culverts under Little Paint Way, which is the sole access to this neighborhood. The road must be elevated to provide room for larger pipes.		
Action or Project Intended for Implementation			
<b>Description of the Solution:</b>	The Township will elevate the roadway and install larger drainage culverts.		
<b>Is this project related to a Critical Facility?</b>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
<b>Level of Protection:</b>	At least a 5-year event; will be determined once project is complete	<b>Estimated Benefits (losses avoided):</b>	Reduction in culvert damages and flood risk. Access maintained.
<b>Useful Life:</b>	30 years	<b>Goals Met:</b>	1
<b>Estimated Cost:</b>	\$125,000	<b>Mitigation Action Type:</b>	Structure and Infrastructure Project
Plan for Implementation			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	2 years
<b>Estimated Time Required for Project Implementation:</b>	1 year	<b>Potential Funding Sources:</b>	HMGP, BRIC, Township budget
<b>Responsible Organization:</b>	Engineer, DPW Supervisor	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard Mitigation
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues
	Remove road	\$20,000	Roadway cannot be removed
	Relocate road to another location	\$50,000	Roadway will still need to cross stream, costly
Progress Report (for plan maintenance)			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			



Action Worksheet		
<b>Project Name:</b>	Upgrade and Improve Culverts on Little Paint Way	
<b>Project Number:</b>	2021-Byram-004	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
<b>Life Safety</b>	1	Project will maintain emergency access
<b>Property Protection</b>	1	Project will protect roadways from flooding, culvert damages
<b>Cost-Effectiveness</b>	1	
<b>Technical</b>	1	The project is technically feasible
<b>Political</b>	1	
<b>Legal</b>	1	The Township has the legal authority to complete the project.
<b>Fiscal</b>	0	Project requires funding support.
<b>Environmental</b>	1	
<b>Social</b>	1	
<b>Administrative</b>	1	
<b>Multi-Hazard</b>	1	Severe Weather, Flood
<b>Timeline</b>	1	2 years
<b>Agency Champion</b>	1	Engineer, DPW Supervisor
<b>Other Community Objectives</b>	1	
<b>Total</b>	13	
<b>Priority (High/Med/Low)</b>	High	



Action Worksheet			
<b>Project Name:</b>	Repetitive Loss Mitigation		
<b>Project Number:</b>	2021-Byram-006		
Risk / Vulnerability			
<b>Hazard(s) of Concern:</b>	Flood, Severe Weather		
<b>Description of the Problem:</b>	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 3 repetitive loss properties but other properties may be impacted by flooding as well.		
Action or Project Intended for Implementation			
<b>Description of the Solution:</b>	Conduct outreach to 10 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).		
<b>Is this project related to a Critical Facility or Lifeline?</b>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
<b>Level of Protection:</b>	1% annual chance flood event + freeboard ( <i>in accordance with flood ordinance</i> )	<b>Estimated Benefits (losses avoided):</b>	Eliminates flood damage to homes and residents, creates open space for the municipality increasing flood storage.
<b>Useful Life:</b>	Acquisition: Lifetime Elevation: 30 years (residential)	<b>Goals Met:</b>	2
<b>Estimated Cost:</b>	\$1 Million	<b>Mitigation Action Type:</b>	Structure and Infrastructure Project
Plan for Implementation			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	6-12 months
<b>Estimated Time Required for Project Implementation:</b>	Three years	<b>Potential Funding Sources:</b>	FEMA HMGP and FMA, local cost share by residents
<b>Responsible Organization:</b>	NFIP Floodplain Administrator, supported by homeowners	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard Mitigation
Three Alternatives Considered (including No Action)			
<b>Alternatives:</b>	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues
	Elevate homes	\$500,000	When this area floods, the entire area is impacted; elevating homes would not eliminate the problem and still lead to road closures and impassable roads
	Elevate roads	\$500,000	Elevated roadways would not protect the homes from flood damages
Progress Report (for plan maintenance)			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			



Action Worksheet		
<b>Project Name:</b>	Repetitive Loss Mitigation	
<b>Project Number:</b>	2021-Byram-006	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Families moved out of high-risk flood areas.
Property Protection	1	Properties removed from high-risk flood areas.
Cost-Effectiveness	1	Cost-effective project
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 remove families from the flood prone areas of the Township.
Administrative	0	
Multi-Hazard	1	Flood, Severe Weather
Timeline	0	
Agency Champion	1	NFIP Floodplain Administrator, supported by homeowners
Other Community Objectives	1	
<b>Total</b>	10	
<b>Priority (High/Med/Low)</b>	High	



## 9.6 TOWNSHIP OF FRANKFORD

This section presents the jurisdictional annex for the Township of Frankford. The annex includes a general overview of the Township of Frankford; an assessment of the Township of Frankford’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.

### 9.6.1 Hazard Mitigation Planning Team

The Township of Frankford 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 9.6-1. Hazard Mitigation Planning Team*

Primary Point of Contact		Alternate Point of Contact
Name / Title: Jeff Lewis, OEM Coordinator Address: Frankford Township Municipal Building 151 US Highway 206, Augusta NJ 07822 Phone Number: 973-479-7203 Email: jlewis310@embarqmail.com		Name / Title: Scott Klosterhoff, OEM Deputy Coordinator Address: Frankford Township Municipal Building 151 US Highway 206, Augusta NJ 07822 Phone Number: 973-534-7699 Email: klosterhoffconstruction@gmail.com
NFIP Floodplain Administrator		
Name / Title: Harold Pellow, Engineer Address: 17 Plains Road, Augusta, NJ 07822 Phone Number: (973) 948-6463 Email: hpellow@hpellow.com		
Name	Title	Method of Participation
Jeff Lewis	OEM Coordinator	Primary point of contact; attended the annex training, risk assessment meeting and mitigation strategy workshop; provided data and updated information for the annex.*
Scott Klosterhoff	OEM Deputy Coordinator	Alternate point of contact
Harold Pellow	Engineer and Planner	NFIP Floodplain administrator, provided data and information, reviewed annex*
Lori Nienstedt	Administrator	Reviewed annex*
Sharon M. Yarosz	Fiscal/CFO	Reviewed annex*
Robert Huber	Building Code Official	Reviewed annex*
Mark Yetter	Public Works	Reviewed annex*
Lt. J. Shotwell	Police Station Commander	Reviewed annex*

\*Refer to Jurisdictional Annex Review Sign-Off Sheet in Appendix B





### 9.6.2 Jurisdiction Profile

Frankford Township is geographically located in the center of Sussex County. It encompasses 34.8 square miles and contains two natural lakes, Culver Lake and Lake Owassa, and the Kittatinny Mountains. The Township is bordered to the north by Montague Township, to the northeast by the Township of Wantage, to the east by Lafayette Township, to the south by Hampton Township and to the west by the Townships of Sandyston and Walpack. Papakating Creek, Dry Brook, Paulins Kill, and Culvers Creek all flow throughout the Township. The following unincorporated communities are located within the Township: Culvers Inlet, Mount Pisgah, Augusta, Ross' Corner, Northrup, Plains, Armstrong, Pelletown, and Wykertown.

According to the U.S. Census, the 2010 population for the Township of Frankford was 5,565. The estimated 2018 population was 5,361, a 3.6 percent decrease from the 2010 Census. Data from the 2018 U.S. Census American Community Survey indicate that 3.2 percent of the population is 5 years of age or younger and 20.1 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.

### 9.6.3 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 9.5-2 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 9.6-2. Recent and Expected Future Development**

Type of Development	2015		2016		2017		2018		2019	
<b>Number of Building Permits for New Construction Issued Since the Previous HMP</b>										
	<b>Total</b>	<b>Within SFHA</b>	<b>Total</b>	<b>Within SFHA</b>	<b>Total</b>	<b>Within SFHA</b>	<b>Total</b>	<b>Within SFHA</b>	<b>Total</b>	<b>Within SFHA</b>
Single and Two-Family Units	430	0	420	0	464	0	428	0	420	0
Multi-Family	0	0	0	0	0	0	0	0	0	0
Other (commercial, mixed-use, etc.)	5	0	13	0	1	0	4	0	7	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		
<b>Recent Major Development and Infrastructure from 2015 to Present</b>										
Quick Check	Commercial	1		77 US Highway 206 Augusta, NJ		None		Complete		
<b>Known or Anticipated Major Development and Infrastructure in the Next Five (5) Years</b>										
Wawa	Commercial	1		1 NJ-15 Augusta, NJ		None		Proposed		

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





### 9.6.4 Capability Assessment

Section 5 (Capability Assessment) describes the components included in the capability assessment and their significance for hazard mitigation planning. The Township of Frankford 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 Frankford 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 Frankford and where hazard mitigation has been integrated.

**Table 9.6-3. 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.
<b>Codes, Ordinances, &amp; Requirements</b>					
<b>Building Code</b>	Yes	State & Local	Yes	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>• 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</li> <li>• The Building Department is responsible for this code in compliance with State Uniform Construction Code Act, (N.J.S. 52:27D-119 et seq.), and Chapter 7 – Building and Housing.</li> </ul>					
<b>Zoning Code</b>	Yes	Local	Yes – if municipality has a Planning Board	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>• 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.</li> <li>• The Land Use Board and Zoning Department are responsible for this code in compliance with Chapter 30, Article 10 – Land Use/Zoning.</li> </ul>					
<b>Subdivisions</b>	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		
<b>Comment:</b> <ul style="list-style-type: none"> <li>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.</li> <li>The Land Use Board is responsible for this ordinance in compliance with Chapter 15- Land Subdivision.</li> </ul>					
<b>Stormwater Management</b>	Yes	Local	Yes	Yes	-
<b>Comment:</b> <ul style="list-style-type: none"> <li>See Title 7 of the NJ Administrative Code, N.J.A.C. 7:8</li> <li>This ordinance follows Chapter 32 of municipal code.</li> </ul>					
<b>Post-Disaster Recovery</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Real Estate Disclosure</b>	Yes	State, Division of Consumer Affairs	Yes	Yes	-
<b>Comment:</b> 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.					
<b>Growth Management</b>	No	-	Yes – if municipality has a Planning Board	-	-
<b>Comment:</b> <ul style="list-style-type: none"> <li>State Mandated on a municipal level. See Zoning Ordinance ; Also - Plan Endorsement Process via the State Development &amp; 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.</li> </ul>					
<b>Site Plan Review</b>	Yes	County & Local	Yes – if municipality has a Planning Board	Yes	-
<b>Comment:</b> <ul style="list-style-type: none"> <li>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 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.</li> </ul>					
<b>Environmental Protection</b>	Yes	Local	No	Yes	-
<b>Comment:</b> <ul style="list-style-type: none"> <li>Chapter 20 Environmental Protection               <ul style="list-style-type: none"> <li>This section provides for the replacement or reimbursement of the specialized and sometimes nonreusable equipment required by State and Federal regulations to be made available in the Township in case of fire, leakage or spillage involving any hazardous material.</li> </ul> </li> </ul>					





	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.
<ul style="list-style-type: none"> <li>○ This section entitles the Township of Frankford to reimbursement for any expendable items used by the Township or any of its agencies in extinguishing any fire, stopping or containing any leak or controlling any spill of hazardous materials.</li> <li>● Chapter BH9 Litter Control</li> </ul>					
<b>Flood Damage Prevention</b>	Yes	Federal, State & Local	Yes	Yes	2021-Frankford-003
<b>Comment:</b> <ul style="list-style-type: none"> <li>● 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.</li> <li>● The Engineering Department is responsible for this ordinance in compliance with Chapter 27 – Flood Damage Prevention.</li> <li>● 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:               <ul style="list-style-type: none"> <li>○ a. Protect human life and health;</li> <li>○ b. Minimize expenditure of public money for costly flood control projects;</li> <li>○ c. Minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;</li> <li>○ d. Minimize prolonged business interruptions;</li> <li>○ e. Minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets, bridges located in areas of special flood hazard;</li> <li>○ 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;</li> <li>○ g. Ensure that potential buyers are notified that property is in an area of special flood hazard; and</li> <li>○ h. Ensure that those who occupy the areas of special flood hazard assume responsibility for their actions.</li> </ul> </li> <li>● The Flood Damage Prevention Ordinance was adopted in 2011 and does not include the state mandated freeboard requirement.</li> </ul>					
<b>Wellhead Protection</b>	Yes	Local	No	Yes	-
<b>Comment:</b> <ul style="list-style-type: none"> <li>● Chapter 30-617 Aquifer and Wellhead Protection was adopted to provide the Township with guidelines for an aquifer protection and aquifer/well testing ordinance to determine adequate groundwater supply for residential and commercial development in areas not served by public water supply.</li> </ul>					
<b>Emergency Management</b>	Yes	Local	No	No	-
<b>Comment:</b> <ul style="list-style-type: none"> <li>● Chapter 3 Police Regulations</li> <li>● Chapter 14 Fire Protection and Prevention</li> </ul>					
<b>Climate Change</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Disaster Recovery Ordinance</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Disaster Reconstruction Ordinance</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Other [Special Purpose Ordinances (i.e., sensitive areas, steep slope)]</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Planning Documents</b>					
<b>Comprehensive / Master Plan</b>	Yes	Local	Yes	No	-
<b>Comment:</b> <ul style="list-style-type: none"> <li>● 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</li> </ul>					





	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.
<p>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.</p> <ul style="list-style-type: none"> <li>The Land Use Board is responsible for this plan. This plan was adopted in 2004 with periodic updates.</li> </ul>					
<b>Capital Improvement Plan</b>	Yes	Local	No	No	-
<p><b>Comment:</b></p> <ul style="list-style-type: none"> <li>The Engineering Department is responsible for this plan, which is updated annually.</li> </ul>					
<b>Disaster Debris Management Plan</b>	No	State & Local	Yes	Yes	2021-Frankford-002
<p><b>Comment:</b></p>					
<b>Floodplain or Watershed Plan</b>	Yes	Local	No	Yes	-
<p><b>Comment:</b></p> <ul style="list-style-type: none"> <li>The Engineering Department is responsible for this plan.</li> </ul>					
<b>Stormwater Management Plan</b>	Yes	State & Local	Yes	-	-
<p><b>Comment:</b></p> <ul style="list-style-type: none"> <li>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.</li> </ul>					
<b>Stormwater Pollution Prevention Plan</b>	Yes	State & Local	Yes	-	-
<p><b>Comment:</b></p> <ul style="list-style-type: none"> <li>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.</li> </ul>					
<b>Urban Water Management Plan</b>	No	-	No	-	-
<p><b>Comment:</b></p>					
<b>Habitat Conservation Plan</b>	No	-	No	-	-
<p><b>Comment:</b></p>					
<b>Economic Development Plan</b>	Yes	County	No	-	-
<p><b>Comment:</b></p> <ul style="list-style-type: none"> <li>The Economic Development Partnership is responsible for this plan.</li> </ul>					
<b>Shoreline Management Plan</b>	No	-	Yes – if located in a coastal zone	-	-
<p><b>Comment:</b></p>					



	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.
<ul style="list-style-type: none"> <li>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.</li> </ul>					
<b>Community Wildfire Protection Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Community Forest Management Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Transportation Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Agriculture Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Climate Action Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Tourism Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Business Development Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Other: Open Space Plan</b>	Yes	Local	No	No	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>The Open Space Commission is responsible for this plan, which was updated I 2016 has a part of the Master Plan.</li> </ul>					
<b>Response/Recovery Planning</b>					
<b>Comprehensive Emergency Management Plan (CEMP) / Emergency Operations Plan (EOP)</b>	Yes	Local	Yes	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>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.</li> <li>The Office of Emergency Management is responsible for this plan.</li> </ul>					
<b>Threat &amp; Hazard Identification &amp; Risk Assessment (THIRA)</b>	Yes	County & Local	No	-	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>County Function</li> </ul>					
<b>Post-Disaster Recovery Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Continuity of Operations Plan</b>	Yes	County and Local	No	-	-
<i>Comment:</i>					
<b>Public Health Plan</b>	Yes	County and Local	No	-	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>Part of ESF; Deputy Clerk works with Board of Health</li> </ul>					
<b>Other</b>	No	-	No	-	-
<i>Comment:</i>					



**Table 9.6-4. Development and Permitting Capability**

Criterion	Response
Does your jurisdiction issue development permits? - If no, who does? If yes, which department?	Yes
Does your jurisdiction have the ability to track permits by hazard area?	Yes
Does your jurisdiction have a buildable lands inventory? -If yes, please describe briefly. -If no, please quantitatively describe the level of buildout in the jurisdiction.	Yes The Township completed a Buildable Lands Inventory as part of its affordable housing planning initiative.

**ADMINISTRATIVE AND TECHNICAL CAPABILITY**

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

**Table 9.6-5. Administrative and Technical Capabilities**

Staff/Personnel Resource	Available?	Department/Agency/Position
<b>Administrative Capability</b>		
Planning Board	Yes	Planning Board
Mitigation Planning Committee	No	-
Environmental Board / Commission	No	-
Open Space Board / Committee	Yes	Open Space Board; Parks Commission
Economic Development Commission / Committee	Yes	Economic Development Committee
Warning Systems / Services (reverse 911, outdoor warning signals)	Yes	Swift Water Reach 9-1-1 (through County)
Maintenance program to reduce risk	Yes	Department of Public Works
Mutual aid agreements	Yes	Rescue Squad, Volunteer Fire Department with surrounding communities in conjunction with County
<b>Technical/Staffing Capability</b>		
Planners or engineers with knowledge of land development and land management practices	Yes	Professional services agreement with Engineer
Engineers or professionals trained in building or infrastructure construction practices	Yes	Professional services agreement with Engineer
Planners or engineers with an understanding of natural hazards	Yes	Professional services agreement with Engineer
Staff with training in benefit/cost analysis	No	-
Staff with training in green infrastructure	Yes	Harold Pellow & Associates
Staff with education/knowledge/training in low impact development	Yes	Harold Pellow & Associates
Surveyor	Yes	Mayor & Council
Stormwater engineer	Yes	Harold Pellow & Associates
Personnel skilled or trained in GIS applications	No	State
Local or state water quality professional	Yes	Harold Pellow & Associates
Scientist familiar with natural hazards in local area	No	State
Emergency manager	Yes	OEM
Watershed planner	No	-
Environmental specialist	No	-
Grant writers	No	-
Resilience Officer	No	-



Staff/Personnel Resource	Available?	Department/Agency/Position
Other: NFIP Floodplain Administrator	Yes	Township Engineer per municipal code
Other: Professionals trained in conducting damage assessments	Yes	No

**FISCAL CAPABILITY**

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

**Table 9.6-6. Fiscal Capabilities**

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

**EDUCATION AND OUTREACH CAPABILITY**

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

**Table 9.6-7. Education and Outreach Capabilities**

Criterion	Response
Do you have a public information officer or communications office?	No
Do you have personnel skilled or trained in website development?	No
Do you have hazard mitigation information available on your website? -If yes, briefly describe.	Yes, information on coronavirus.
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.	No
Do you have any other programs already in place that could be used to communicate hazard-related information? If yes, briefly describe.	No

**COMMUNITY CLASSIFICATIONS**

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





**Table 9.6-8. Community Classifications**

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

**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 9.6-9. Adaptive Capacity**

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

**NATIONAL FLOOD INSURANCE PROGRAM**

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

**Table 9.6-10. National Flood Insurance Program Compliance**

Criterion	Response
What local department is responsible for floodplain management?	Engineering





Criterion	Response
Who is your floodplain administrator? (name, department/position)	Harold Pellow, Engineer
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 set by FEMA and the State.
When was the most recent Community Assistance Visit or Community Assistance Contact?	September 7, 2010
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.	No
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?	Yes, additional training for staff is encouraged.
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
How many flood insurance policies are in force in your jurisdiction?*	20 policies
-What is the insurance in force?	\$6,511,500 insurance in force
-What is the premium in force?	\$31,040 premium in force
How many total loss claims have been filed in your jurisdiction?*	11 claims
-How many claims are still open or were closed without payment?	\$61,459 in payments
-What were the total payments for losses?	
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  
Reference: FEMA 2020

### 9.6.5 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 Frankford’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 9.5-11 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 9.6-11. 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 23 <sup>rd</sup> and 24 <sup>th</sup> .	Although the County was impacted, the Township did not report significant impacts.
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 was subject to municipal office closures and social distancing and masking requirements.

Source: FEMA 2020, NOAA NCEI 2020

### 9.6.6 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 Frankford 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 Frankford 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 Frankford has significant exposure.

#### REPETITIVE FLOOD LOSSES

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

- 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

#### CRITICAL FACILITIES

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

**Table 9.6-12. Critical Facilities and Lifelines Flood Exposure**

Name	Type	Exposure	
		1% Event	0.2% Event
Main Library	Shelter	X	X
21-3 Culvers Lake Dam	Dam	X	X
22-8 Stinson Pond Dam	Dam	X	X
22-14 No Name #42 Dam	Dam	X	X
22-127 Sussex County Farm Dam	Dam	X	X







Source: Sussex County Planning Partnership 2020

Note:

\*Identified lifeline

**IDENTIFIED ISSUES AND PROBLEM AREAS**

The jurisdiction has identified the following vulnerabilities within their community:

- The Flood Damage Prevention Ordinance requires update to include freeboard.
- Drainage issues are experienced in the Culver Lake area. The Township is replacing tiles with plastic piping.

**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 Frankford 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 Frankford. The Township of Frankford 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 Frankford agreed with the calculated hazard rankings.

**Table 9.6-13. Township of Frankford Hazard Ranking**

<b>Dam Failure</b>	<b>Disease Outbreak</b>	<b>Drought</b>	<b>Earthquake</b>	<b>Flood</b>	<b>Geologic</b>	
Low	Medium	Medium	Low	Medium	Medium	
<b>Hazardous Materials</b>	<b>Hurricane and Tropical Storm</b>	<b>Invasive Species</b>	<b>Nor’Easter</b>	<b>Severe Weather</b>	<b>Severe Winter Weather</b>	<b>Wildfire</b>
Medium	High	Medium	High	High	High	Low

**9.6.7 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 9.5-15 and Table 9.5-16 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 9.6-14. 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	Enter 2021 HMP Action #
Frankford-1 (old #1 and 4)	Ensure continuity of operations. Purchase and install generators for critical facilities in the Township: <ul style="list-style-type: none"> <li>• Fire Department – Stations 1 &amp; 2</li> </ul> Municipal Building	Township	Complete		
Frankford-2 (new)	Incorporate risk assessment and hazard mitigation principles into comprehensive planning efforts.	Township	Ongoing Capability		
Frankford-3 (new)	Conduct an engineering study to identify the flooding issues on Culvers Lake and Union Turnpike. Once study is completed, identify mitigation strategies to correct this issue.	Engineering	Ongoing Capability		
Frankford-4 (new)	Upgrading of culverts on Ridge Road and Plains Road. This area tends to accumulate water during heavy rain events.	DPW, Engineering	No Progress, no longer considered necessary		
Frankford-5 (revised old #6 and 9)	Continue to develop and enhance the Township's public outreach and education program on mitigation related issues. Provide information on all types of hazards, preparedness and mitigation measures, and responses on the Township website.	Township, OEM	Ongoing Capability		
Frankford-6 (old #8)	Install a storm warning system on the firehouse located on Route 206 once it is constructed.	Township OEM, Fire Department	No Progress		

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

- None identified

**PROPOSED HAZARD MITIGATION INITIATIVES FOR THE PLAN UPDATE**

The Township of Frankford 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 Frankford 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 9.5-15 summarizes the comprehensive-range of specific mitigation initiatives the Township of Frankford 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 9.5-16 provides a summary of the prioritization of all proposed mitigation initiatives for this HMP update.



Table 9.6-15. 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-Frankford -001	Dam Inspection and Outreach	<b>Problem:</b> There are a number of dams in Frankford that are located in flood zones, provide recreational uses, and downstream flood protection. The structural conditions of these dams needs to be assessed for safety, with findings reported to the Township.	Existing	Dam Failure, Flood Hurricane/ Tropical Storm, Nor’Easter , Severe Weather Severe Winter Weather	3, 5, 6	Township OEM/Administration, NJDEP; Township Private owners	Staff Time	Enhanced safety and technical capabilities	TBD	Within 3 years	High	SIP, LPR	PR, SP
		<b>Solution:</b> The Township will complete outreach and work with dam owners to ensure that structural assessments are completed. Where repairs are necessary, the Township Engineer will work with the property owner to design repairs and the Township will assist in identification of funding support where necessary.											
2021-Frankford -002	Disaster Debris Management Plan	<b>Problem:</b> The Township currently does not have an adopted debris management plan. 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.	Existing	Flood, Hurricane, Nor’Easter , Severe Weather, Severe Winter Weather, Wildfire	3, 5, 6	OEM, Public Works	Township budget	Increased disaster capability and preparedness	Staff time	1 year	High	LPR	ES
		<b>Solution:</b> The Township will develop a debris management plan that will assist the municipality when they need to facilitate response and recovery after a debris-causing incident. The plan will provide direction to facilitate and coordinate the management of debris following a disaster.											
2021-Frankford -003	Flood Damage Prevention Ordinance Update	<b>Problem:</b> The Township’s Flood Damage Prevention Ordinance lacks language to include the state mandated freeboard requirement.	New	Flood	2	Administration	Borough budget	Meet state standards	Staff time	Within 6 months	High	LPR	PR
		<b>Solution:</b> The Township will update the Flood Damage Prevention Ordinance to include the state mandated freeboard requirement.											
2021-Frankford -004	Blue Ridge Rescue Squad Backup Power	<b>Problem:</b> Backup power sources are necessary to maintain critical services for critical facilities. The Blue Ridge Rescue	Existing	Severe Weather, Severe	1, 3	Engineer, Blue Ridge	FEMA HMGP and BRIC,	Ensures continuity	\$50,000	Within	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
		<p>Squad located at 350 US Highway 206 Branchville, NJ 07826 lacks a backup power source. The facility is considered to be a critical facility.</p> <p><b>Solution:</b> The Engineer will work with the Rescue Squad to research what size generator is needed to power the facility. The Township will then provide assistance pursuing funds and guide the purchase and installation of the selected generator and necessary electrical components to supply backup power to the Blue Ridge Rescue Squad.</p>		Winter Weather, Hurricane, Nor’Easter		Rescue Squad	USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Rescue Squad Budget	ity of operations of Rescue Squad		5 years			

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:

- BRIC Building Resilient Infrastructure and Communities
- FMA Flood Mitigation Assistance Grant Program
- HMGP Hazard Mitigation Grant 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 9.6-16. 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-Frankford-001	Dam Inspection and Outreach	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	High 
2021-Frankford-002	Disaster Debris Management Plan	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	High
2021-Frankford-003	Flood Damage Prevention Ordinance Update	0	1	1	1	1	1	1	1	1	1	0	1	1	1	12	High
2021-Frankford-004	Blue Ridge Rescue Squad Backup Power	1	1	1	1	1	0	0	1	1	1	1	0	1	1	11	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 9.6-17. 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							X
Disease Outbreak								
Drought								
Earthquake								
Flood	X						X	X
Geologic								
Hazardous Materials								
Hurricane and Tropical Storm	X							X
Invasive Species								
Nor’Easter	X							X
Severe Weather	X							X
Severe Winter Weather	X							X
Wildfire								

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

**RED** high ranked hazard

**ORANGE** medium ranked hazard

**YELLOW** low ranked hazard





Figure 9.6-1. Township of Frankford Hazard Area Extent and Location Map 1

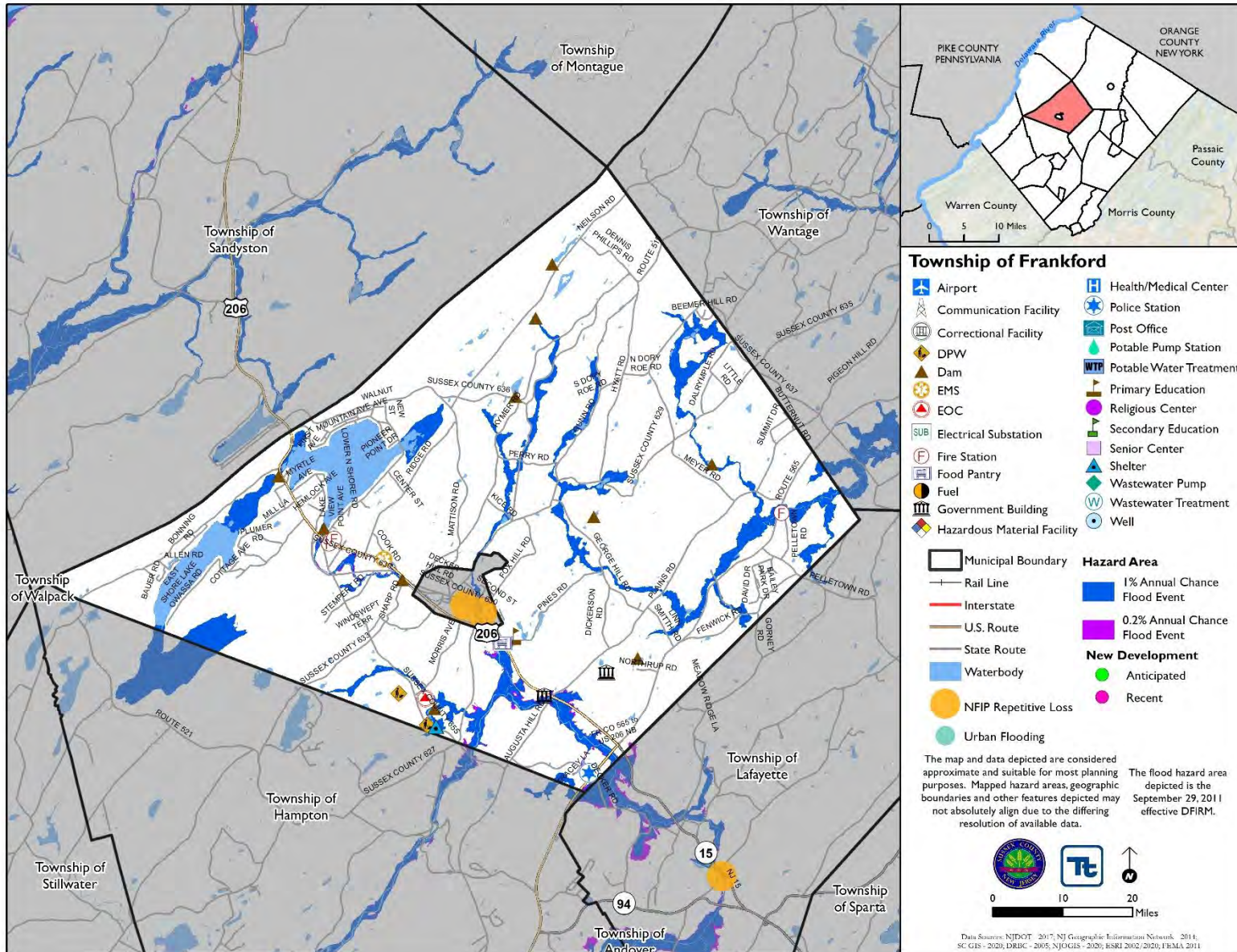




Figure 9.6-2. Township of Frankford Hazard Area Extent and Location Map 2

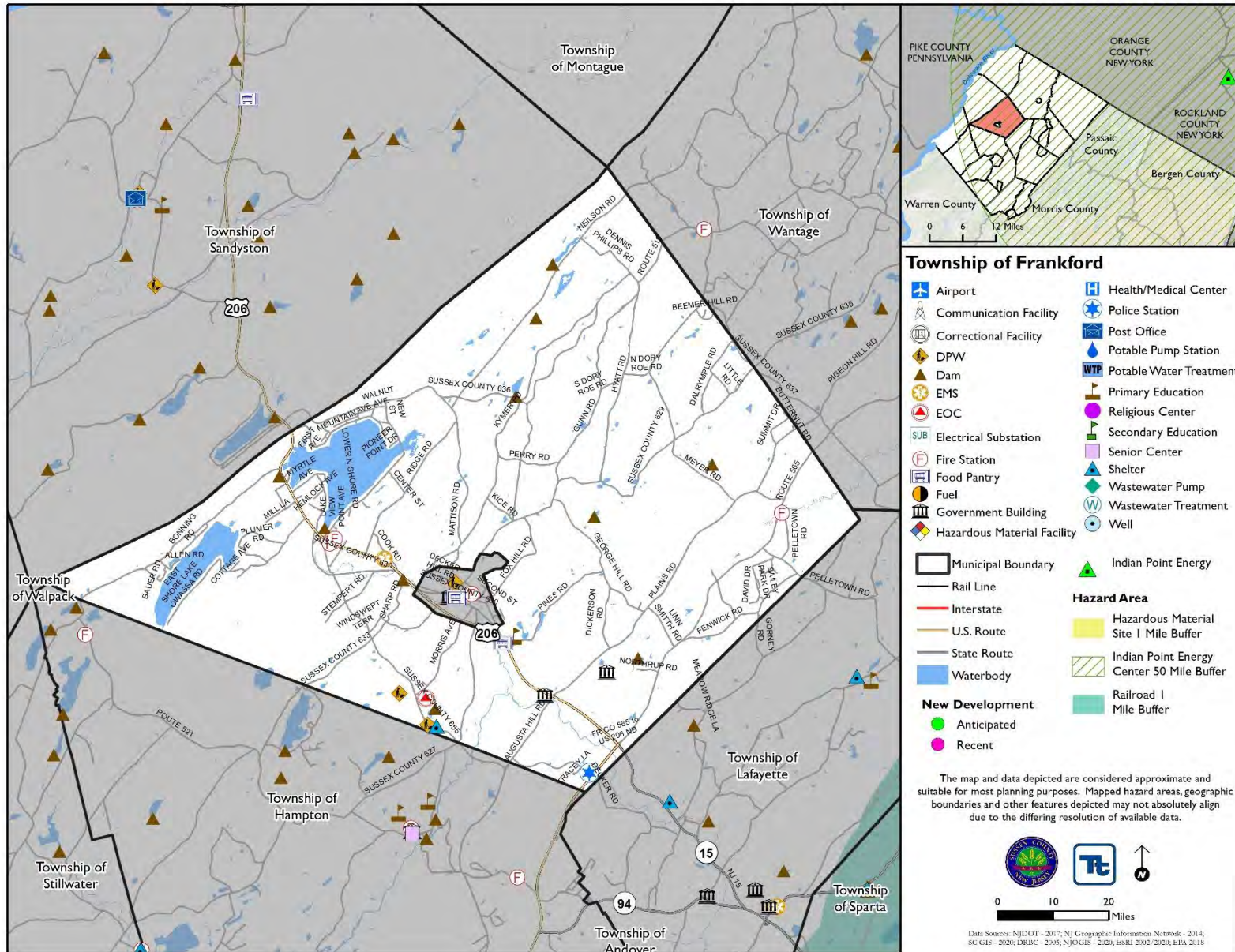
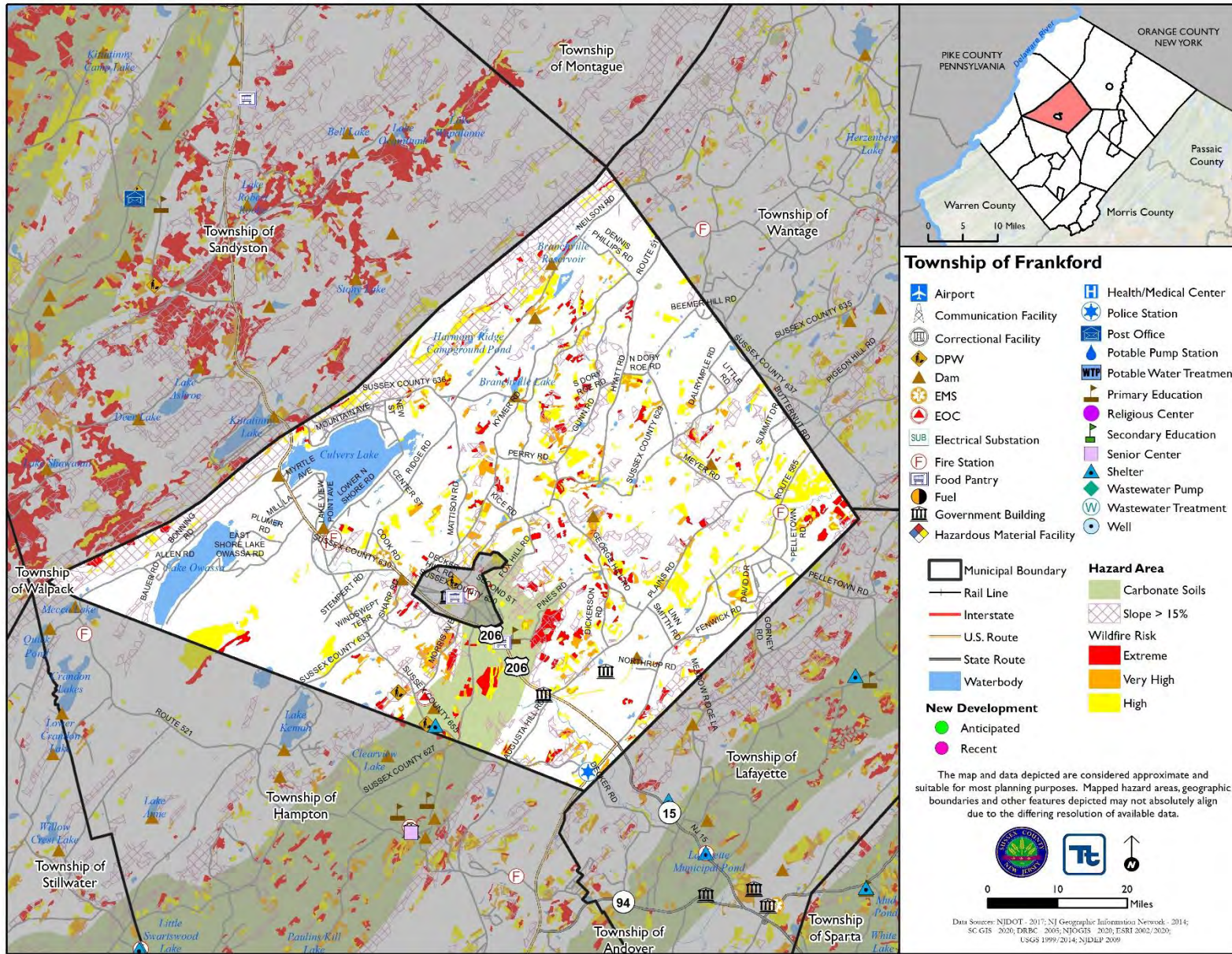




Figure 9.6-3 Township of Frankford Hazard Area Extent and Location Map 3





Action Worksheet			
<b>Project Name:</b>	Dam Inspection and Outreach		
<b>Project Number:</b>	2021-Frankford-001		
Risk / Vulnerability			
<b>Hazard(s) of Concern:</b>	Dam Failure, Flood Hurricane/Tropical Storm, Nor'Easter, Severe Weather Severe Winter Weather		
<b>Description of the Problem:</b>	There are a number of dams in Frankford that are located in flood zones, provide recreational uses, and downstream flood protection. The structural conditions of these dams needs to be assessed for safety, with findings reported to the Township.		
Action or Project Intended for Implementation			
<b>Description of the Solution:</b>	The Township will complete outreach and work with dam owners to ensure that structural assessments are completed. Where repairs are necessary, the Township Engineer will work with the property owner to design repairs and the Township will assist in identification of funding support where necessary.		
<b>Is this project related to a Critical Facility or Lifeline?</b>	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
<b>Level of Protection:</b>	500-year flood	<b>Estimated Benefits (losses avoided):</b>	Dam failure avoided, meet safety requirements
<b>Useful Life:</b>	50 years	<b>Goals Met:</b>	3, 5, 6
<b>Estimated Cost:</b>	TBD	<b>Mitigation Action Type:</b>	Structure and Infrastructure Project, Local Plans and Regulations
Plan for Implementation			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	Within 3 years
<b>Estimated Time Required for Project Implementation:</b>	2 years	<b>Potential Funding Sources:</b>	HMGP, PDM, FMA
<b>Responsible Organization:</b>	Township OEM/Administration, NJDEP; Township Private owners	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard Mitigation Planning
Three Alternatives Considered (including No Action)			
<b>Alternatives:</b>	<b>Action</b>	<b>Estimated Cost</b>	<b>Evaluation</b>
	No Action	\$0	Current problem continues
	Rely on private owners to address	\$0	Private owners may not be properly informed or equipped
	Buyout private dams	High	Costly
Progress Report (for plan maintenance)			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			



Action Worksheet		
<b>Project Name:</b>	Dam Inspection and Outreach	
<b>Project Number:</b>	2021-Frankford-001	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Project protects life from dam failure
Property Protection	1	Project protects property from dam failure
Cost-Effectiveness	1	
Technical	1	
Political	1	There is public support for the project
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	Dam Failure, Flood Hurricane/Tropical Storm, Nor'Easter, Severe Weather Severe Winter Weather
Timeline	0	3 years
Agency Champion	1	Township OEM/Administration, NJDEP; Township Private owners
Other Community Objectives	1	
<b>Total</b>	12	
<b>Priority (High/Med/Low)</b>	High	



Action Worksheet			
<b>Project Name:</b>	Blue Ridge Rescue Squad Backup Power		
<b>Project Number:</b>	2021-Frankford-004		
<b>Risk / Vulnerability</b>			
<b>Hazard(s) of Concern:</b>	Severe Weather, Severe Winter Weather, Hurricane, Nor'Easter		
<b>Description of the Problem:</b>	Backup power sources are necessary to maintain critical services for critical facilities. The Blue Ridge Rescue Squad located at 350 US Highway 206 Branchville, NJ 07826 lacks a backup power source. The facility is considered to be a critical facility.		
<b>Action or Project Intended for Implementation</b>			
<b>Description of the Solution:</b>	The Engineer will work with the Rescue Squad to research what size generator is needed to power the facility. The Township will then provide assistance pursuing funds and guide the purchase and installation of the selected generator and necessary electrical components to supply backup power to the Blue Ridge Rescue Squad.		
<b>Is this project related to a Critical Facility?</b>	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
<b>Level of Protection:</b>	N/A	<b>Estimated Benefits (losses avoided):</b>	Ensures continuity of operations of Rescue Squad
<b>Useful Life:</b>	20 years	<b>Goals Met:</b>	1, 3
<b>Estimated Cost:</b>	\$50,000	<b>Mitigation Action Type:</b>	Structure and Infrastructure Projects (SIP)
<b>Plan for Implementation</b>			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	Within 5 years
<b>Estimated Time Required for Project Implementation:</b>	1 year	<b>Potential Funding Sources:</b>	FEMA HMGP and BRIC, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Municipal Budget
<b>Responsible Organization:</b>	Engineer, Public Works	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard Mitigation, Emergency Management
<b>Three Alternatives Considered (including No Action)</b>			
<b>Alternatives:</b>	<b>Action</b>	<b>Estimated Cost</b>	<b>Evaluation</b>
	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
<b>Progress Report (for plan maintenance)</b>			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			



Action Worksheet		
<b>Project Name:</b>	Blue Ridge Rescue Squad Backup Power	
<b>Project Number:</b>	2021-Frankford-004	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Project will protect critical services of Rescue Squad building
Property Protection	1	Project will protect building from power loss.
Cost-Effectiveness	1	
Technical	1	
Political	1	
Legal	0	The Township does not have the legal authority to complete the project without cooperation
Fiscal	0	Project requires funding support.
Environmental	1	
Social	1	
Administrative	1	
Multi-Hazard	1	Severe Weather, Severe Winter Weather, Hurricane, Nor'Easter
Timeline	0	Within 5 years
Agency Champion	1	Engineer, Rescue Squad
Other Community Objectives	1	
<b>Total</b>	11	
<b>Priority (High/Med/Low)</b>	High	



## 9.7 BOROUGH OF FRANKLIN

This section presents the jurisdictional annex for the Borough of Franklin. The annex includes a general overview of the Borough of Franklin; an assessment of the Borough of Franklin’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.

### 9.7.1 Hazard Mitigation Planning Team

The Borough of Franklin 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 9.7-1. Hazard Mitigation Planning Team

Primary Point of Contact		Alternate Point of Contact
Name / Title: Jim Williams, OEM Coordinator Address: 46 Main Street, Franklin, NJ 07416 Phone Number: (973) 600-9081 Email: lauranjenna@gmail.com		Name / Title: Brian VanDenBroek, DPW Supervisor Address: 46 Main Street, Franklin, NJ 07416 Phone Number: (862) 268-7788 Email: bvandenbroek@franklinborough.org
NFIP Floodplain Administrator		
Name / Title: Deborah Bonanno, Administrator Address: 46 Main Street, Franklin, NJ 07416 Phone Number: (973) 827-9280x102 Email: dbonanno@franklinborough.org		
Name	Title	Method of Participation
Jim Williams	OEM Coordinator	Primary point of contact, reviewed annex*
Brian VanDenBroek	DPW Supervisor	Alternate point of contact, reviewed annex*
Deborah Bonanno	Administrator	NFIP floodplain administrator; provided data and information to update the annex, reviewed annex*
John M. Sowden	Mayor	Reviewed annex*
Dennis Kennan	Engineer	Reviewed annex*
Ken Nelson	Planner	Reviewed annex*
Gregory Cuglinari	Police Chief	Reviewed annex*
Khyle Conklin	Fire Chief	Reviewed annex*

\*Refer to Jurisdictional Annex Review Sign-Off Sheet in Appendix B

### 9.7.2 Jurisdiction Profile

Franklin Borough was incorporated in 1913 and is known as the "Fluorescent Mineral Capital of the World." The Borough has a rich mining history and was widely recognized for its rich ore body containing more than 150 minerals. The Borough is located in eastern Sussex County and bordered to the north by the Borough of Hamburg, to the west by Hardyston Township, to the south by the Borough of Ogdensburg, and to the east by







the Township of Hardyston. The Borough is also located within the New Jersey Highlands Region. The Walkkill River, Franklin Pond Creek and Wildcat Branch flow through the Borough.

According to the U.S. Census, the 2010 population for the Borough of Franklin was 5,045. The estimated 2018 population was 4,807, a 4.7 percent decrease from the 2010 Census. Data from the 2018 U.S. Census American Community Survey indicate that 6.0 percent of the population is 5 years of age or younger and 13.6 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.

### 9.7.3 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 9.6-2 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 9.7-2. Recent and Expected Future Development**

Type of Development	2015		2016		2017		2018		2019	
<b>Number of Building Permits for New Construction Issued Since the Previous HMP</b>										
	<b>Total</b>	<b>Within SFHA</b>	<b>Total</b>	<b>Within SFHA</b>	<b>Total</b>	<b>Within SFHA</b>	<b>Total</b>	<b>Within SFHA</b>	<b>Total</b>	<b>Within SFHA</b>
Single and Two-Family Units	0	0	1	0	1	0	0	0	0	0
Multi-Family	0	0	0	0	0	0	0	0	0	0
Other (commercial, mixed-use, etc.)	0	0	0	0	0	0	0	0	0	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	
<b>Recent Major Development and Infrastructure from 2015 to Present</b>										
Walsh Road	Residential		5 units		Walsh Road		None		Under Construction	
<b>Known or Anticipated Major Development and Infrastructure in the Next Five (5) Years</b>										
JCM	Apartment Complex		300		Munsonhurst Road		Wetlands		Approval from Borough Needs State approval	

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

### 9.7.4 Capability Assessment

Section 5 (Capability Assessment) describes the components included in the capability assessment and their significance for hazard mitigation planning. The Borough of Franklin 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 Borough of Franklin 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 Borough of Franklin and where hazard mitigation has been integrated.

**Table 9.7-3. 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.
<b>Codes, Ordinances, &amp; Requirements</b>					
<b>Building Code</b>	Yes	State & Local	Yes	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>• 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</li> <li>• This code follows State Uniform Construction Code Act (N.J.S. 52:27D-119 et seq.).</li> </ul>					
<b>Zoning Code</b>	Yes	Local	Yes – if municipality has a Planning Board	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>• 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.</li> <li>• The Zoning Officer is responsible for this code in compliance with Chapter 161, Article 5 – Land Development – Zoning.</li> </ul>					
<b>Subdivisions</b>	Yes	Local	Yes – if municipality has a Planning Board	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>• 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.</li> <li>• The Zoning Officer is responsible for this ordinance in compliance with Chapter 161 – Land Development.</li> </ul>					



	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.
<b>Stormwater Management</b>	Yes	Local	Yes	Yes	-
<b>Comment:</b> <ul style="list-style-type: none"> <li>See Title 7 of the NJ Administrative Code, N.J.A.C. 7:8</li> <li>The Town Engineer is responsible for this ordinance in compliance with Chapter 161, Article 9 – Land Development, Stormwater and Flooding Controls.</li> </ul>					
<b>Post-Disaster Recovery</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Real Estate Disclosure</b>	Yes	State, Division of Consumer Affairs	Yes	Yes	-
<b>Comment:</b> 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.					
<b>Growth Management</b>	No	-	Yes – if municipality has a Planning Board	No	-
<b>Comment:</b> <ul style="list-style-type: none"> <li>State Mandated on a municipal level. See Zoning Ordinance ; Also - Plan Endorsement Process via the State Development &amp; 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.</li> </ul>					
<b>Site Plan Review</b>	Yes	Local	Yes – if municipality has a Planning Board	Yes	-
<b>Comment:</b> <ul style="list-style-type: none"> <li>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 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.</li> <li>The Engineering Department is responsible for these requirements.</li> </ul>					
<b>Environmental Protection</b>	Yes	Local	No	Yes	-
<b>Comment:</b> <ul style="list-style-type: none"> <li>Chapter 168 Littering</li> <li>Chapter 188 Nuclear Free Zone</li> <li>Chapter 320 Solid Waste</li> </ul>					
<b>Flood Damage Prevention</b>	Yes	State & Local	Yes	Yes	2021-Franklin-005
<b>Comment:</b> <ul style="list-style-type: none"> <li>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.</li> <li>Flood Damage Prevention, Chapter 128 of the municipal code is administered by the Floodplain Administrator. The Borough Administrator serves as the Floodplain Administrator.</li> <li>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:               <ul style="list-style-type: none"> <li>A. Protect human life and health;</li> </ul> </li> </ul>					



	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.
<ul style="list-style-type: none"> <li>o B. Minimize expenditure of public money for costly flood-control projects;</li> <li>o C. Minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;</li> <li>o D. Minimize prolonged business interruptions;</li> <li>o E. Minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets, bridges located in areas of special flood hazard;</li> <li>o 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;</li> <li>o G. Ensure that potential buyers are notified that property is in an area of special flood hazard; and</li> <li>o H. Ensure that those who occupy the areas of special flood hazard assume responsibility for their actions.</li> </ul> <ul style="list-style-type: none"> <li>• The Ordinance does not include language regarding freeboard requirements.</li> </ul>					
<b>Wellhead Protection</b>	No	-	No	-	-
<i>Comment: There are three municipal wells in the Borough. A wellhead protection ordinance may be considered to protect the Borough's water supply.</i>					
<b>Emergency Management</b>	Yes	Local	No	No	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>• Chapter 34 Fire Department</li> <li>• Chapter 60 Police Department</li> <li>• Chapter 124 Fire Prevention</li> </ul>					
<b>Climate Change</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Disaster Recovery Ordinance</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Disaster Reconstruction Ordinance</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Other:</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Planning Documents</b>					
<b>Comprehensive / Master Plan</b>	Yes	Local	Yes	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>• 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.</li> <li>• The Planning Board is responsible for this plan in compliance with 2003 Master Plan with reexamination in 2009.</li> </ul>					
<b>Capital Improvement Plan</b>	Yes	Local	No	No	-
<i>Comment: The Borough Council is responsible for this plan.</i>					
<b>Disaster Debris Management Plan</b>	No	-	No	-	2021-Franklin-006
<i>Comment: Goes to 75 Corkhill Road Facility (DPW)</i>					
<b>Floodplain or Watershed Plan</b>	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.
<i>Comment:</i>					
<b>Stormwater Management Plan</b>	No	-	Yes	-	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>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.</li> </ul>					
<b>Stormwater Pollution Prevention Plan</b>	Yes	State & Local	Yes	-	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>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.</li> <li>Franklin is a Tier B community.</li> </ul>					
<b>Urban Water Management Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Habitat Conservation Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Economic Development Plan</b>	Yes	Local	No	No	-
<i>Comment: In-House Comm. is responsible for this plan.</i>					
<b>Shoreline Management Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>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.</li> </ul>					
<b>Community Wildfire Protection Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Community Forest Management Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Transportation Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Agriculture Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Climate Action Plan</b>	No	-	No	-	-
<i>Comment:</i>					





	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.
<b>Tourism Plan</b>	No	-	No	-	-
<i>Comment:</i> A Tourism Plan may be considered for the future.					
<b>Business Development Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Other</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Response/Recovery Planning</b>					
<b>Comprehensive Emergency Management Plan (CEMP) / Emergency Operations Plan (EOP)</b>	Yes	Local	Yes	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>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.</li> <li>The Office of Emergency Management is responsible for this plan.</li> </ul>					
<b>Threat &amp; Hazard Identification &amp; Risk Assessment (THIRA)</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Post-Disaster Recovery Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Continuity of Operations Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Public Health Plan</b>	Yes	County	No	-	-
<i>Comment:</i>					
<b>Other</b>	No	-	No	-	-
<i>Comment:</i>					

**Table 9.7-4. Development and Permitting Capability**

Criterion	Response
Does your jurisdiction issue development permits? - If no, who does? If yes, which department?	Yes, Construction 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.	Yes The Borough has a buildable land inventory as part of its Housing Element.

**ADMINISTRATIVE AND TECHNICAL CAPABILITY**

The table below summarizes potential staff and personnel resources available to the Borough of Franklin.

**Table 9.7-5. Administrative and Technical Capabilities**

Staff/Personnel Resource	Available?	Department/Agency/Position
<b>Administrative Capability</b>		





Staff/Personnel Resource	Available?	Department/Agency/Position
Planning Board	Yes	Planning Board
Mitigation Planning Committee	No	-
Environmental Board / Commission	No	-
Open Space Board / Committee	Yes	Part of the Planning Board
Economic Development Commission / Committee	Yes	Ad-hoc, now formalized
Warning Systems / Services (reverse 911, outdoor warning signals)	No	The Borough is seeking to implement a warning system.
Maintenance program to reduce risk	Yes	Franklin Borough Board of Public Works
Mutual aid agreements	Yes	Surrounding communities with written and verbal
<b>Technical/Staffing Capability</b>		
Planners or engineers with knowledge of land development and land management practices	Yes	Contractors (annually)
Engineers or professionals trained in building or infrastructure construction practices	Yes	Contractors (annually)
Planners or engineers with an understanding of natural hazards	Yes	Contractors (annually)
Staff with training in benefit/cost analysis	No	-
Staff with training in green infrastructure	Yes	French & Parrello Denis Keenan
Staff with education/knowledge/training in low impact development	Yes	French & Parrello Denis Keenan
Surveyor	Yes	Contractors (annually)
Stormwater engineer	Yes	French & Parrello Denis Keenan
Personnel skilled or trained in GIS applications	Yes	Contractors (annually)
Local or state water quality professional	Yes	Brian/Van Cleef Associates
Scientist familiar with natural hazards in local area	No	-
Emergency manager	Yes	OEM Coordinator
Watershed planner	No	-
Environmental specialist	No	-
Grant writers	Yes	Borough Staff
Resilience Officer	No	-
Other:	No	-

**FISCAL CAPABILITY**

The table below summarizes financial resources available to the Borough of Franklin.

**Table 9.7-6. Fiscal Capabilities**

Financial Resource	Accessible or Eligible to Use?
Community Development Block Grants (CDBG, CDBG-DR)	Yes
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service	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





Financial Resource	Accessible or Eligible to Use?
State-Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	No
Clean Water Act 319 Grants (Nonpoint Source Pollution)	No
Other	No

**EDUCATION AND OUTREACH CAPABILITY**

The table below summarizes the education and outreach resources available to the Borough of Franklin.

**Table 9.7-7. Education and Outreach Capabilities**

Criterion	Response
Do you have a public information officer or communications office?	Yes- Police Department
Do you have personnel skilled or trained in website development?	No
Do you have hazard mitigation information available on your website? -If yes, briefly describe.	Yes The Borough posts information about natural hazard events as well as COVID-19.
Do you use social media for hazard mitigation education and outreach? -If yes, briefly describe.	Yes- looking to expand
Do you have any citizen boards or commissions that address issues related to hazard mitigation? -If yes, briefly describe.	Yes-OEM Committee
Do you have any other programs already in place that could be used to communicate hazard-related information? If yes, briefly describe.	Yes- discussions with Borough Council

**COMMUNITY CLASSIFICATIONS**

The table below summarizes the classifications for community programs available to the Borough of Franklin.

**Table 9.7-8. Community Classifications**

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

**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 9.7-9. Adaptive Capacity**

Hazard	Adaptive Capacity (Capabilities) – Strong/Moderate/Weak
Dam Failure	Weak
Disease Outbreak	Moderate
Drought	Strong
Earthquake	Weak
Flood	Moderate
Geologic	Weak
Hazardous Materials	Moderate
Hurricane and Tropical Storm	Moderate
Invasive Species	Strong
Nor’Easter	Strong
Severe Weather	Strong
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.*

**NATIONAL FLOOD INSURANCE PROGRAM**

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

**Table 9.7-10. National Flood Insurance Program Compliance**

Criterion	Response
What local department is responsible for floodplain management?	Administrator
Who is your floodplain administrator? (name, department/position)	Deborah Bonanno, Administrator
Are any certified floodplain managers on staff in your jurisdiction?	No
What is the date that your flood damage prevention ordinance was last amended?	June 28, 2011
Does your floodplain management program meet or exceed minimum requirements? -If exceeds, in what ways?	Unknown
When was the most recent Community Assistance Visit or Community Assistance Contact?	December 1, 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.	No
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 indicated that lack of training, staff and funding are barriers to running an effective floodplain management program in the Borough.



Criterion	Response
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
How many flood insurance policies are in force in your jurisdiction?*	11 policies
-What is the insurance in force? -What is the premium in force?	
How many total loss claims have been filed in your jurisdiction?*	11 claims
-How many claims are still open or were closed without payment? -What were the total payments for losses?	\$75,888 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  
Reference: FEMA 2020

**OPPORTUNITIES FOR FUTURE INTEGRATION**

- **Flood Damage Prevention Ordinance:** The Borough will update the Flood Damage Prevention Ordinance to include the state mandated freeboard requirement. (2021-Franklin-005)
- **Disaster Debris Management Plan:** The Borough will develop a Disaster Debris Management Plan. (2021-Franklin-006)
- **Wellhead Protection Ordinance:** The Borough will consider wellhead protection ordinances to protect its municipal water supply.

**9.7.5 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 Borough of Franklin’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 9.6-11 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 9.7-11. 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 23 <sup>rd</sup> and 24 <sup>th</sup> .	The Borough experienced excessive overtime due to snow removal operations, entailing 180.5 overtime hours across 10 full-time employees. The Borough also experienced excessive fuel costs and salt expenses associated with addressing the storm.
January 20, 2020 and continuing	EM-3451, DR-4488: COVID-19 Pandemic	Yes	The coronavirus pandemic resulted in the need for	The Borough was subject to municipal office closures and





Date(s) of Event	Event Type (disaster declaration if applicable)	Sussex County Designated?	Summary of Event	Summary of Local Damages and Losses
			shutdowns and social distancing and mask requirements.	social distancing and masking requirements.

Source: FEMA 2020, NOAA NCEI 2020

### 9.7.6 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 Borough of Franklin 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 Borough of Franklin 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 Borough of Franklin has significant exposure.

#### REPETITIVE FLOOD LOSSES

The following summarizes the repetitive and severe repetitive flood losses in the Borough of Franklin.

- 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

#### CRITICAL FACILITIES

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

**Table 9.7-12. Critical Facilities and Lifelines Flood Exposure**

Name	Type	Exposure	
		1% Event	0.2% Event
22-227 Franklin Pond Dam	Dam	X	X

Source: Sussex County Planning Partnership 2020

#### IDENTIFIED ISSUES AND PROBLEM AREAS

The jurisdiction has identified the following vulnerabilities within their community:

- During heavy rains, Franklin Pond crests over beach and causes erosion. It is filled in sand during storm events.
- On Rutherford Avenue, the drainage creek floods out because it cannot accept water fast enough
- Route 23- drainage system not designed to be large enough for deluges.



**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 Borough of Franklin 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 Borough of Franklin. The Borough of Franklin 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 Borough of Franklin agreed with the calculated hazard rankings.

**Table 9.7-13. Borough of Franklin Hazard Ranking**

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

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

**9.7.7 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 9.6-15 and Table 9.6-16 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 9.7-14. 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	Enter 2021 HMP Action #
Franklin Boro-1 (revised old #3)	Conduct a study on the redevelopment of Rutherford Avenue. This would allow traffic heading north and south when Route 23 is closed due to an emergency. Once study is complete, identify mitigation actions to complete this project.	Borough Engineer with support from NJDOT	No Progress		





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 #
Franklin Boro-2 (revised old #2)	Ensure continuity of operations at critical facilities. Purchase and install a generators for critical facilities in Borough: <ul style="list-style-type: none"> <li>• First Aid Squad</li> <li>• Franklin Elementary School</li> <li>• Borough Hall</li> <li>• Borough's Board of Public Works Water Division facility</li> </ul> Borough's Board of Public Works Road Division facility	Borough OEM	In Progress	X	2021-Franklin-002
Franklin Boro-3 (old #6)	Provide an all-hazards public education outreach program on mitigation related issues through social media and the Borough website.	Borough OEM	Ongoing Capability / In Progress	X	2021-Franklin-001
Franklin Boro-4 (new)	Support the mitigation of vulnerable structures via retrofit (e.g. elevation, flood-proofing) or acquisition/relocation to protect structures from future damage, with repetitive loss and severe repetitive loss properties as a priority when applicable. Phase 1: Identify appropriate candidates and determine most cost-effective mitigation option. Phase 2: Work with the property owners to implement selected action based on available funding and local match availability.	Engineering via NFIP FPA with NJOEM, FEMA support	Ongoing Capability		
Franklin Boro-5 (new)	Identify and establish a reverse 911 system for the Borough to use to alert residents during emergencies. Once set up, create an outreach program to all the residents of the Borough on how to sign up and use the system.	Borough OEM	In Progress	X	2021-Franklin-001
Franklin-6 (new)	Conduct a study on the flooding of the Walkkill River and its impacts on the homes along Newton Avenue.	Engineering with support from NJDEP and Fish and Wildlife	No Progress	X	
Franklin-7 (new)	Purchase and install a 3,000 gallon bi-fuel tank at the DPW facility on Corkhill Road. The tank would hold 2,000 gallons of gasoline and 1,000 gallons	Borough OEM and DPW	No Progress		



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 #
	of diesel fuel. The fuel will be used for municipal vehicles.				

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

- Backup generators have been installed at water pump stations and lift stations. The fire department and police department have generators, though the police department generator is undersized.

**PROPOSED HAZARD MITIGATION INITIATIVES FOR THE PLAN UPDATE**

The Borough of Franklin 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 Borough of Franklin 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 9.6-15 summarizes the comprehensive-range of specific mitigation initiatives the Borough of Franklin 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 9.6-16 provides a summary of the prioritization of all proposed mitigation initiatives for this HMP update.



Table 9.7-15. 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-Franklin-001	Outreach Program	<p><b>Problem:</b> The Borough has identified a need to better communicate hazard and disaster information to the public using the internet, social media, and traditional venues. Currently the Borough does not have as much direct control on the website.</p> <p><b>Solution:</b> The Borough proposes to develop and implement an outreach program that includes targeted outreach such as Reverse 9-1-1/textmygov, website and social media integration upgrades, and ADA compliance.</p>	Existing	All Hazards	1, 3, 4, 6	Borough Administrator; Website vendor; Emergency Management; Sussex County Sheriff	HMG; County; Borough Appropriations	Enhanced understanding and awareness of hazards	\$10,000	Within one year	High	EAP	PR
2021-Franklin-002	Generators for Municipal Facilities	<p><b>Problem:</b> The Borough does not have generators for all municipal facilities. There are no standby generators available at the Rescue Squad, Franklin Elementary School, and Borough Hall. The Police Department’s current generator is undersized. These facilities are vulnerable to power outages that would disrupt the operation of municipal functions during a hazard event. The following generator sizes are identified:</p> <ul style="list-style-type: none"> <li>• Police Dept 50 KW Diesel or Propane</li> <li>• Borough Hall 100KW Natural Gas</li> <li>• DPW Water Utility 30KW Diesel/Propane</li> <li>• DPW Road Dept 75KW Diesel or Propane</li> <li>• Elementary School 500KW Natural Gas</li> <li>• First Aid Squad 22KW Diesel or Propane</li> </ul> <p><b>Solution:</b> The Borough proposes to purchase and install generators at municipal facilities, including Rescue Squad, Elementary School, Borough Hall, and Police Department.</p>	Existing	All Hazards	1, 2, 3, 5, 6	Borough OEM; Public Works	BRIC; HMG; Borough Appropriations	Continued operations of facilities during hazard incidents	High	Within three years	High	SIP	PR



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-Franklin-003	Franklin Pond Flood Study	<b>Problem:</b> During heavy rains, Franklin Pond crests over the beach and causes erosion. It has filled in with sand during storm events. FEMA has reimbursed rather than provided funding for mitigation projects, which poses a financial hardship.	N/A	Flood; Hurricanes and Tropical Storms; Nor'easter's Severe Storms	2, 4, 5	Engineer	HMGP, BRIC, municipal budget	Reduction in flooding, silting of pond	TBD by flood study and selected actions	Within 5 years	Medium	SIP, NSP	SP, NR
		<b>Solution:</b> The Borough will conduct a flood study to determine what can be done to reduce flooding in Franklin Pond. Possible options include dredging of the pond, diverting runoff away from the pond, etc. Once cost-effective actions are identified, the Borough will carry out the selected actions.											
2021-Franklin-004	Rutherford Avenue	<b>Problem:</b> The drainage creek on Rutherford Avenue floods out because it cannot accept water fast enough. FEMA has reimbursed rather than provided funding for mitigation projects, which poses a financial hardship.	Existing	Flood; Hurricanes and Tropical Storms; Nor'easter's Severe Storms	2, 4, 5	Engineer	HMGP, BRIC, Borough budget	Reduction of flooding at Rutherford Avenue	High	Within 5 years	High	SIP	SP
		<b>Solution:</b> The Borough Engineer will design a larger drainage creek with a greater varying capacity. The Borough will then make the necessary upgrades.											
2021-Franklin-005	Flood Damage Prevention Ordinance Update	<b>Problem:</b> The Borough's Flood Damage Prevention Ordinance lacks language to include the state mandated freeboard requirement.	New	Flood	2, 5	Administration	Borough budget	Meet state standards	Staff time	Within 6 months	High	LPR	PR
		<b>Solution:</b> The Borough will update the Flood Damage Prevention Ordinance to include the state mandated freeboard requirement.											
2021-Franklin-006	Disaster Debris Management Plan	<b>Problem:</b> The Borough lacks a Disaster Debris Management Plan.	Existing	All Hazards	5, 6	OEM, Administration	Borough budget	Increased disaster capabilities	Staff time	2 years	High	LPR	ES
		<b>Solution:</b> The Borough will develop and adopt a Disaster Debris Management Plan. The Plan will include any necessary mutual aid discussions to supplement the Borough's capabilities.											





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-Franklin-007	Wallkill Creek Flood Study	<p><b>Problem:</b> The Wallkill Creek passes through Franklin Borough and poses a flood risk for residents throughout the community.</p> <p><b>Solution:</b> The Borough will conduct a study on the flooding of the Wallkill River and its impacts on the homes along Newton Avenue.</p>	Existing	Flood; Hurricanes and Tropical Storms; Nor'easter's Severe Storms	2, 4, 5	Public Works	Borough budget	Enhanced understanding of flood issues	Low	Within five years	Medium	LPR	PR

Notes:

Acronyms and Abbreviations:

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

- BRIC Building Resilient Infrastructure and Communities Program
- FMA Flood Mitigation Assistance Grant Program
- HMGP Hazard Mitigation Grant 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 9.7-16. 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-Franklin-001	Outreach Program	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	High ⚠
2021-Franklin-002	Generators for Municipal Facilities	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	High
2021-Franklin-003	Franklin Pond	0	1	0	1	1	0	0	1	1	1	1	0	1	1	9	High
2021-Franklin-004	Rutherford Avenue	0	1	1	1	1	1	0	1	1	1	1	0	1	1	11	High
2021-Franklin-005	Flood Damage Prevention Ordinance Update	0	1	1	1	1	1	1	1	1	1	0	1	1	1	12	High
2021-Franklin-006	Disaster Debris Management Plan	0	1	1	1	1	1	1	1	1	1	1	1	1	1	13	High
2021-Franklin-007	Walkkill Creek Flood Study	1	1	0	0	0	1	1	0	0	0	1	0	1	1	7	Medium

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 9.7-17. 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		X	X		X
Disease Outbreak			X		X	X		X
Drought			X		X	X		X
Earthquake			X		X	X		X
Flood	X		X	X	X	X	X	X
Geologic			X		X	X		X
Hazardous Materials			X		X	X		X
Hurricane and Tropical Storm	X		X	X	X	X		X
Invasive Species			X		X	X		X
Nor’Easter	X		X	X	X	X		X
Severe Weather	X		X	X	X	X		X
Severe Winter Weather			X		X	X		X
Wildfire			X		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 9.7-1. Borough of Franklin Hazard Area Extent and Location Map 1

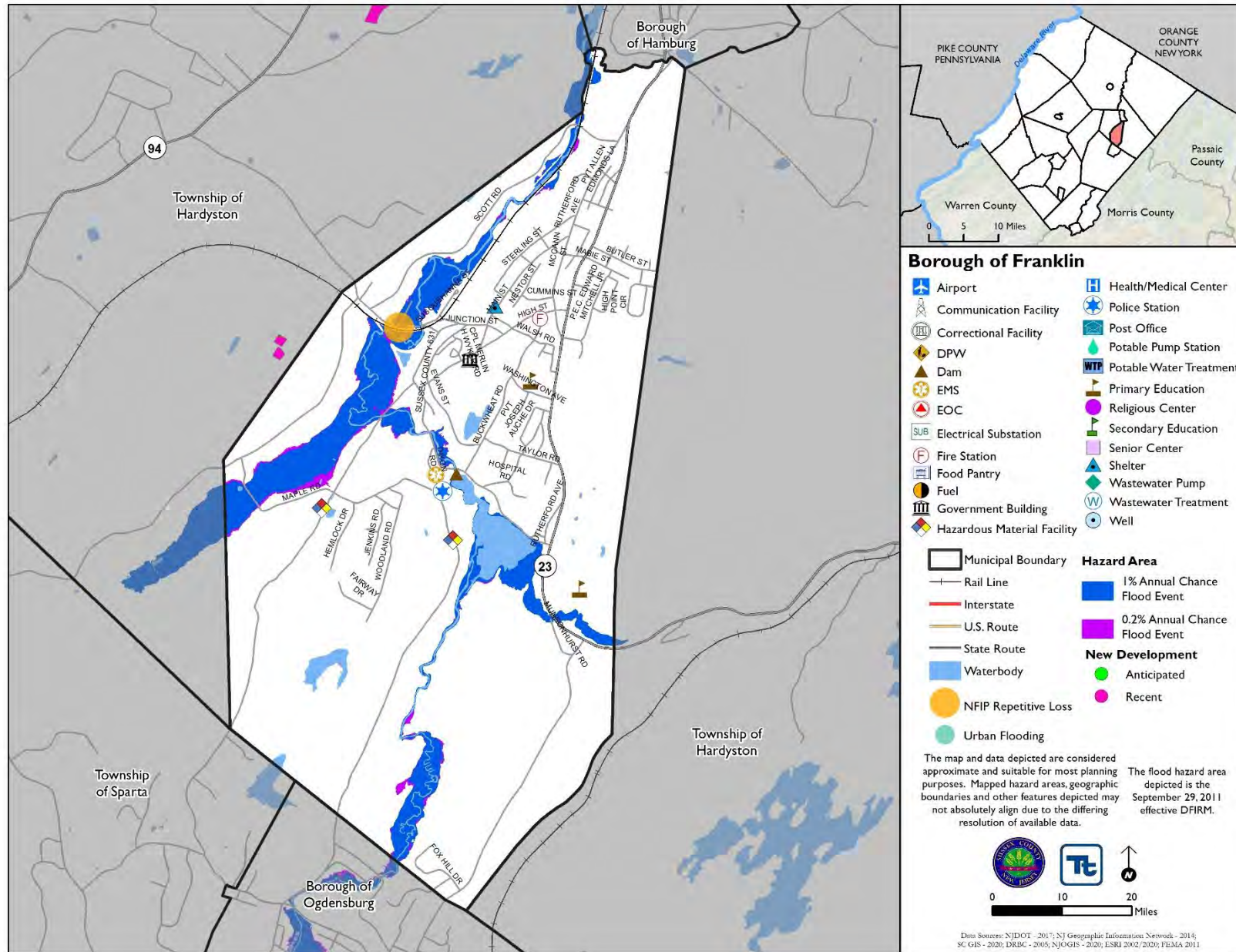




Figure 9.7-2. Borough of Franklin Hazard Area Extent and Location Map 2

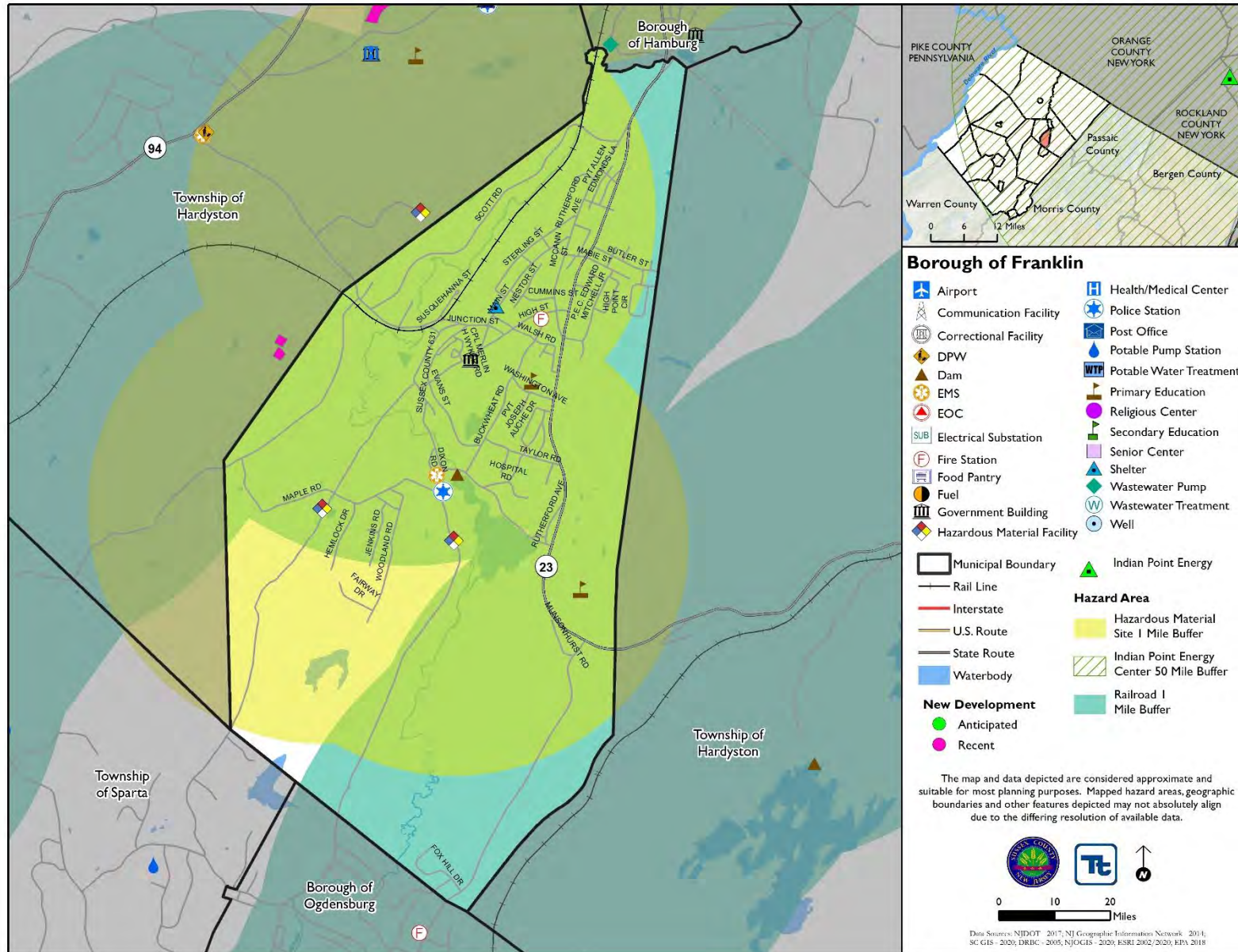
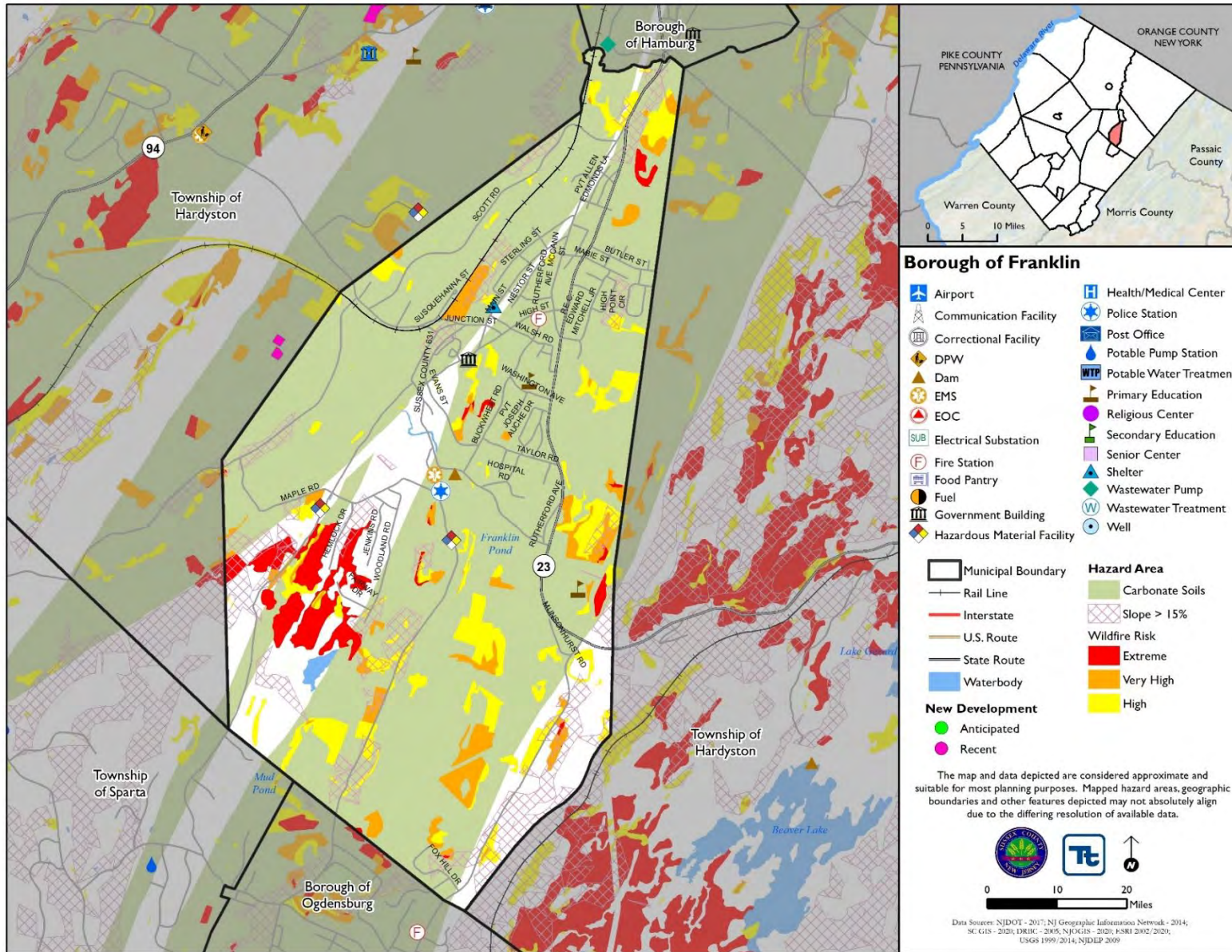




Figure 9.7-3 Borough of Franklin Hazard Area Extent and Location Map 3





Action Worksheet			
<b>Project Name:</b>	Outreach Program		
<b>Project Number:</b>	2021-Franklin-001		
Risk / Vulnerability			
<b>Hazard(s) of Concern:</b>	All Hazards		
<b>Description of the Problem:</b>	The Borough has identified a need to better communicate hazard and disaster information to the public using the internet, social media, and traditional venues. Currently the Borough does not have as much direct control on the website.		
Action or Project Intended for Implementation			
<b>Description of the Solution:</b>	The Borough proposes to develop and implement an outreach program that includes targeted outreach such as Reverse 9-1-1/textmygov, website and social media integration upgrades, and ADA compliance.		
<b>Is this project related to a Critical Facility?</b>		Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
<b>Level of Protection:</b>	N/A	<b>Estimated Benefits (losses avoided):</b>	Enhanced understanding and awareness of hazards
<b>Useful Life:</b>	Indefinite	<b>Goals Met:</b>	1, 3, 4, 6
<b>Estimated Cost:</b>	\$10,000	<b>Mitigation Action Type:</b>	Education and Awareness Programs
Plan for Implementation			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	Within one year
<b>Estimated Time Required for Project Implementation:</b>	Six months	<b>Potential Funding Sources:</b>	HMGP; County; Borough Appropriations
<b>Responsible Organization:</b>	Borough Administrator; Website vendor; Emergency Management; Sussex County Sheriff	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard Mitigation
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues
	Outsource	Medium	Less control over messaging
	Municipal outreach program	Low	Feasible
Progress Report (for plan maintenance)			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			



Action Worksheet		
<b>Project Name:</b>	Outreach Program	
<b>Project Number:</b>	2021-Franklin-001	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Hazard awareness will save lives
Property Protection	1	Outreach will include structural mitigation
Cost-Effectiveness	1	
Technical	1	Technically feasible
Political	1	
Legal	1	
Fiscal	1	
Environmental	1	
Social	1	Project will protect social cohesion
Administrative	1	Project is administratively feasible
Multi-Hazard	1	All hazards
Timeline	1	
Agency Champion	1	Administration/OEM will champion
Other Community Objectives	1	
<b>Total</b>	14	
<b>Priority (High/Med/Low)</b>	High	





Action Worksheet			
<b>Project Name:</b>	Generators for Municipal Facilities		
<b>Project Number:</b>	2021-Franklin-002		
Risk / Vulnerability			
<b>Hazard(s) of Concern:</b>	All Hazards		
<b>Description of the Problem:</b>	<p>Problem: The Borough does not have generators for all municipal facilities. There are no standby generators available at the Rescue Squad, Franklin Elementary School, and Borough Hall. The Police Department’s current generator is undersized. These facilities are vulnerable to power outages that would disrupt the operation of municipal functions during a hazard event. The following generator sizes are identified:</p> <ul style="list-style-type: none"> <li>• Police Dept 50 KW Diesel or Propane</li> <li>• Borough Hall 100KW Natural Gas</li> <li>• DPW Water Utility 30KW Diesel/Propane</li> <li>• DPW Road Dept 75KW Diesel or Propane</li> <li>• Elementary School 500KW Natural Gas</li> <li>• First Aid Squad 22KW Diesel or Propane</li> </ul>		
Action or Project Intended for Implementation			
<b>Description of the Solution:</b>	The Borough proposes to purchase and install generators at municipal facilities, including Rescue Squad, Elementary School, Borough Hall, and Police Department.		
<b>Is this project related to a Critical Facility?</b>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
<b>Level of Protection:</b>	N/A	<b>Estimated Benefits (losses avoided):</b>	Continued operations of facilities during hazard incidents
<b>Useful Life:</b>	30 years	<b>Goals Met:</b>	1, 2, 3, 5, 6
<b>Estimated Cost:</b>	High-TBD	<b>Mitigation Action Type:</b>	Structure and Infrastructure Project
Plan for Implementation			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	Within three years
<b>Estimated Time Required for Project Implementation:</b>	1 year	<b>Potential Funding Sources:</b>	BRIC; HMGP; Borough Appropriations
<b>Responsible Organization:</b>	Borough OEM; Public Works	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard Mitigation
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues
	Microgrid	High	Too expensive
	Targeted generators	High	Cost feasible
Progress Report (for plan maintenance)			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			



Action Worksheet		
<b>Project Name:</b>	Generators for Municipal Facilities	
<b>Project Number:</b>	2021-Franklin-002	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Critical facilities will protect life safety
Property Protection	1	Project will protect critical facilities
Cost-Effectiveness	1	
Technical	1	Generators are technically feasible
Political	1	Generators are politically feasible
Legal	1	
Fiscal	1	
Environmental	1	
Social	1	Critical facility protection will protect social cohesion
Administrative	1	
Multi-Hazard	1	All Hazards
Timeline	1	
Agency Champion	1	
Other Community Objectives	1	
<b>Total</b>	14	
<b>Priority (High/Med/Low)</b>	High	



Action Worksheet			
<b>Project Name:</b>	Franklin Pond		
<b>Project Number:</b>	2021-Franklin-003		
Risk / Vulnerability			
<b>Hazard(s) of Concern:</b>	Flood, Severe Weather		
<b>Description of the Problem:</b>	During heavy rains, Franklin Pond crests over the beach and causes erosion. It has filled in with sand during storm events. FEMA has reimbursed rather than provided funding for mitigation projects, which poses a financial hardship.		
Action or Project Intended for Implementation			
<b>Description of the Solution:</b>	The Borough will conduct a flood study to determine what can be done to reduce flooding in Franklin Pond. Possible options include dredging of the pond, diverting runoff away from the pond, etc. Once cost-effective actions are identified, the Borough will carry out the selected actions.		
<b>Is this project related to a Critical Facility or Lifeline?</b>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
<b>Level of Protection:</b>	TBD by flood study and selected actions	<b>Estimated Benefits (losses avoided):</b>	Reduction in flooding, silting of pond
<b>Useful Life:</b>	TBD by flood study and selected actions	<b>Goals Met:</b>	2
<b>Estimated Cost:</b>	TBD by flood study and selected actions	<b>Mitigation Action Type:</b>	Structure and Infrastructure Projects, Natural Systems Protection
Plan for Implementation			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	Within 5 years
<b>Estimated Time Required for Project Implementation:</b>	5 years	<b>Potential Funding Sources:</b>	HMGP, BRIC, municipal budget
<b>Responsible Organization:</b>	Engineer	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard mitigation planning, stormwater planning
Three Alternatives Considered (including No Action)			
<b>Alternatives:</b>	<b>Action</b>	<b>Estimated Cost</b>	<b>Evaluation</b>
	No Action	\$0	Current problem continues
	Elevate nearby roadways	\$500,000	Costly and may not solve problem
	Relocate nearby roadways and properties	N/A	Not possible
Progress Report (for plan maintenance)			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			



Action Worksheet		
<b>Project Name:</b>	Franklin Pond	
<b>Project Number:</b>	2021-Franklin-003	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	0	.
Property Protection	1	Reduction in flooding risk
Cost-Effectiveness	0	
Technical	1	Technically feasible project
Political	1	
Legal	0	The Borough may require permitting to conduct the project.
Fiscal	0	Project will require grant funding.
Environmental	1	Reduces silting of pond
Social	1	Project would reduce flooding impacts.
Administrative	1	
Multi-Hazard	1	Flood, Severe Weather
Timeline	0	
Agency Champion	1	Engineer
Other Community Objectives	1	
<b>Total</b>	9	
<b>Priority (High/Med/Low)</b>	High	



Action Worksheet			
<b>Project Name:</b>	Rutherford Avenue		
<b>Project Number:</b>	2021-Franklin-004		
Risk / Vulnerability			
<b>Hazard(s) of Concern:</b>	Flood, Severe Weather		
<b>Description of the Problem:</b>	Rutherford-drainage creek floods out because it can't accept water fast enough. FEMA has reimbursed rather than provided funding for mitigation projects, which poses a financial hardship.		
Action or Project Intended for Implementation			
<b>Description of the Solution:</b>	The Borough Engineer will design a larger drainage creek with a greater varying capacity. The Borough will then make the necessary upgrades.		
<b>Is this project related to a Critical Facility?</b>		Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
<b>Level of Protection:</b>	At least a 5-year event; will be determined once project is complete	<b>Estimated Benefits (losses avoided):</b>	Reduction of flooding at Rutherford Avenue
<b>Useful Life:</b>	30 years	<b>Goals Met:</b>	2
<b>Estimated Cost:</b>	High	<b>Mitigation Action Type:</b>	Structure and Infrastructure Project
Plan for Implementation			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	Within 5 years
<b>Estimated Time Required for Project Implementation:</b>	1 year	<b>Potential Funding Sources:</b>	HMGP, BRIC, Borough budget
<b>Responsible Organization:</b>	Engineer	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard Mitigation
Three Alternatives Considered (including No Action)			
<b>Alternatives:</b>	<b>Action</b>	<b>Estimated Cost</b>	<b>Evaluation</b>
	No Action	\$0	Current problem continues
	Remove nearby road and properties	Very High	Roadway cannot be removed
	Relocate road and properties to another location	N/A	Not feasible
Progress Report (for plan maintenance)			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			



Action Worksheet		
<b>Project Name:</b>	Rutherford Avenue	
<b>Project Number:</b>	2021-Franklin-004	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	0	
Property Protection	1	Project will protect roadway from flooding, damages
Cost-Effectiveness	1	
Technical	1	
Political	1	
Legal	1	Borough has the legal authority to complete the project.
Fiscal	0	Project requires funding support.
Environmental	1	
Social	1	
Administrative	1	
Multi-Hazard	1	Severe Weather, Flood
Timeline	0	Within 5 years
Agency Champion	1	Engineer
Other Community Objectives	1	
<b>Total</b>	11	
<b>Priority (High/Med/Low)</b>	High	



## 9.8 TOWNSHIP OF FREDON

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

### 9.8.1 Hazard Mitigation Planning Team

The Township of Fredon 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 9.8-1. Hazard Mitigation Planning Team*

Primary Point of Contact		Alternate Point of Contact
Name / Title: Keith Festa, OEM Coordinator Address: 443 Route 94, Newton, NJ 07860 Phone Number: (516) 456-1374 Email: firecop1534@gmail.com		Name / Title: Glenn Deitz, Third OEM Coordinator Address: 30 Anderson Hill Road, Newton, NJ 07860 Phone Number: (973) 333-4244 Email: <a href="mailto:gdeitz@fredonnj.gov">gdeitz@fredonnj.gov</a>
NFIP Floodplain Administrator		
Name / Title: Keith Festa, OEM Coordinator Address: 443 Route 94, Newton, NJ 07860 Phone Number: (516) 456-1374 Email: firecop1534@gmail.com		
Name	Title	Method of Participation
Keith Festa	OEM Coordinator	Primary point of contact, NFIP floodplain administrator, contributed to mitigation strategy; attended the kickoff meeting, annex training, reviewed annex*
Glenn Deitz	OEM Coordinator	Alternate point of contact
Suzanne Boland	Registered Municipal Clerk	Provided data and information, contributed to mitigation strategy
Carl Lazzaro	OEM Coordinator, third	Attended the annex training and contributed to the annex development
Deborah Prommell	Acting Municipal Clerk	Attended the kickoff meeting and annex training
John Flora	Mayor	Reviewed annex*
Harold Pellow	Consultant Engineer	Reviewed annex*
Deborah Bonanno	Fiscal/CFO	Reviewed annex*
Leigh Witty	Building Code Official	Reviewed annex*
Tom Knutelsky	Floodplain Administrator	Reviewed annex*
Eileen Banyra	Land Use Planner	Reviewed annex*
John Breece	Fire Department	Reviewed annex*

*\*Refer to Jurisdictional Annex Review Sign-Off Sheet in Appendix B*





### 9.8.2 Jurisdiction Profile

The Township of Fredon was incorporated in 1904. The Township is located in southwestern Sussex County and has a total land area of 17.65 square miles. It is bordered to the north by Hampton Township, to the south by Green Township, to the east by Andover Township and Newton, and to the west by Stillwater Township and Warren County. The Pequest River, Paulins Kill, and Bear Brook all flow through the Township. In addition, numerous ponds and lakes are located throughout the Township.

According to the U.S. Census, the 2010 population for the Township of Fredon was 3,437. The estimated 2018 population was 3,214, a 6.49 percent decrease from the 2010 Census. Data from the 2018 U.S. Census American Community Survey indicate that 8.0 percent of the population is 5 years of age or younger and 25 percent is 65 years of age or older. Communities must deploy a support system that enables all populations to safely reach shelters or to quickly evacuate a hazard area.

### 9.8.3 Growth/Development Trends

Understanding how past, current, and projected development patterns have or are likely to increase or decrease risk in hazard areas is a key component to understanding a jurisdiction’s overall risk to its hazards of concern. Table 9.7-2 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 9.8-2. Recent and Expected Future Development**

Type of Development	2015		2016		2017		2018		2019	
<b>Number of Building Permits for New Construction Issued Since the Previous HMP</b>										
	<b>Total</b>	<b>Within SFHA</b>	<b>Total</b>	<b>Within SFHA</b>	<b>Total</b>	<b>Within SFHA</b>	<b>Total</b>	<b>Within SFHA</b>	<b>Total</b>	<b>Within SFHA</b>
Single and Two-Family Units	0	0	1	0	1	0	1	0	1	0
Multi-Family	0	0	0	0	0	0	0	0	0	0
Other (commercial, mixed-use, etc.)	0	0	0	0	0	0	0	0	0	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		
<b>Recent Major Development and Infrastructure from 2015 to Present</b>										
None identified										
<b>Known or Anticipated Major Development and Infrastructure in the Next Five (5) Years</b>										
None anticipated										

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

### 9.8.4 Capability Assessment

Section 5 (Capability Assessment) describes the components included in the capability assessment and their significance for hazard mitigation planning. The Township of Fredon 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 Fredon 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 Fredon and where hazard mitigation has been integrated.

	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.
<b>Codes, Ordinances, &amp; Requirements</b>					
<b>Building Code</b>	Yes	State	Yes	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>• 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</li> <li>• The Building Department is responsible for this code in compliance with Chapter 200 – Construction Codes, Uniform.</li> </ul>					
<b>Zoning Code</b>	Yes	Local	Yes – if municipality has a Planning Board	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>• 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.</li> <li>• The Zoning Department is responsible for this code in compliance with Chapter 550- Zoning.</li> </ul>					
<b>Subdivisions</b>	Yes	Local & Federal	Yes – if municipality has a Land Use Board	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>• 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.</li> </ul>					





	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.
<ul style="list-style-type: none"> <li>The Planning and Zoning Department is responsible for this ordinance in compliance with Chapter 550- Zoning and Chapter 470- Subdivision of Land.</li> <li>Fredon Township Ordinance 2021-03: Amending Chapter 457 Stormwater Management February 2021</li> </ul>					
<b>Stormwater Management</b>	Yes	Local & Federal	Yes	Yes	-
<b>Comment:</b> <ul style="list-style-type: none"> <li>See Title 7 of the NJ Administrative Code, N.J.A.C. 7:8</li> <li>The Planning and Zoning Department is responsible for this ordinance in compliance with Chapter 457 – Stormwater Control.</li> <li>Fredon Township Ordinance 2021-03: Amending Chapter 457 Stormwater Management February 2021</li> </ul>					
<b>Post-Disaster Recovery</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Real Estate Disclosure</b>	Yes	State, Division of Consumer Affairs	Yes	Yes	-
<b>Comment:</b> 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.					
<b>Growth Management</b>	Yes	Local	Land Use Board	Yes	-
<b>Comment:</b> <ul style="list-style-type: none"> <li>State Mandated on a municipal level. See Zoning Ordinance ; Also - Plan Endorsement Process via the State Development &amp; 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.</li> <li>The Planning and Zoning Department is responsible for these ordinances.</li> </ul>					
<b>Site Plan Review</b>	Yes	Local	Land Use Board	Yes	-
<b>Comment:</b> <ul style="list-style-type: none"> <li>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 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.</li> <li>The Planning and Zoning Department is responsible for these requirements in compliance with Chapter 424 – Site Plan Review.</li> <li>Fredon Township Ordinance 2021-03: Amending Chapter 457-17 Stormwater Management February 2021</li> </ul>					
<b>Environmental Protection</b>	Yes	State	Yes	No	-
<b>Comment:</b> <ul style="list-style-type: none"> <li>Land Use Board applications require NJDEP Environmental Impact Statement if required.</li> <li>The Zoning Ordinance (Chapter 550) includes the following purposes related to environmental protection:               <ul style="list-style-type: none"> <li>To preserve agricultural lands and open space, and to ensure that any future development of farmland that does occur includes a component of preservation and is designed to minimize any visual and environmental impacts that may occur.</li> <li>To preserve large tracts of land for open space and farmland by encouraging the development of new residential subdivisions in a cluster design.</li> <li>To protect areas constrained by steep slopes, wetlands, Category 1 streams, flood-prone areas, forested areas and areas with threatened or endangered habitat.</li> </ul> </li> </ul>					
<b>Flood Damage Prevention</b>	Yes	Local	Yes	Yes	-
<b>Comment:</b> <ul style="list-style-type: none"> <li>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.</li> <li>This ordinance follows Chapter 270- Flood Control, last amended February 2021</li> </ul>					



	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.
<ul style="list-style-type: none"> <li>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:               <ul style="list-style-type: none"> <li>A. To protect human life and health;</li> <li>B. To minimize expenditure of public money for costly flood control projects;</li> <li>C. To minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;</li> <li>D. To minimize prolonged business interruptions;</li> <li>E. To minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets, bridges located in areas of special flood hazard;</li> <li>F. To 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;</li> <li>G. To ensure that potential buyers are notified that property is in an area of special flood hazard; and</li> <li>H. To ensure that those who occupy the areas of special flood hazard assume responsibility for their actions.</li> </ul> </li> </ul>					
<b>Wellhead Protection</b>	No	-	No	-	-
<i>Comment:</i> Fredon Township has no public water systems.					
<b>Emergency Management</b>	Yes	Local	No	Yes	-
<i>Comment:</i> <ul style="list-style-type: none"> <li>Chapter 85, Volunteer Fire Company and First Responders</li> <li>Chapter 262, Fire Company</li> </ul>					
<b>Climate Change</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Disaster Recovery Ordinance</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Disaster Reconstruction Ordinance</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Other: NFIP Freeboard</b>	Yes	State	No	Yes	-
<i>Comment:</i> <ul style="list-style-type: none"> <li>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</li> <li>The Building Department is responsible for this code in compliance with Chapter 200 – Construction Codes, Uniform.</li> </ul>					
<b>Other: Soil Erosion and Sediment Control</b>	Yes	Local	No	Yes	-
<i>Comment:</i> The Planning and Zoning Department is responsible for these ordinances in compliance with Chapter 441 – Soil Erosion and Sediment Control.					
<b>Other: Genetically Engineered Microorganisms</b>	Yes	Local	No	Yes	-
<i>Comment:</i> <ul style="list-style-type: none"> <li>Chapter 290, Genetically Engineered Microorganisms deals with the release of microorganisms.</li> <li>“The Township Committee shall adopt, by resolution, such rules and regulations which shall, in its discretion, be deemed reasonable and necessary governing the application for permission to release any genetically engineered microorganism into the outdoor environment of the Township, including, but not limited to, regulations requiring completion of appropriate applications; submission of a plan for environmental protection, containment and disposal; submission of a plan insuring the health, safety and welfare of the public; submission of approvals by appropriate state and federal governmental agencies; payment of fees and costs to the Township; survey and location of the release site and affected areas; and posting of appropriate sureties or other insurances to guarantee against liability for damage or loss.”</li> </ul>					
<b>Other: Hazardous Materials</b>	Yes	Local	No	Yes	-
<i>Comment:</i> <ul style="list-style-type: none"> <li>Chapter 300, Hazardous Materials deals with the emergency response and cost recovery of hazardous materials.</li> </ul>					
<b>Planning Documents</b>					
<b>Comprehensive / Master Plan</b>	Yes	Local	Yes	Yes	
<i>Comment:</i> <ul style="list-style-type: none"> <li>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</li> </ul>					





	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.
<p>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.</p> <ul style="list-style-type: none"> <li>The Planning Board is responsible for this plan. This plan was adopted in 2008.</li> </ul>					
<b>Capital Improvement Plan</b>	Yes	Local	No	Yes	-
<i>Comment: This Capitol Improvement Plan was adopted in 2015.</i>					
<b>Disaster Debris Management Plan</b>	Yes	Local	No	Yes	-
<i>Comment: Disaster debris is addressed within the Fredon Township Office of Emergency Management Emergency Operations Plan October 2018 and the Fredon Township Ordinance 2021-03: Amending Chapter 457-16 Stormwater Management February 2021.</i>					
<b>Floodplain or Watershed Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Stormwater Management Plan</b>	Yes	Federal, State & Local	Yes	Yes	-
<i>Comment:</i> <ul style="list-style-type: none"> <li>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.</li> <li>The Land Use Board is responsible for this plan in compliance with the Master Plan.</li> <li>Identified in Fredon Township Ordinance 2021-03: Amending Chapter 457 Stormwater Management February 2021</li> </ul>					
<b>Stormwater Pollution Prevention Plan</b>	Yes	Federal & Local	Yes	Yes	-
<i>Comment:</i> <ul style="list-style-type: none"> <li>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.</li> <li>Identified in Fredon Township Ordinance 2021-03: Amending Chapter 457 Stormwater Management February 2021</li> </ul>					
<b>Urban Water Management Plan</b>	No	-	No	-	-
<i>Comment: Fredon Township is a rural community this is not applicable.</i>					
<b>Habitat Conservation Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Economic Development Plan</b>	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.
<i>Comment:</i>					
<b>Shoreline Management Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>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.</li> </ul>					
<b>Community Wildfire Protection Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Community Forest Management Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Transportation Plan</b>	Yes	Local	No	Yes	-
<i>Comment: The Office of Emergency Management is responsible for this plan. This plan was adopted in 2014.</i>					
<b>Agricultural Plan</b>	Yes	Local	No	Yes	-
<i>Comment: The Land Use Board is responsible for this plan in compliance with the Master Plan.</i>					
<b>Climate Action Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Tourism Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Business Development Plan</b>	Yes	Local	No	Yes	-
<i>Comment: The Land Use Board is responsible for this plan in compliance with the Master Plan.</i>					
<b>Other: Open Space Plan</b>	Yes	State & Local	No	Yes	-
<i>Comment: The Planning Board is responsible for this plan. This plan was adopted in 2000.</i>					
<b>Other: Stream Corridor Management Plan</b>	Yes	Local	No	Yes	-
<i>Comment: The Land Use Board is responsible for this plan in compliance with the Master Plan.</i>					
<b>Other: Watershed Management or Protection Plan</b>	Yes	Local	No	Yes	-
<i>Comment: The Land Use Board is responsible for this plan in compliance with the Master Plan.</i>					
<b>Response/Recovery Planning</b>					
<b>Comprehensive Emergency Management Plan (CEMP) / Emergency Operations Plan (EOP)</b>	Yes	Local	Yes	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>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.</li> <li>The Office of Emergency Management is responsible for this plan. This plan was adopted in 2018.</li> </ul>					
<b>Threat &amp; Hazard Identification &amp; Risk Assessment (THIRA)</b>	Yes	Local	Yes	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>Contained within Emergency Operations Plan.</li> <li>The Office of Emergency Management is responsible for this plan. This plan was adopted in 2018.</li> </ul>					
<b>Post-Disaster Recovery Plan</b>	Yes	Local	Yes	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>Contained within Emergency Operations Plan.</li> <li>The Office of Emergency Management is responsible for this plan. This plan was adopted in 2018.</li> </ul>					



	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.
<b>Continuity of Operations Plan</b>	Yes	Local	Yes	Yes	-
<i>Comment:</i> <ul style="list-style-type: none"> <li>• Contained within Emergency Operations Plan.</li> <li>• The Office of Emergency Management is responsible for this plan. This plan was adopted in 2018.</li> </ul>					
<b>Public Health Plan</b>	Yes	Local	Yes	Yes	-
<i>Comment:</i> <ul style="list-style-type: none"> <li>• Contained within Emergency Operations Plan.</li> <li>• The Office of Emergency Management is responsible for this plan. This plan was adopted in 2018.</li> </ul>					
<b>Other</b>	No	-	No	-	-
<i>Comment:</i>					

**Table 9.8-3. Development and Permitting Capability**

Criterion	Response
Does your jurisdiction issue development permits? - If no, who does? If yes, which department?	Yes
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 Fredon.

**Table 9.8-4. Administrative and Technical Capabilities**

Staff/Personnel Resource	Available?	Department/Agency/Position
<b>Administrative Capability</b>		
Land Use Board	Yes	Combined Planning & Zoning Board
Mitigation Planning Committee	Yes	Fredon Township Committee
Environmental Board / Commission	Yes	<p>Environmental Commission. The Fredon Township Environmental Commission is the focal point for environmental issues affecting the Township. The Commission’s area of interest and activities include preservation of natural resources, conservation of open space, inventory of natural resources, water quality, environmental education, enhancement of the quality of life in the Township, solicitation of grants and historical preservation. Anything that may adversely affect or enhance the Township’s environment is of interest to the Commission.</p> <p>The Commission is an advisory body to the Planning Board. The Commission reviews applications for development submitted to the Board and reports on elements that may have a negative impact on the environment.</p>



Staff/Personnel Resource	Available?	Department/Agency/Position
Open Space Board / Committee	Yes	Open Space Commission. In an effort to preserve Fredon’s rural character, the Open Space Commission was formed in the spring of 2006. The mission of this group is to identify and prioritize land parcels for preservation, make recommendation to the township committee, and develop partnerships with allied organizations. The group focuses on land that preserves agriculture, scenic views, water quality, wildlife, and passive/active recreation. The funds to support the purchases or preservation of land are generated by the Open Space Tax. In 2008, the Township Committee reduced the Open Space Tax from 2 cents to 1 cent per \$100,000 of the revised assessed value of a home, and it was reduced again to 1/2 a cent in 2009.
Economic Development Commission / Committee	No	-
Warning Systems / Services (reverse 911, outdoor warning signals)	No	-
Maintenance program to reduce risk	Yes	Tree trimming, stormwater catch basin maintenance
Mutual aid agreements	Yes	Verbal agreements
<b>Technical/Staffing Capability</b>		
Planners or engineers with knowledge of land development and land management practices	Yes	Pellow Engineering
Engineers or professionals trained in building or infrastructure construction practices	Yes	State
Planners or engineers with an understanding of natural hazards	Yes	Pellow Engineering and State
Staff with training in benefit/cost analysis	No	-
Staff with training in green infrastructure	Yes	E. Banyra, Township Planner
Staff with education/knowledge/training in low impact development	Yes	E. Banyra, Township Planner
Surveyor	No	-
Stormwater engineer	Yes	Pellow Engineering
Personnel skilled or trained in GIS applications	No	-
Local or state water quality professional	Yes	Sussex County
Scientist familiar with natural hazards in local area	No	-
Emergency manager	Yes	Appointed by Township Committee
Watershed planner	No	-
Environmental specialist	Yes	E. Banyra, Township Planner
Grant writers	No	-
Resilience Officer	No	-
Other: Professionals trained in conducting damage assessments	Yes	State Building Inspector

**FISCAL CAPABILITY**

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





**Table 9.8-5. Fiscal Capabilities**

Financial Resource	Accessible or Eligible to Use?
Community Development Block Grants (CDBG, CDBG-DR)	No
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service	No
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
State-Sponsored Grant Programs	State Aid
Development Impact Fees for Homebuyers or Developers	Yes
Clean Water Act 319 Grants (Nonpoint Source Pollution)	No
Other: Open Space Acquisition Funding Programs	Yes

**EDUCATION AND OUTREACH CAPABILITY**

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

**Table 9.8-6. Education and Outreach Capabilities**

Criterion	Response
Do you have a public information officer or communications office?	Yes, Mayor designated
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.	No
Do you have any other programs already in place that could be used to communicate hazard-related information? If yes, briefly describe.	Yes, Website capable of messaging. Social media. Fire prevention programs are conducted annually at schools.

**COMMUNITY CLASSIFICATIONS**

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

**Table 9.8-7. Community Classifications**

Program	Participating?	Classification	Date Classified
Community Rating System	No	-	-
Building Code Effectiveness Grading Schedule (BCEGS)	No	-	-
Public Protection (Fire ISO Protection Class)	Yes	5	2014
Storm Ready Certification	No	-	-
Firewise Community Classification	No	-	-
Sustainable Jersey	No	-	-







**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 9.8-8. Adaptive Capacity**

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

*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. The administration 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 9.8-9. National Flood Insurance Program Compliance**

Criterion	Response
What local department is responsible for floodplain management?	Land Use Board
Who is your floodplain administrator? (name, department/position)	Keith Festa, OEM Coordinator
Are any certified floodplain managers on staff in your jurisdiction?	No
What is the date that your flood damage prevention ordinance was last amended?	2/2021
Does your floodplain management program meet or exceed minimum requirements? -If exceeds, in what ways?	Meets N.J.S.A. 40-48-1 et seq
When was the most recent Community Assistance Visit or Community Assistance Contact?	December 7, 1994





Criterion	Response
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.	No
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?	No
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
How many flood insurance policies are in force in your jurisdiction?*	3 policies
-What is the insurance in force?	\$1,050,000 insurance in force
-What is the premium in force?	\$1,359 premium in force
How many total loss claims have been filed in your jurisdiction?*	2 claims
-How many claims are still open or were closed without payment?	\$6,937 in payments
-What were the total payments for losses?	
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  
Reference: FEMA 2020

### 9.8.5 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 Fredon’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 9.7-10 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 9.8-10. 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 23 <sup>rd</sup> and 24 <sup>th</sup> .	\$6,810.81 Overtime for storm cleanup
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.	\$8,311.98

Source: FEMA 2020, NOAA-NCEI 2020





### 9.8.6 Jurisdiction-Specific Vulnerabilities and Hazard Ranking

The hazard profiles in Section 4 (Risk Assessment) provide detailed information regarding each plan participant’s vulnerability to the identified hazards. Refer to Section 4.2 (Methodology and Tools) and Section 4.4 (Hazard Ranking) for a detailed summary for the Township of Fredon 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 Fredon 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 Fredon has significant exposure.

#### REPETITIVE FLOOD LOSSES

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

- 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

#### CRITICAL FACILITIES

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

**Table 9.8-11. Critical Facilities and Lifelines Flood Exposure**

Name	Type	Exposure	
		1% Event	0.2% Event
None identified			

Source: Sussex County Planning Partnership 2020

#### IDENTIFIED ISSUES AND PROBLEM AREAS

The jurisdiction has identified the following vulnerabilities within their community:

- The Township would like to utilize the Civic Center at 436 NJ-94, Newton, NJ 07860 for emergency housing, use as a warming shelter, etc. However, the building will require upgrades. In addition, the shelter would require staffing as staffing from the Township is limited.
- Backup power sources are necessary to maintain critical services for critical facilities. The Township Civic Center requires a backup power source. The site also houses the fire house and EMS. The Township has plans to establish the Civic Center as an emergency shelter.
- The Greendell Road and Long Hill catch basin is in need of replacement in order to improve stormwater.
- Deer Run requires installation of a storm drain to allow for proper stormwater management and to reduce risk of flooding.





**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 Fredon 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 Fredon. The Township of Fredon 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 Fredon agreed with the calculated hazard rankings.

**Table 9.8-12. Township of Fredon Hazard Ranking**

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

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

**9.8.7 Mitigation Strategy and Prioritization**

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

**PAST MITIGATION INITIATIVE STATUS**

The following table summarizes the jurisdiction’s progress on their mitigation strategy identified in the 2016 HMP. Actions that are carried forward as part of this plan update are included in Table 9.7-14 and Table 9.7-15 with prioritization. Previous actions that are now on-going programs and capabilities are indicated as such in the following table and can also be found under ‘Capability Assessment’ presented previously in this annex.

**Table 9.8-13. 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	Enter 2021 HMP Action #
Fredon-1 (old #1 and 11)	Harden the Township's Civic Center and EOC to FEMA 361 standards.	Township Administration, OEM	No Progress	X	2020-Fredon-001, 2020-Fredon-002
Fredon-2 (old #2 and 3)	When updating the roof of the Township school, incorporate current high wind standards into the design.	School Administration	No Progress		





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 #
Fredon-3 (old #6 and 8)	Conduct inundation studies for the dams located in the Township: twin dams at Warner Road and Paulinskill Lake Road and at Whittemore Pond.	Township Engineer	No Progress		
Fredon-4 (old #9)	Upgrade and improve stormwater culverts at intersection of Pond Place and Slate Ridge.	Township Engineer	No Progress		
Fredon-5 (old #10)	Install stormwater runoff retention basin located at Newton Medical Center	Township Engineer, Hospital Administration	No Progress		
Fredon-6 (new)	Review the current hazard mitigation plan prior to updating plans, ordinances, etc. within the Township.	Township Administration	Completed; Fredon Township Ordinance 2021-03		
Fredon-7 (old #12)	Develop and implement a multi-hazard public outreach program.	Township Administration, OEM	Ongoing Capability		
Fredon-8 (new)	Continue with the process of adding additional radio equipment on an existing tower in the Township. Awaiting zoning sign off; then will complete project.	Township OEM and County OEM	No Progress		
Fredon-9 (revised old #4)	Ensure continuity of operations at critical facilities and municipal buildings. Identified at this time is to purchase and install backup generators at the following locations: <ul style="list-style-type: none"> <li>• Town Hall/DPW</li> <li>• Civic Center</li> <li>• Township School</li> </ul>	Township OEM	No Progress	X	2020-Fredon-002

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

- None identified

**PROPOSED HAZARD MITIGATION INITIATIVES FOR THE PLAN UPDATE**

The Township of Fredon 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 Fredon 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 9.7-14 summarizes the comprehensive-range of specific mitigation initiatives the Township of Fredon 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 9.7-15 provides a summary of the prioritization of all proposed mitigation initiatives for this HMP update.



Table 9.8-14. 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
2020-Fredon-001	Civic Center Emergency Shelter	<b>Problem:</b> The Township would like to utilize the Civic Center at 436 NJ-94, Newton, NJ 07860 for emergency housing, use as a warming shelter, etc. However, the building will require upgrades. In addition, the shelter would require staffing as staffing from the Township is limited.	Existing	All Hazards	1	OEM, FEMA, Sussex County OEM, American Red Cross	FEMA HMGP and BRIC, USDA Community Facilities Grant Program, EMPG, Municipal Budget	Civic Center used for emergency sheltering	\$125,000	Within 5 years	High	SIP	ES
		<b>Solution:</b> The Township will work with FEMA to identify what upgrades are needed to the facility to meet sheltering guidelines. Expected upgrades needed include cots, potential showering locations, etc. The Township will work with Sussex County OEM and the American Red Cross to establish sheltering staffing agreements.											
2020-Fredon-002	Civic Center Backup Power	<b>Problem:</b> Backup power sources are necessary to maintain critical services for critical facilities. The Township Civic Center requires a backup power source. The site also houses the fire house and EMS. The Township has plans to establish the Civic Center as an emergency shelter.	Existing	Severe Storm, Severe Winter Storm, Hurricane, Nor’Easter	1	Engineer, OEM	FEMA HMGP and BRIC, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Municipal Budget	Ensure continuity of operations of Civic Center	\$50,000	Within 5 years	High	SIP	ES
		<b>Solution:</b> The Engineer will research what size generator is needed to power the Civic Center. The Township will then purchase and install the selected generator and necessary electrical components to supply backup power to the Municipal Building.											
2020-Fredon-003	Greendell Road And Long Hill Catch Basin Project	<b>Problem:</b> The Greendell Road and Long Hill catch basin is in need of replacement in order to improve stormwater.	Existing	Flood, Severe Weather	2	Engineer, DPW	HMGP, BRIC, Capitol Improvement Fund	Reduce flood risk, increase stormwater management	High	1 year	High	SIP	SP
		<b>Solution:</b> The Township Engineer will design the replacement catch basin. The DPW will install the catch basin designed by the Engineer.											



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
2020-Fredon-004	Storm Drain and Maintain Easement Deer Run Installation	<p><b>Problem:</b> Deer Run requires installation of a storm drain to allow for proper stormwater management and to reduce risk of flooding.</p> <p><b>Solution:</b> The Township will secure an easement and design and construct a storm drain at Deer Run.</p>	New	Flood, Severe Weather	2	Engineer, DPW	HMGP, BRIC, Capitol Improvement Fund	Reduce flood risk, increase stormwater management	High	6 months	High	SIP	SP

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
- PDM Pre-Disaster Mitigation Grant 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 9.8-15. 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
2020-Fredon-001	Civic Center Emergency Shelter	1	1	1	1	1	1	0	1	1	1	1	0	1	1	12	High ▲
2020-Fredon-002	Civic Center Backup Power	1	1	1	1	1	1	0	1	1	1	1	0	1	1	12	High
2020-Fredon-003	Greendell Road And Long Hill Catch Basin Project	0	1	1	1	1	1	1	1	1	1	1	1	1	1	13	High
2020-Fredon-004	Storm Drain and Maintain Easement Deer Run Installation	0	1	1	1	1	0	1	1	1	1	1	1	1	1	12	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 9.8-16. 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			X
Disease Outbreak					X			X
Drought					X			X
Earthquake					X			X
Flood					X	X		X
Geologic					X			X
Hazardous Materials					X			X
Hurricane and Tropical Storm					X			X
Invasive Species					X			X
Nor’Easter					X			X
Severe Weather					X	X		X
Severe Winter Weather					X			X
Wildfire					X			X

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

**RED** high ranked hazard

**ORANGE** medium ranked hazard

**YELLOW** low ranked hazard



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

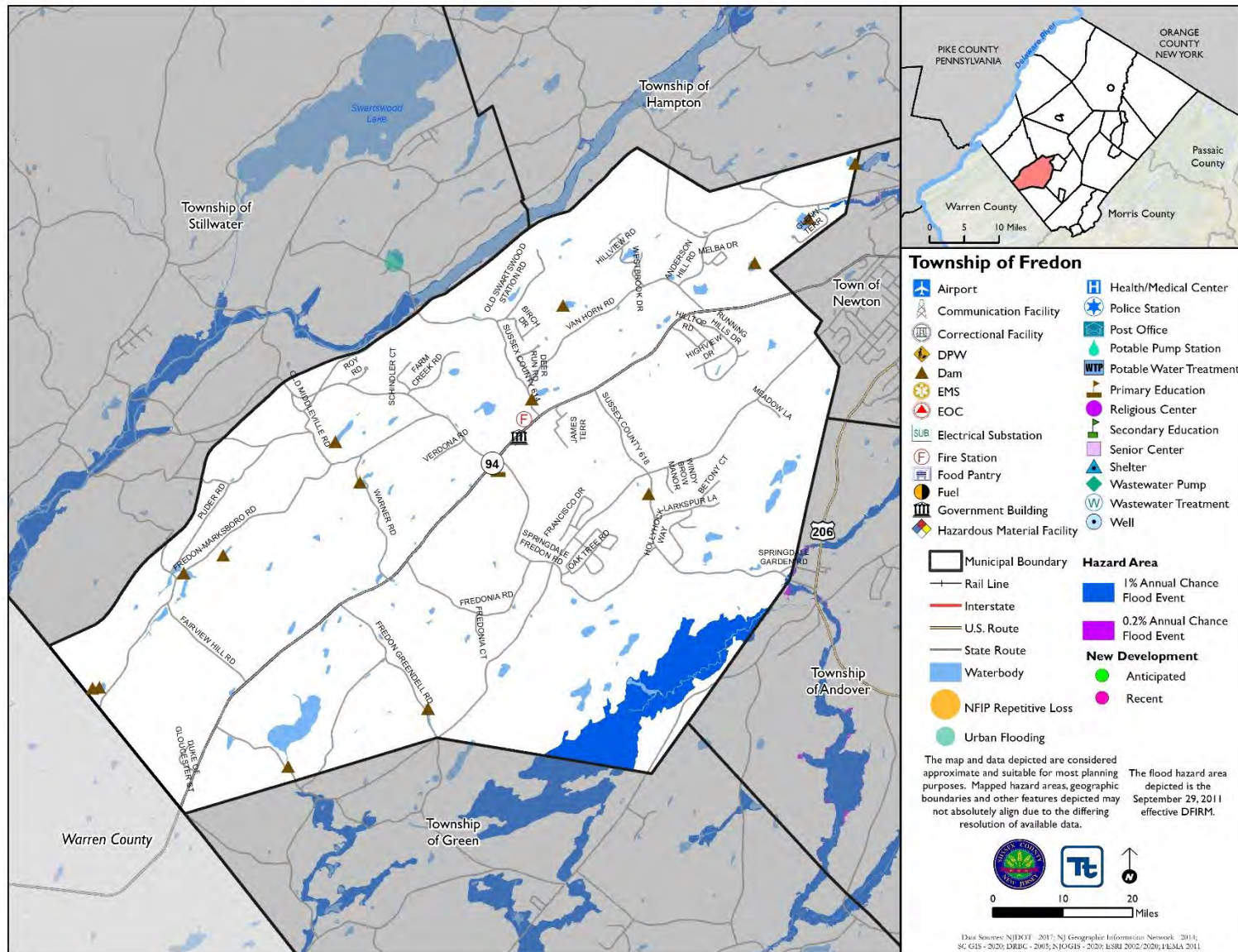




Figure 9.8-2. Township of Fredon Hazard Area Extent and Location Map 2

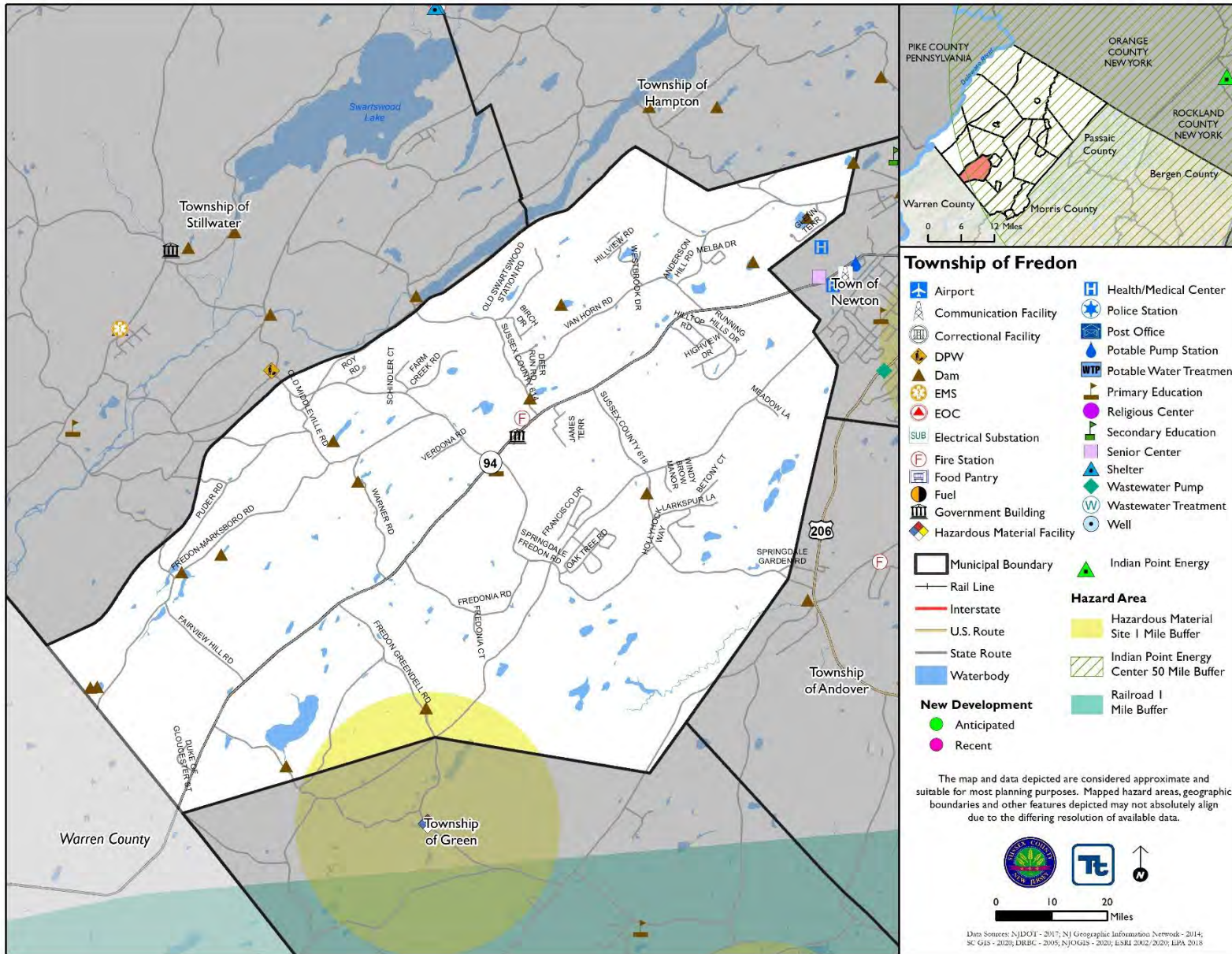
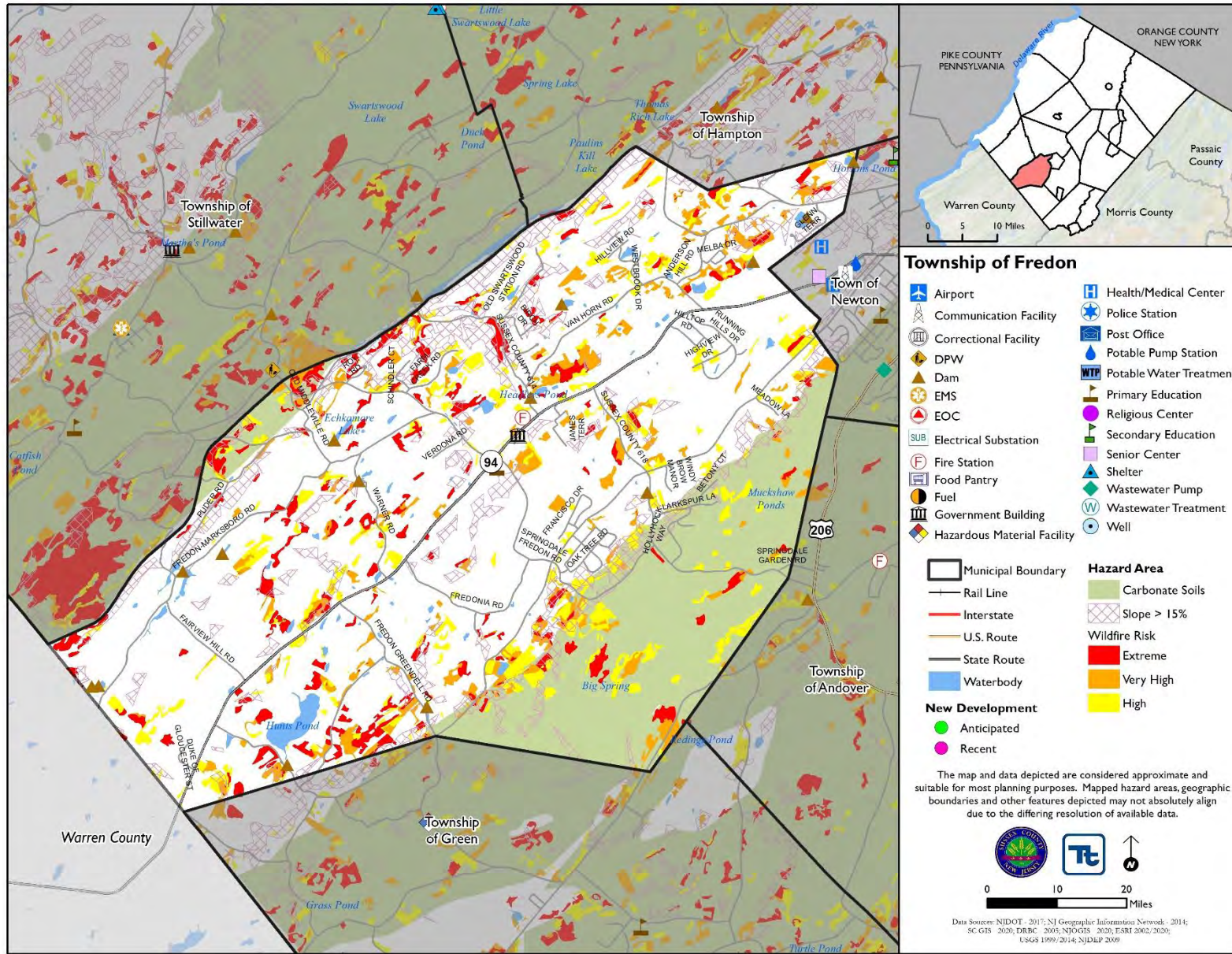




Figure 9.8-3 Township of Fredon Hazard Area Extent and Location Map 3





Action Worksheet			
<b>Project Name:</b>	Civic Center Emergency Shelter		
<b>Project Number:</b>	2020-Fredon-001		
Risk / Vulnerability			
<b>Hazard(s) of Concern:</b>	All Hazards		
<b>Description of the Problem:</b>	The Township would like to utilize the Civic Center at 436 NJ-94, Newton, NJ 07860 for emergency housing, use as a warming shelter, etc. However, the building will require upgrades. In addition, the shelter would require staffing as staffing from the Township is limited.		
Action or Project Intended for Implementation			
<b>Description of the Solution:</b>	The Township will work with FEMA to identify what upgrades are needed to the facility to meet sheltering guidelines. Expected upgrades needed include cots, potential showering locations, etc. The Township will work with Sussex County OEM and the American Red Cross to establish sheltering staffing agreements.		
<b>Is this project related to a Critical Facility?</b>	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
<b>Level of Protection:</b>	Emergency shelter requirements	<b>Estimated Benefits (losses avoided):</b>	Civic Center used for emergency sheltering
<b>Useful Life:</b>	15 years	<b>Goals Met:</b>	1
<b>Estimated Cost:</b>	\$125,000	<b>Mitigation Action Type:</b>	Structure and Infrastructure Project
Plan for Implementation			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	Within 5 years
<b>Estimated Time Required for Project Implementation:</b>	6 months	<b>Potential Funding Sources:</b>	FEMA HMGP and BRIC, USDA Community Facilities Grant Program, EMPG, Municipal Budget
<b>Responsible Organization:</b>	OEM	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard mitigation, emergency management
Three Alternatives Considered (including No Action)			
<b>Alternatives:</b>	<b>Action</b>	<b>Estimated Cost</b>	<b>Evaluation</b>
	No Action	\$0	Problem continues.
	Purchase multi-use trailers	\$1M per trailer	Require deployment, limited space
	Build separate facility	High	Costly
Progress Report (for plan maintenance)			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			



Action Worksheet		
<b>Project Name:</b>	Civic Center Emergency Shelter	
<b>Project Number:</b>	2020-Fredon-001	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Provides sheltering
Property Protection	1	Project will strengthen building protections
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	Project requires funding support
Environmental	1	
Social	1	
Administrative	1	
Multi-Hazard	1	All Hazards
Timeline	0	Within 5 years
Agency Champion	1	OEM
Other Community Objectives	1	
<b>Total</b>	12	
<b>Priority (High/Med/Low)</b>	High	



Action Worksheet			
<b>Project Name:</b>	Civic Center Backup Power		
<b>Project Number:</b>	2020-Fredon-002		
<b>Risk / Vulnerability</b>			
<b>Hazard(s) of Concern:</b>	Severe Storm, Severe Winter Storm, Hurricane, Nor'Easter		
<b>Description of the Problem:</b>	Backup power sources are necessary to maintain critical services for critical facilities. The Township Civic Center requires a backup power source. The site also houses the fire house and EMS. The Township has plans to establish the Civic Center as an emergency shelter.		
<b>Action or Project Intended for Implementation</b>			
<b>Description of the Solution:</b>	The Engineer will research what size generator is needed to power the Civic Center. The Township will then purchase and install the selected generator and necessary electrical components to supply backup power to the Municipal Building.		
<b>Is this project related to a Critical Facility?</b>	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
<b>Level of Protection:</b>	N/A	<b>Estimated Benefits (losses avoided):</b>	Ensures continuity of operations of Civic Center
<b>Useful Life:</b>	20 years	<b>Goals Met:</b>	1
<b>Estimated Cost:</b>	\$50,000	<b>Mitigation Action Type:</b>	Structure and Infrastructure Projects (SIP)
<b>Plan for Implementation</b>			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	Within 5 years
<b>Estimated Time Required for Project Implementation:</b>	1 year	<b>Potential Funding Sources:</b>	FEMA HMGP and BRIC, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Municipal Budget
<b>Responsible Organization:</b>	Engineer, OEM	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard Mitigation, Emergency Management
<b>Three Alternatives Considered (including No Action)</b>			
<b>Alternatives:</b>	<b>Action</b>	<b>Estimated Cost</b>	<b>Evaluation</b>
	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
<b>Progress Report (for plan maintenance)</b>			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			





Action Worksheet		
<b>Project Name:</b>	Civic Center Backup Power	
<b>Project Number:</b>	2020-Fredon-002	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
<b>Life Safety</b>	1	Project will protect critical services of the Civic Center and allow the building to be used for sheltering
<b>Property Protection</b>	1	Project will protect building from power loss.
<b>Cost-Effectiveness</b>	1	
<b>Technical</b>	1	
<b>Political</b>	1	
<b>Legal</b>	1	The Township has the legal authority to complete the project.
<b>Fiscal</b>	0	Project requires funding support.
<b>Environmental</b>	1	
<b>Social</b>	1	
<b>Administrative</b>	1	
<b>Multi-Hazard</b>	1	Severe Storm, Severe Winter Storm, Hurricane, Nor'Easter
<b>Timeline</b>	0	Within 5 years
<b>Agency Champion</b>	1	Engineer, OEM
<b>Other Community Objectives</b>	1	
<b>Total</b>	12	
<b>Priority (High/Med/Low)</b>	High	



Action Worksheet			
<b>Project Name:</b>	Greendell Road And Long Hill Catch Basin Project		
<b>Project Number:</b>	2020-Fredon-003		
Risk / Vulnerability			
<b>Hazard(s) of Concern:</b>	Flood, Severe Weather		
<b>Description of the Problem:</b>	The Greendell Road and Long Hill catch basin is in need of replacement in order to improve stormwater.		
Action or Project Intended for Implementation			
<b>Description of the Solution:</b>	The Township Engineer will design the replacement catch basin. The DPW will install the catch basin designed by the Engineer.		
<b>Is this project related to a Critical Facility?</b>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
<b>Level of Protection:</b>	TBD by engineering study	<b>Estimated Benefits (losses avoided):</b>	Reduce flood risk, increase stormwater management
<b>Useful Life:</b>	20 years	<b>Goals Met:</b>	2
<b>Estimated Cost:</b>	High	<b>Mitigation Action Type:</b>	Structure and Infrastructure Project
Plan for Implementation			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	6 months
<b>Estimated Time Required for Project Implementation:</b>	1 year	<b>Potential Funding Sources:</b>	HMGP, BRIC, Capitol Improvement Fund
<b>Responsible Organization:</b>	Engineer, DPW	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard mitigation, Stormwater management
Three Alternatives Considered (including No Action)			
<b>Alternatives:</b>	<b>Action</b>	<b>Estimated Cost</b>	<b>Evaluation</b>
	No Action	\$0	Problem continues.
	Buyout homes exposed to flooding	High	Costly
	Close roadways that experience flooding	Low	Loss of access
Progress Report (for plan maintenance)			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			



Action Worksheet		
<b>Project Name:</b>	Greendell Road And Long Hill Catch Basin Project	
<b>Project Number:</b>	2020-Fredon-003	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	0	
Property Protection	1	Properties protected from flooding
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	1	Project has funding support identified
Environmental	1	
Social	1	
Administrative	1	
Multi-Hazard	1	Flood, Severe Weather
Timeline	1	1 year
Agency Champion	1	Engineer, DPW
Other Community Objectives	1	
<b>Total</b>	13	
<b>Priority (High/Med/Low)</b>	High	



Action Worksheet			
<b>Project Name:</b>	Storm Drain and Maintain Easement Deer Run Installation		
<b>Project Number:</b>	2020-Fredon-004		
Risk / Vulnerability			
<b>Hazard(s) of Concern:</b>	Flood, Severe Weather		
<b>Description of the Problem:</b>	Deer Run requires installation of a storm drain to allow for proper stormwater management and to reduce risk of flooding.		
Action or Project Intended for Implementation			
<b>Description of the Solution:</b>	The Township Engineer will design the necessary stormwater improvements and new features. The DPW will install the stormwater system components designed by the Engineer.		
<b>Is this project related to a Critical Facility?</b>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
<b>Level of Protection:</b>	TBD by engineering study	<b>Estimated Benefits (losses avoided):</b>	Reduce flood risk, increase stormwater management
<b>Useful Life:</b>	20 years	<b>Goals Met:</b>	2
<b>Estimated Cost:</b>	High	<b>Mitigation Action Type:</b>	Structure and Infrastructure Project
Plan for Implementation			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	1 year
<b>Estimated Time Required for Project Implementation:</b>	1 year	<b>Potential Funding Sources:</b>	HMGP, BRIC, Capitol Improvement Fund
<b>Responsible Organization:</b>	Engineer, DPW	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard mitigation, Stormwater management
Three Alternatives Considered (including No Action)			
<b>Alternatives:</b>	<b>Action</b>	<b>Estimated Cost</b>	<b>Evaluation</b>
	No Action	\$0	Problem continues.
	Buyout homes exposed to flooding	High	Costly
	Close roadways that experience flooding	Low	Loss of access
Progress Report (for plan maintenance)			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			



Action Worksheet		
<b>Project Name:</b>	Storm Drain and Maintain Easement Deer Run Installation	
<b>Project Number:</b>	2020-Fredon-004	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	0	
Property Protection	1	Properties protected from flooding
Cost-Effectiveness	1	
Technical	1	The project is technically feasible
Political	1	
Legal	0	Project requires securing an easement
Fiscal	1	Project has funding support identified
Environmental	1	
Social	1	
Administrative	1	
Multi-Hazard	1	Flood, Severe Weather
Timeline	1	1 year
Agency Champion	1	Engineer, DPW
Other Community Objectives	1	
<b>Total</b>	12	
<b>Priority (High/Med/Low)</b>	High	



## 9.9 TOWNSHIP OF GREEN

This section presents the jurisdictional annex for the Township of Green. The annex includes a general overview of the Township of Green; an assessment of the Township of Green’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.

### 9.9.1 Hazard Mitigation Planning Team

The Township of Green 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 9.9-1. Hazard Mitigation Planning Team**

Primary Point of Contact		Alternate Point of Contact
Name / Title: Mark Zschack, Municipal Clerk/Administrator Address: 150 Kennedy Road, P.O. Box 65, Tranquility, NJ 07879 Phone Number: (908) 852-9333 x18 Email: clerkadmin@greentwp.com		Name / Title: Margaret “Peg” Phillips, Mayor Address: 150 Kennedy Road, P.O. Box 65, Tranquility, NJ 07879 Phone Number: (908) 852-9333 Email: pphillips@greentwp.com
NFIP Floodplain Administrator		
Name / Title: Cory Stoner, Township Engineer Address: 17 Plains Road, Augusta, NJ 07822 Phone Number: 973-948-6463 Email: cstoner@hpellow.com		
Name	Title	Method of Participation
Mark Zschack	Municipal Clerk/Administrator	Primary point of contact, provided data and information, contributed to mitigation strategy; attended the annex training and risk assessment meeting, reviewed annex*
Margaret “Peg” Phillips	Mayor	Alternate point of contact
Cory Stoner	Township Engineer	NFIP floodplain administrator, reviewed annex*
Linda Padula	CFO	Reviewed annex*
Richard O’Connor	Construction Official	Reviewed annex*
Mike Rose	OEM Coordinator, Fire Department Chief	Reviewed annex*
Jessica Caldwell	Principal Planner	Reviewed annex*
Watson Perigo	Department Head, Public Works	Reviewed annex*

\*Refer to Jurisdictional Annex Review Sign-Off Sheet in Appendix B



### 9.9.2 Jurisdiction Profile

Green Township is located in southwestern Sussex County and is bordered to the north by Fredon and Andover Townships, to the south and west by Warren County and to the east by Byram Township. The following unincorporated communities are located within the Township: Huntsburg, Greendell, Tranquility, and Huntsville. The Pequest River, Bear Brook, and Trout Brook are named streams that flow through the Township. Lake Tranquility, Buckmire Pond, and Turtle Pond are the larger named lakes located in the Township.

According to the U.S. Census, the 2010 population for the Township of Green was 3,601. The estimated 2018 population was 3,495, a 2.9 percent decrease from the 2010 Census. Data from the 2018 U.S. Census American Community Survey indicate that 2.4 percent of the population is 5 years of age or younger and 15.2 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.

### 9.9.3 Growth/Development Trends

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

**Table 9.9-2. 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	6	2	2	0	4	0	2	2	0	0
Multi-Family	0	0	0	0	0	0	0	0	0	0
Other (commercial, mixed-use, etc.)	0	0	0	0	2	0	1	0	2	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										
Crossed Keys	Commercial	1		289 Pequest Road/Block 22 Lots 2 & 2.02		Nuclear Incident Hazard Area, Carbonate Soil, Hazardous Material Incident Hazard Area		Construction in Progress		
Forest Flats	Industrial	1		Airport Road/ Block 31 Lot 1.05		Nuclear Incident Hazard Area, Carbonate Soil, Wildfire, Hazardous Material Incident Hazard Area		Construction in Progress		



Ridge Rock	Industrial	1	Airport Road/ Block 31 Lot 1.09	Nuclear Incident Hazard Area, Railway Incident Hazard Area, Hazardous Material Hazard Area, Carbonate Soil	Construction in Progress
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
Airside	Industrial	1	246 Brighton Road/ Block 26 Lot 4	Nuclear Incident Hazard Area, Carbonate Soil, Wildfire, Railway Incident Hazard Area	Construction in Progress
Tranquility Farms	Commercial	2	47 Decker Pond Road/ Block 113 Lot 3	Nuclear Incident Hazard Area, Carbonate Soil	Completed
Indoor Riding Ring	Commercial	1	81 Henry Road/ Block 9 Lot 4.01	Railway Incident Hazard Area	Completed
Gas Main	Infrastructure	N/A	Whitehall Road	Nuclear Incident Hazard Area, Railway Incident Hazard Area	Construction in Progress
Emerald Glen	Industrial	1	Airport Road/ Block 31 Lot 1.07	Nuclear Incident Hazard Area, Carbonate Soil, Wildfire, Hazardous Material Incident Hazard Area	
Known or Anticipated Major Development and Infrastructure in the Next Five (5) Years					
Cedar Peak	Industrial	N/A	Airport Road/ Block 31 Lot 1.06	Nuclear Incident Hazard Area, Carbonate Soil, Wildfire, Hazardous Material Incident Hazard Area	Anticipated
Pine Summit	Industrial	N/A	Airport Road/ Block 31 Lot 1.04	Nuclear Incident Hazard Area, Railway Incident Hazard Area, Hazardous Material Hazard Area, Carbonate Soil	Anticipated
Overland Traverse	Industrial	N/A	Airport Road/ Block 31 Lot 1.03	Nuclear Incident Hazard Area, Railway Incident Hazard Area, Hazardous Material Hazard Area, Carbonate Soil	Anticipated
Ground Solar Array	Infrastructure	N/A	93 Airport Road/ Block 19 Lot 15	Nuclear Incident Hazard Area, Railway Incident Hazard Area, Hazardous Material	Anticipated





				Hazard Area, Carbonate Soil	
--	--	--	--	--------------------------------	--

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

### 9.9.4 Capability Assessment

Section 5 (Capability Assessment) describes the components included in the capability assessment and their significance for hazard mitigation planning. The Township of Green 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 Green 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 Green and where hazard mitigation has been integrated.

**Table 9.9-3. 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.
<b>Codes, Ordinances, &amp; Requirements</b>					
<b>Building Code</b>	Yes	State & Local	Yes	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>• 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</li> <li>• The Zoning Official is responsible for this code in compliance with State Uniform Construction Code Act (N.J.S. 52:27D-119 et seq.).</li> </ul>					
<b>Zoning Code</b>	Yes	Local	Yes – if municipality has a Planning Board	Yes	-
<i>Comment:</i>					



	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.
<ul style="list-style-type: none"> <li>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.</li> <li>The Zoning Official is responsible for this code in compliance with Chapter 30, Article XII.</li> </ul>					
<b>Subdivisions</b>	Yes	Local	Yes – if municipality has a Planning Board	Yes	-
<p><b>Comment:</b></p> <ul style="list-style-type: none"> <li>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.</li> <li>The Zoning Official is responsible for this ordinance in compliance with Chapter 30, Article IX.</li> </ul>					
<b>Stormwater Management</b>	Yes	County & Local	Yes	Yes	-
<p><b>Comment:</b></p> <ul style="list-style-type: none"> <li>See Title 7 of the NJ Administrative Code, N.J.A.C. 7:8</li> <li>The Township Committee is responsible for this ordinance in compliance with N.J.A.C. 5:21 – Section 30-17.1A.</li> </ul>					
<b>Post-Disaster Recovery</b>	No	-	No	-	-
<p><b>Comment:</b></p>					
<b>Real Estate Disclosure</b>	No	State, Division of Consumer Affairs	Yes	No	-
<p><b>Comment:</b> 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.</p>					
<b>Growth Management</b>	No	-	Yes – if municipality has a Planning Board	No	-
<p><b>Comment:</b></p> <ul style="list-style-type: none"> <li>State Mandated on a municipal level. See Zoning Ordinance; Also - Plan Endorsement Process via the State Development &amp; 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.</li> </ul>					
<b>Site Plan Review</b>	Yes	Local	Yes – if municipality has a Planning Board	Yes	-
<p><b>Comment:</b></p> <ul style="list-style-type: none"> <li>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 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</li> </ul>					



	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.
<p>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.</p> <ul style="list-style-type: none"> <li>The Planning Board is responsible for these requirements in compliance with Chapter 30, Article IX.</li> </ul>					
<b>Environmental Protection</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Flood Damage Prevention</b>	Yes	Federal, State & Local	Yes	Yes	2021-Green-011
<p><i>Comment:</i></p> <ul style="list-style-type: none"> <li>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.</li> <li>The Zoning Official is responsible for this ordinance in compliance with Chapter 25.</li> <li>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:               <ul style="list-style-type: none"> <li>a. Protect human life and health;</li> <li>b. Minimize expenditure of public money for costly flood control projects;</li> <li>c. Minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;</li> <li>d. Minimize prolonged business interruptions;</li> <li>e. Minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets, bridges located in areas of special flood hazard;</li> <li>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;</li> <li>g. Ensure that potential buyers are notified that property is in an area of special flood hazard; and</li> <li>h. Ensure that those who occupy the areas of special flood hazard assume responsibility for their actions.</li> </ul> </li> <li>The ordinance requires update to include the state mandated freeboard requirement.</li> </ul>					
<b>Wellhead Protection</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Emergency Management</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Climate Change</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Disaster Recovery Ordinance</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Disaster Reconstruction Ordinance</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Other [Special Purpose Ordinances (i.e., sensitive areas, steep slope)]</b>	Yes	County & Local	No	Yes	-
<p><i>Comment:</i> The Township Committee and Engineering Department is responsible for these ordinances in compliance with Soil and Soil Removal Chapter 26 – purpose to control soil erosion and sediment damages and related environmental damage by requiring adequate provisions for surface water retention and drainage and for the protection of exposed soil surfaces in order to promote the safety, public health, convenience and general welfare of the community.</p>					
<b>Planning Documents</b>					
<b>Comprehensive / Master Plan</b>	Yes	Local	Yes	Yes	-
<p><i>Comment:</i></p> <ul style="list-style-type: none"> <li>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;</li> </ul>					



	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.
<p><i>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.</i></p> <ul style="list-style-type: none"> <li><i>The Planning Board is responsible for this plan in compliance with Master Plan Reexamination Report, Green Township, September 2008.</i></li> </ul>					
<b>Capital Improvement Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Disaster Debris Management Plan</b>	No	-	No	-	2021-Green-007
<i>Comment:</i>					
<b>Floodplain or Watershed Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Stormwater Management Plan</b>	Yes	Local	Yes	Yes	-
<p><i>Comment:</i></p> <ul style="list-style-type: none"> <li><i>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.</i></li> <li><i>The Planning Board is responsible for this plan.</i></li> </ul>					
<b>Stormwater Pollution Prevention Plan</b>	No	-	No	-	-
<p><i>Comment:</i></p> <ul style="list-style-type: none"> <li><i>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.</i></li> </ul>					
<b>Urban Water Management Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Habitat Conservation Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Economic Development Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Shoreline Management Plan</b>	No	-	Yes – if located in a coastal zone	-	-



	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.
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>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.</li> </ul>					
<b>Community Wildfire Protection Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Community Forest Management Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Transportation Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Agriculture Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Climate Action Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Tourism Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Business Development Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Other Plans</b>	Yes	Local	No	No	No
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>The Planning Board is responsible for these plans in compliance with Green Township Land Use Plan, December 2005 and Housing Element and Fair Share Plan, December 2005.</li> </ul>					
<b>Response/Recovery Planning</b>					
<b>Comprehensive Emergency Management Plan (CEMP) / Emergency Operations Plan (EOP)</b>	Yes	Local	Yes	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>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.</li> <li>The Office of Emergency Management is responsible for this plan in compliance with EOP.</li> </ul>					
<b>Threat &amp; Hazard Identification &amp; Risk Assessment (THIRA)</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Post-Disaster Recovery Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Continuity of Operations Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Public Health Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Other</b>	No	-	No	-	-
<i>Comment:</i>					



**Table 9.9-4. Development and Permitting Capability**

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

**ADMINISTRATIVE AND TECHNICAL CAPABILITY**

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

**Table 9.9-5. Administrative and Technical Capabilities**

Staff/Personnel Resource	Available?	Department/Agency/Position
<b>Administrative Capability</b>		
Planning Board	Yes	Green Township Planning Board
Mitigation Planning Committee	No	-
Environmental Board / Commission	Yes	Green Township Environmental Advisory Committee
Open Space Board / Committee	Yes	Open Space Advisory Committee
Economic Development Commission / Committee	No	-
Warning Systems / Services (reverse 911, outdoor warning signals)	Yes	Smart911
Maintenance program to reduce risk	Yes	The Township works to identify and remove trees on municipal property that could affect electric power
Mutual aid agreements	Yes	Fire, First Aid
<b>Technical/Staffing Capability</b>		
Planners or engineers with knowledge of land development and land management practices	Yes	Township Engineer/Township Planner
Engineers or professionals trained in building or infrastructure construction practices	Yes	Township Engineer
Planners or engineers with an understanding of natural hazards	Yes	Township Engineer/Township Planner
Staff with training in benefit/cost analysis	Yes	Township Engineer
Staff with training in green infrastructure	No	-
Staff with education/knowledge/training in low impact development	No	-
Surveyor	Yes	Township Engineer
Stormwater engineer	Yes	Township Engineer
Personnel skilled or trained in GIS applications	Yes	Township Engineer
Local or state water quality professional	No	-
Scientist familiar with natural hazards in local area	No	-
Emergency manager	Yes	OEM
Watershed planner	No	-
Environmental specialist	No	-
Grant writers	Yes	Peter Sklannik
Resilience Officer	No	-



Staff/Personnel Resource	Available?	Department/Agency/Position
Other: NFIP Floodplain Administrator	Yes	Craig Bollmann, Zoning Officer

**FISCAL CAPABILITY**

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

**Table 9.9-6. Fiscal Capabilities**

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

**EDUCATION AND OUTREACH CAPABILITY**

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

**Table 9.9-7. 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?	No
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.	No
Do you have any other programs already in place that could be used to communicate hazard-related information? If yes, briefly describe.	No

**COMMUNITY CLASSIFICATIONS**

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

**Table 9.9-8. Community Classifications**

Program	Participating?	Classification	Date Classified
Community Rating System	No	-	-
Building Code Effectiveness Grading Schedule (BCEGS)	No	-	-
Public Protection (Fire ISO Protection Class)	Yes	05/5Y	July 2014





Program	Participating?	Classification	Date Classified
Storm Ready Certification	No	-	-
Firewise Community Classification	No	-	-
Sustainable Jersey	Yes	None	Registered 12/16/2016

N/A = Not applicable. NP = Not participating

**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 9.9-9. 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. At this time, the administration is not 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 9.9-10. National Flood Insurance Program Compliance**

Criterion	Response
What local department is responsible for floodplain management?	Municipal Engineer





Criterion	Response
Who is your floodplain administrator? (name, department/position)	Cory Stoner
Are any certified floodplain managers on staff in your jurisdiction?	No
What is the date that your flood damage prevention ordinance was last amended?	June 2016
Does your floodplain management program meet or exceed minimum requirements? -If exceeds, in what ways?	The program meets minimum requirements.
When was the most recent Community Assistance Visit or Community Assistance Contact?	February 16, 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.	No
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?	He would consider attending continuing education and 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
How many flood insurance policies are in force in your jurisdiction?*	9 policies
-What is the insurance in force?	\$2,630,000 insurance in force
-What is the premium in force?	\$6,920 premium in force
How many total loss claims have been filed in your jurisdiction?*	2 claims
-How many claims are still open or were closed without payment?	\$11,652 in payments
-What were the total payments for losses?	
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 (Policy/Claims Data)  
Reference: FEMA 2020

**ADDITIONAL AREAS OF EXISTING INTEGRATION**

- **Green Township Environmental Committee:** The Environmental Advisory Committee provides advice and recommendations to the Planning Board on environmental impacts of land use in the municipality in an effort to ensure that planning reflects consideration of natural resources and quality of life. Groundwater preservation is the current focus of activity.
- **Land Use Board:** The Green Township Land Use Board has the following responsibilities:
  - Adoption of a Master Plan every ten years;
  - Subdivision control and site plan review for permitted uses;
  - Recommendations as to the official map of the Township;
  - Conditional use applications;
  - Recommendations as to the zoning ordinance or amendments;
  - Review of Capital Improvement Projects;
  - Variances under certain circumstances in connection with site plans and subdivisions.





- Hear and decide Appeals of decisions of the administrative officer enforcing the zoning ordinance;
  - Hear and decide for Interpretations of the zoning map or ordinance;
  - Hear and decide Bulk or "C" Variances; A "c" variance is if it is separate from a site plan, subdivision or conditional use (i.e.. residential permit that doesn't require a subdivision or site plan)
  - Hear and decide Use or "D" Variances: example of a "d" variance; Use of principle structure; Expansion of non-conforming use; deviation from a specification of standard of a conditional use; Increase in permitted floor area ration; Increase in permitted density; Height greater than 10 feet or 10% of the maximum height permitted.
  - May direct the Issuance of a Permit for a building or structure in the bed of a mapped street or public drainage way, flood control basin or public area. A building structure not related to a street.
- **Township Website:** Green Township hosts a municipal website (<http://www.greentwp.com/index.cfm>) which includes community information, news, and announcements.

**OPPORTUNITIES FOR FUTURE INTEGRATION**

- **Disaster Debris Management Plan:** The Township intends to develop a Disaster Debris Management Plan (2021-Green-007).
- **Flood Damage Prevention Ordinance:** The Township’s flood damage prevention ordinance lacks the state mandated freeboard requirement. The Township will update the ordinance to include freeboard (2021-Green-011).

**9.9.5 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 Green’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 9.8-11 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 9.9-11. 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 23 <sup>rd</sup> and 24 <sup>th</sup> .	Although the County was impacted, the Township did not receive damages.
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.	Additional cost for equipment and overtime

Source: FEMA 2020, NOAA NCEI 200

**9.9.6 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 Green 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 Green 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 Green has significant exposure.

**REPETITIVE FLOOD LOSSES**

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

- 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

**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 9.9-12. Critical Facilities and Lifelines Flood Exposure**

Name	Type	Exposure	
		1% Event	0.2% Event
21-15 Tranquility Mill Dam	Dam	X	X
21-52 Lake Tranquility Dam	Dam	X	X
21-91 Tranquility Church Dam	Dam	X	X

Source: Sussex County Planning Partnership, 2020

Note:

\*Identified lifeline

**IDENTIFIED ISSUES AND PROBLEM AREAS**

The jurisdiction has identified the following vulnerabilities within their community:

- Road flooding on Whitehall Road near Washers Pond (40-58’29.58” N / 74-45’32.63” W) Roadway will be raised in 2021 as part of a road improvement project.
- Lake Tranquility properties are inundated with ground water. A drainage study of the entire lake community is warranted.
- The Township has a lack of stand pipes at draft stations for emergency equipment.
- Basements of homes in the Township flood during periods of heavy rain and the residents do not have pumps to remove the water.
- Pequest River experiences streambank erosion.
- The Township lacks outreach to address hazards, emergency preparedness, and hazard mitigation.
- The Township lacks a Disaster Debris Management Plan.
- Hunts School Road has an undersized drainage pipe that contributes to flooding.





- Backup power sources are necessary to maintain critical services for critical facilities. The Tranquility Post Office and the Greendell Post Office lack backup power. The Township owns both properties.
- No mapping exists of the drainage system in Green Township to help identify and solve problem areas.

**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 Green 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 Green. The Township of Green 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 Green agreed with the calculated hazard rankings.

**Table 9.9-13. Township of Green Hazard Ranking**

Dam Failure	Disease Outbreak	Drought	Earthquake	Flood	Geologic	
Medium	Medium	Medium	Low	Medium	Low	
Hazardous Materials	Hurricane and Tropical Storm	Invasive Species	Nor’Easter	Severe Weather	Severe Winter Weather	Wildfire
Medium	High	Medium	High	High	High	Low

**9.9.7 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 9.8-15 and Table 9.8-16 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 9.9-14. 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	Enter 2021 HMP Action #
Green Twp-1	Ensure continuity of operations at critical facilities and municipal buildings. Identified at this time: Add or replace	OEM Coordinator Fire Department	Complete		



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 #
	permanent generators at critical facilities (municipal building, Road Dept., Fire Station, Squad Building)				
Green Twp-2	Purchase and install repeaters on two existing towers in the Township. This will increase the level of emergency communities both inter and intra-agency.	OEM Coordinator Fire Department	No progress		
Green Twp-3	Ensure continuity of operations: Purchase portable generators (12) to ensure those in need have the life support needed during and after an event.	First Aid Captain, Fire Chief, Administrator (Engineer)	Complete		
Green Twp-4	Add stand pipes at draft sites – 2 or more throughout Township	Administrator OEM Coordinator	No progress	X	2021-Green-003
Green Twp-5	Purchase/replace portable water pumps (12) to ensure those who experience flooding in conjunction with loss of power are adequately protected from loss of structure and/or mold issues.	Fire Chief, Administrator	No progress	X	2021-Green-004
Green Twp-6 (old #3)	Work with private land owners to stabilize stream bank(s) and augment Pequest River	Township Engineer	No Progress	X	2021-Green-005
Green Twp-7 (old #4)	Retrofit impact resistant windows and shutters on municipal building located on Kennedy Road as funding permits	DPW	No Progress		
Green Twp-8 (old #5)	Retrofit an external frame to mitigate straight line winds to PO building located on Municipal Rd as funding permits	Township Administrator	No Progress		
Green Twp-9 (old #6)	Retrofit roof on remaining building to meet current high wind standards located at Trinca Airport on Airport Road	Township Administrator	No Progress		
Green Twp-10 (old #7)	Implement a storm water runoff management system for 350 homes in Lake Tranquility area as funding and private cooperation permit	DPW	No Progress	X	2021-Green-002
Green Twp-11	Conduct all-hazards public education and outreach program for hazard mitigation and preparedness.	OEM Coordinator, in coordination with SCDDEM	No Progress	X	2021-Green-006



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 #
(old #8)					
Green Twp-12 (new)	Review the current hazard mitigation plan and other hazard analysis prior to land use, zoning changes and development permitting.	Township Engineer and Planner	Ongoing Capability		
Green Twp-13 (new)	Provide protection to buildings/infrastructure in high hazard areas in the Township	Township Engineer and Planner	No Progress		
Green Twp – 14 (old #1)	Work with school to retrofit roof to meet current high wind standards on Green Hills School located on Mackerley Road as funding permits.	Township Administrator, School Board	Complete		
Green Twp – 15 (old #2)	Implement Fire Wise	OEM Coordinator	No Progress		

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

- None identified.

**PROPOSED HAZARD MITIGATION INITIATIVES FOR THE PLAN UPDATE**

The Township of Green 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 Green 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 9.8-15 summarizes the comprehensive-range of specific mitigation initiatives the Township of Green 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 9.8-16 provides a summary of the prioritization of all proposed mitigation initiatives for this HMP update.



Table 9.9-15. 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-Green-001	Whitehall Road Roadway Elevation	<p><b>Problem:</b> Road flooding on Whitehall Road near Washers Pond restricts normal travel and greatly effects emergency access. During Hurricane Irene the road surface was covered for months by six feet of water. In high rain years the roadway is partially flooded also creating a driving hazard.</p> <p><b>Solution:</b> A four hundred- and fifty-foot (450') section of the road will need to be reconstructed. The area of flooding will need to be raised approximately eighteen inches (18") to mitigate the semi-annual flooding. The slope along Washers Pond will require grading and a guide rail needs to be replaced.</p>	Existing	Flood, Severe Weather	2	Engineer, DPW	HMGP, BRIC, Township budget	Reduction in roadway flooding	High	1 year	High	SIP	PP
2021-Green-002	Lake Tranquility Drainage Study	<p><b>Problem:</b> Lake Tranquility properties are inundated with water runoff and ground water.</p> <p><b>Solution:</b> The Township will conduct drainage study of the entire lake community and determine if actions can be taken to address groundwater flooding in Lake Tranquility. Once actions are identified, the Township will carry out the cost-effective options. A potential action would be to implement a storm water runoff management system for 350 homes in Lake Tranquility area as funding and private cooperation permit. Drainage easements need to be created allowing the Township the authorization to access and maintain.</p>	Existing	Flood	2, 4, 5	Engineer	HMGP, BRIC, FMA, Township budget	Better understanding of flooding and addressing of flood risk	High	Within 5 years	High	LPR, SIP	PP, SP
2021-Green-003	Stand Pipes at Draft Sites	<p><b>Problem:</b> Water systems are limited in Green Township therefore the need for a water source to combat fires is paramount. The Township has a lack of stand pipes at draft stations for emergency equipment.</p> <p><b>Solution:</b> Additional areas for the installation of a stand pipe or draft stations will be researched and</p>	N/A	Hazardous Materials, Wildfire	3, 6	Administrator, OEM Coordinator	HMGP, Township budget	Increased emergency response capability.	Medium	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
		determined. Once the locations are established funding and or easements will need to be secured.											
2021-Green-004	Portable Water Pumps	<p><b>Problem:</b> Basements of homes in the Township flood during periods of heavy rain and the residents do not have pumps to remove the water.</p> <p><b>Solution:</b> Purchase/replace portable water pumps (12) to ensure those who experience flooding in conjunction with loss of power are adequately protected from loss of structure and/or mold issues.</p>	N/A	Flood	2, 5	Fire Chief, Administrator	Township budget	Increased emergency response capability.	Medium	Within 5 years	Medium	SIP	ES
2021-Green-005	Pequest River	<p><b>Problem:</b> The Pequest River experiences streambank erosion.</p> <p><b>Solution:</b> Identify areas of the Pequest River where erosion and undermining of the river bank are occurring. Work with the Township Engineer and private land owners in developing plans to stabilize these locations.</p>	Existing	Flood, Severe Weather	1, 2	Township Engineer	HMGP, BRIC, Township budget	Erosion and flood issues reduced	Medium	Within 5 years	High	NSP	NR
2021-Green-006	All Hazards Outreach	<p><b>Problem:</b> The Township lacks outreach to address hazards, emergency preparedness, and hazard mitigation.</p> <p><b>Solution:</b> Develop and conduct all-hazards public education and outreach program for hazard mitigation and preparedness. Utilize Township social media outlets to communicate with township residents.</p>	New & Existing	All Hazards	3	OEM Coordinator, in coordination with SCDEM	Township budget	Educated public	Low	1 year	High	EAP	PI
2021-Green-007	Disaster Debris Management Plan	<p><b>Problem:</b> The Township lacks a Disaster Debris Management Plan.</p> <p><b>Solution:</b> The Township will develop and adopt a Disaster Debris Management Plan.</p>	Existing	All Hazards	2, 5	OEM, Public Works	Township budget	Increased disaster response capabilities	Staff time	1 year	High	LPR	ES
2021-Green-008	Hunts School Road	<p><b>Problem:</b> Hunts School Road has an undersized drainage pipe that contributes to flooding.</p> <p><b>Solution:</b> The Township will replace and upsize the drainage pipe.</p>	Existing	Flood, Severe Weather	2	Public Works	HMGP, BRIC, Township budget	Reduction in flood risk	\$75,000	Within 5 years	High	SIP	SP



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-Green-009	Post Office Backup Power	<b>Problem:</b> Backup power sources are necessary to maintain critical services for critical facilities. The Tranquility Post Office and the Greendell Post Office lack backup power. The Township owns both properties.	Existing	Severe Weather, Severe Winter Weather, Hurricane, Nor’Easter	2, 6	OEM, Engineer, Administration	FEMA HMGP and BRIC, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Municipal Budget	Ensure continuity of operations of Post Office	\$50,000 per generator	Within 5 years	High	SIP	ES
		<b>Solution:</b> The Township will consider the installation of backup generators at each site. The Engineer will research what size generator is needed to power the facilities. The Township will then purchase and install the selected generator and necessary electrical components to supply backup power to the facilities.											
2021-Green-010	Drainage System Mapping	<b>Problem:</b> No mapping exists of the drainage system in Green Township to help identify and solve problem areas.	Existing	Flood, Severe Weather	4, 5	Public Works	Township budget	Increased capability to identify issues and needs for improvement	High	Within 5 years	Medium	LPR	SP
		<b>Solution:</b> The Township will contract with an engineering firm to create detailed mapping of all drainage infrastructure.											
2021-Green-011	Flood Damage Prevention Ordinance Update	<b>Problem:</b> The Township’s Flood Damage Prevention Ordinance lacks the state mandated freeboard requirement.	New	Flood	2	FPA, Administration	Township budget	Meet state standards, reduce future flood risk	Staff time	6 months	High	LPR	PR



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
		<b>Solution:</b> The Township will update the Flood Damage Prevention Ordinance to include the freeboard requirement.											

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 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 9.9-16. 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-Green-001	Whitehall Road Roadway Elevation	1	1	1	1	1	1	0	1	1	1	1	1	1	1	13	High ⚠
2021-Green-002	Lake Tranquility Drainage Study	0	1	0	1	1	1	0	1	1	0	1	0	1	1	9	High
2021-Green-003	Stand Pipes at Draft Sites	1	1	1	1	1	1	0	1	1	1	1	0	1	1	12	High
2021-Green-004	Portable Water Pumps	1	1	1	1	1	1	0	1	1	1	1	0	1	1	12	High
2021-Green-005	Pequest River	0	1	1	1	1	0	0	1	1	1	1	0	1	1	10	High
2021-Green-006	All Hazards Outreach	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	High
2021-Green-007	Disaster Debris Management Plan	0	1	1	1	1	1	1	1	1	1	1	1	1	1	13	High
2021-Green-008	Hunts School Road	1	1	0	1	1	1	0	1	0	0	1	0	1	1	9	High
2021-Green-009	Post Office Backup Power	1	1	1	1	1	1	0	1	1	1	1	0	1	1	12	High
2021-Green-010	Drainage System Mapping	0	1	1	1	1	1	1	1	1	1	1	0	1	1	12	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 9.9-17. 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		X			X
Disease Outbreak			X		X			X
Drought			X		X			X
Earthquake			X		X			X
Flood		X	X	X	X	X		X
Geologic			X		X			X
Hazardous Materials			X		X			X
Hurricane and Tropical Storm			X		X			X
Invasive Species			X		X			X
Nor'Easter			X		X			X
Severe Weather		X	X	X	X	X		X
Severe Winter Weather			X		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 9.9-1. Township of Green Hazard Area Extent and Location Map 1

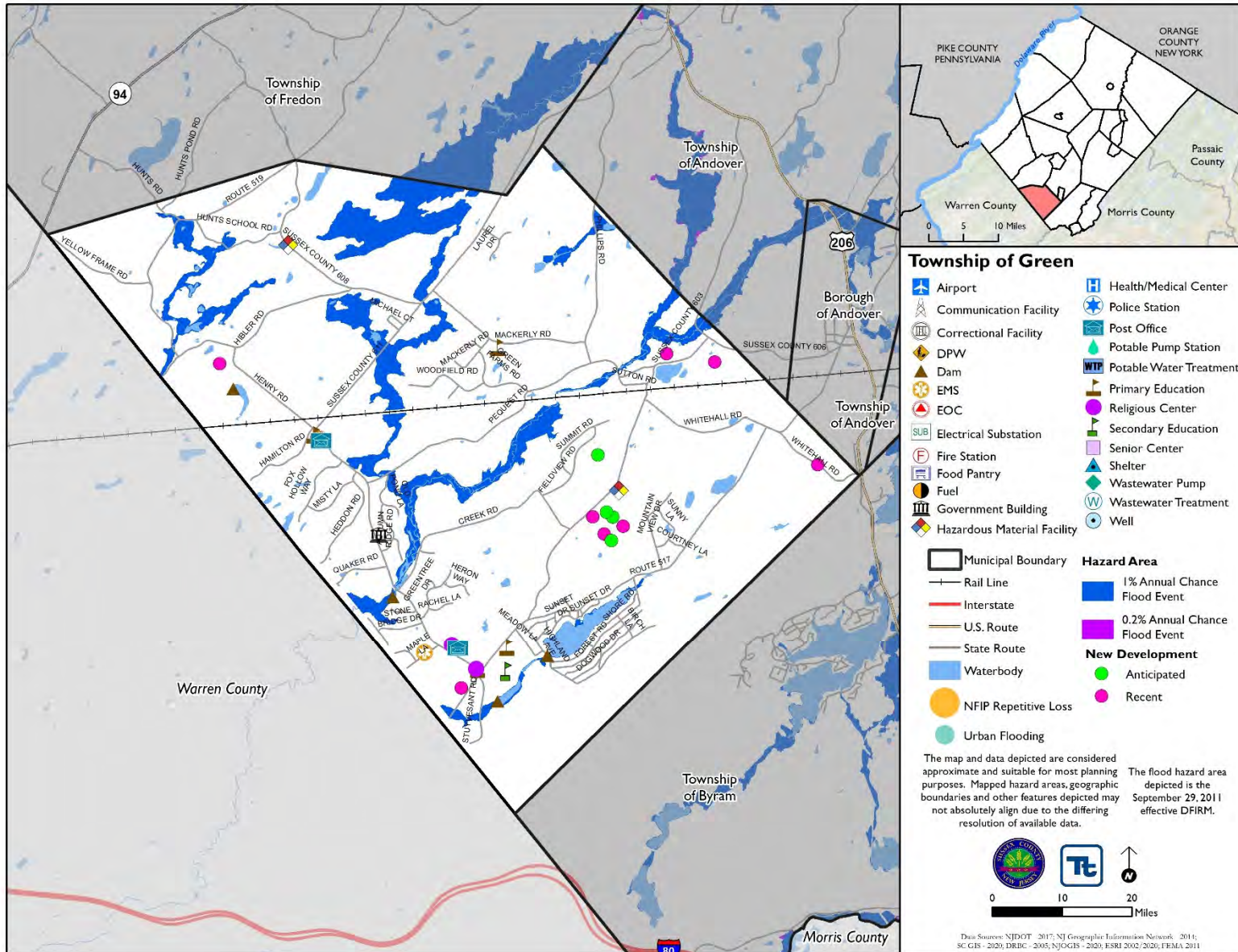




Figure 9.9-2. Township of Green Hazard Area Extent and Location Map 2

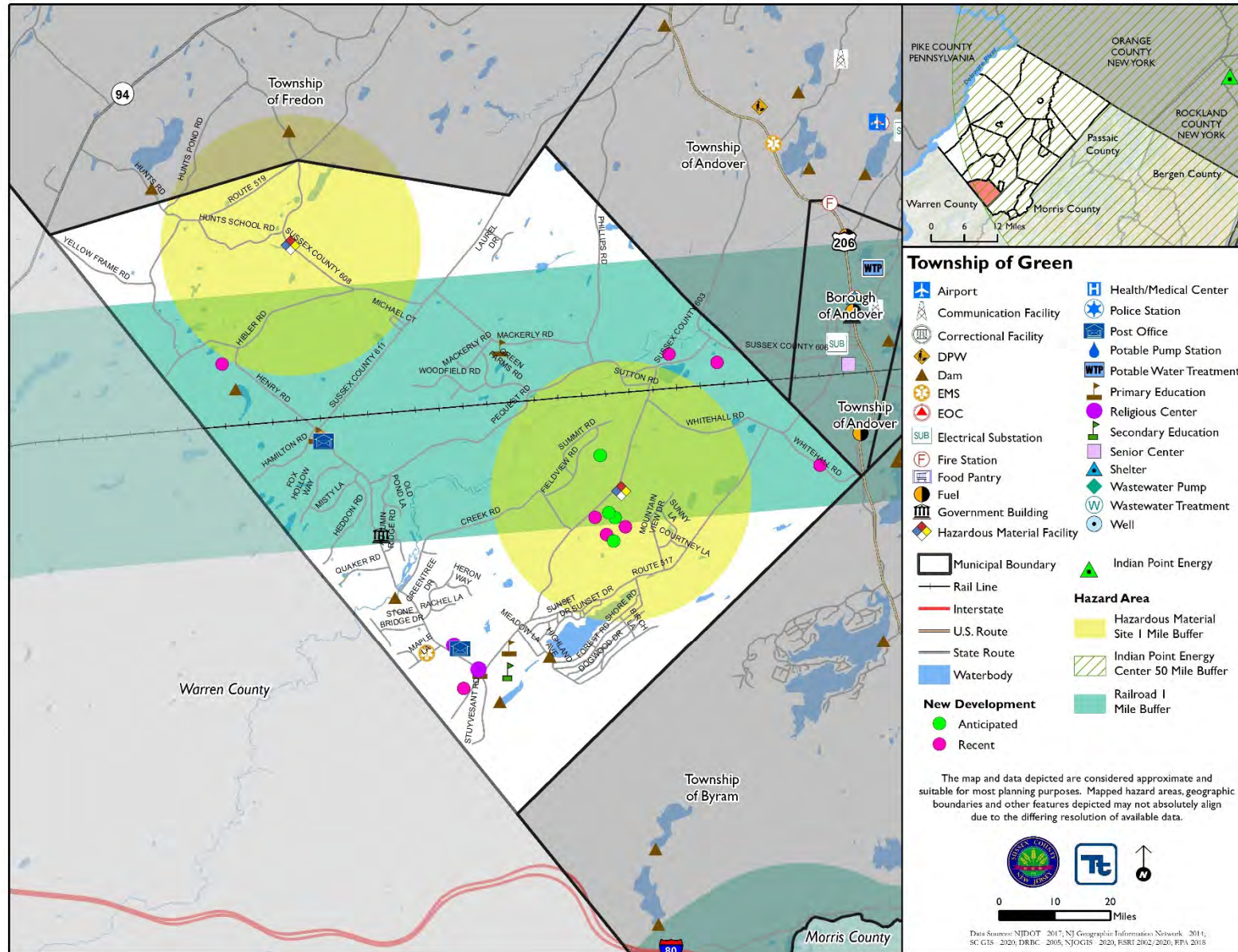
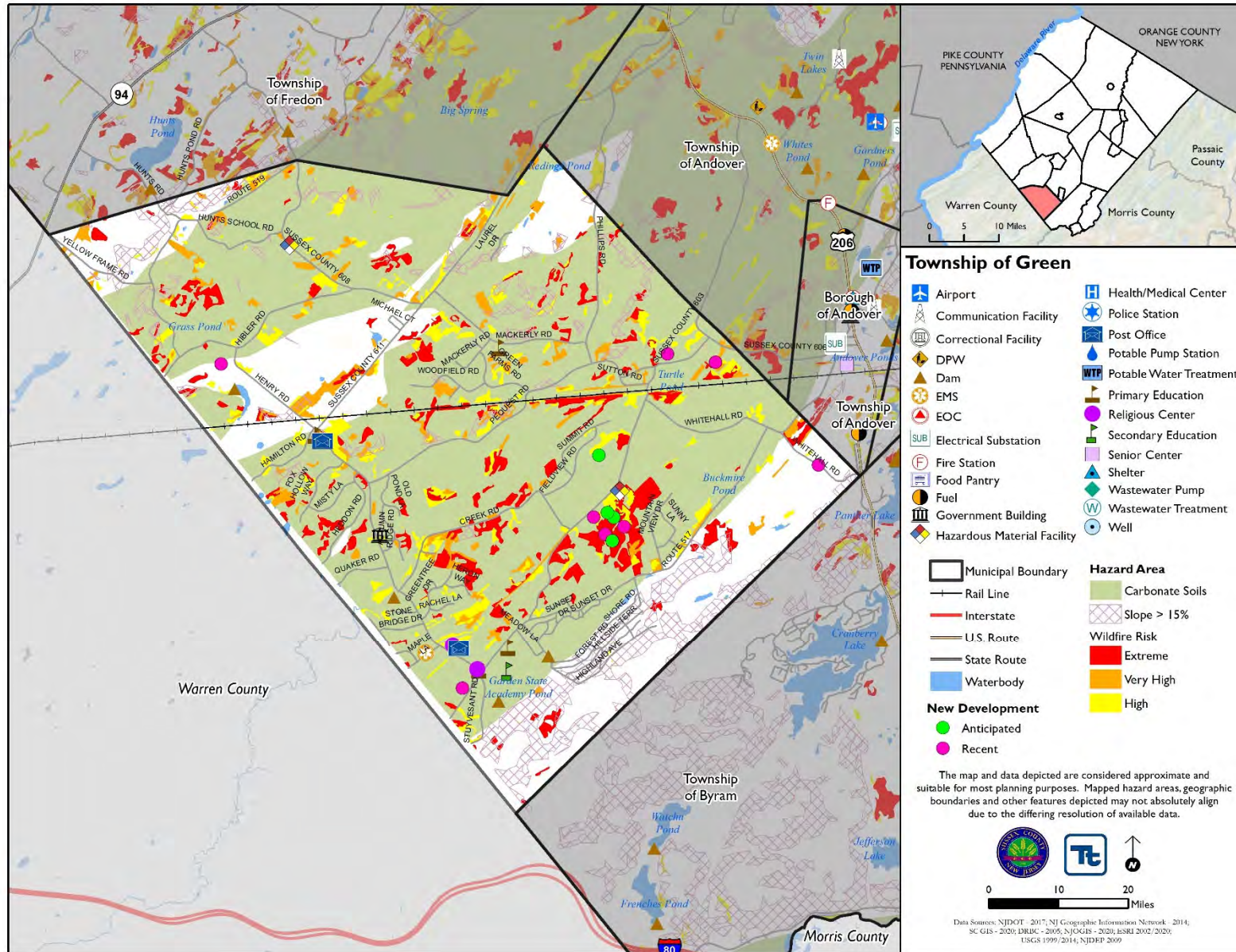




Figure 9.9-3 Township of Green Hazard Area Extent and Location Map 3







Action Worksheet			
<b>Project Name:</b>	Whitehall Road Roadway Elevation		
<b>Project Number:</b>	2021-Green-001		
<b>Risk / Vulnerability</b>			
<b>Hazard(s) of Concern:</b>	Flood, Severe Weather		
<b>Description of the Problem:</b>	Road flooding on Whitehall Road near Washers Pond restricts normal travel and greatly effects emergency access. During Hurricane Irene the road surface was covered for months by six feet of water. In high rain years the roadway is partially flooded also creating a driving hazard.		
<b>Action or Project Intended for Implementation</b>			
<b>Description of the Solution:</b>	A four hundred- and fifty-foot (450') section of the road will need to reconstructed. The area of flooding will need to be raised approximately eighteen inches (18") to mitigate the semi-annual flooding. The slope along Washers Pond will require grading and a guide rail needs to be replaced.		
<b>Is this project related to a Critical Facility?</b>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
<b>Level of Protection:</b>	18" elevation	<b>Estimated Benefits (losses avoided):</b>	Reduction in roadway flooding
<b>Useful Life:</b>	50 years	<b>Goals Met:</b>	3
<b>Estimated Cost:</b>	High	<b>Mitigation Action Type:</b>	Structure and Infrastructure Project
<b>Plan for Implementation</b>			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	Within 2 years
<b>Estimated Time Required for Project Implementation:</b>	1 year	<b>Potential Funding Sources:</b>	HMGP, BRIC, Municipal budget
<b>Responsible Organization:</b>	Engineer, Roads Department	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard mitigation planning
<b>Three Alternatives Considered (including No Action)</b>			
<b>Alternatives:</b>	<b>Action</b>	<b>Estimated Cost</b>	<b>Evaluation</b>
	No Action	\$0	Problem continues.
	Remove flood prone roadway	N/A	Loss of access to neighborhoods, increased emergency risk
	Buyout properties that exist along flood prone roadways	\$Tens of Millions	Costly, loss of large portion of community
<b>Progress Report (for plan maintenance)</b>			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			



Evaluation and Prioritization		
<b>Project Name:</b>	Whitehall Road Roadway Elevation	
<b>Project Number:</b>	2021-Green-001	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Project will protect emergency access
Property Protection	1	Project will protect roadway from flood damage
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	Project requires funding support
Environmental	1	
Social	1	
Administrative	1	
Multi-Hazard	1	Flood, Severe Weather
Timeline	1	1 year
Agency Champion	1	Engineer, Roads Department
Other Community Objectives	1	
<b>Total</b>	13	
<b>Priority (High/Med/Low)</b>	High	



Action Worksheet			
<b>Project Name:</b>	Lake Tranquility Drainage Study		
<b>Project Number:</b>	2021-Green-002		
Risk / Vulnerability			
<b>Hazard(s) of Concern:</b>	Flood, Severe Weather		
<b>Description of the Problem:</b>	Lake Tranquility properties are inundated with water runoff and ground water.		
Action or Project Intended for Implementation			
<b>Description of the Solution:</b>	The Township will conduct drainage study of the entire lake community and determine if actions can be taken to address groundwater flooding in Lake Tranquility. Once actions are identified, the Township will carry out the cost-effective options. A potential action would be to implement a storm water runoff management system for 350 homes in Lake Tranquility area as funding and private cooperation permit. Drainage easements need to be created allowing the Township the authorization to access and maintain.		
<b>Is this project related to a Critical Facility or Lifeline?</b>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
<b>Level of Protection:</b>	TBD	<b>Estimated Benefits (losses avoided):</b>	Reduction in flood risk in selected areas
<b>Useful Life:</b>	TBD by drainage study	<b>Goals Met:</b>	2, 4, 5
<b>Estimated Cost:</b>	TBD by study	<b>Mitigation Action Type:</b>	Local Plans and Regulations, Structure and Infrastructure Projects
Plan for Implementation			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	Within 5 years
<b>Estimated Time Required for Project Implementation:</b>	5 years	<b>Potential Funding Sources:</b>	HMGP, BRIC, FMA, municipal budget
<b>Responsible Organization:</b>	Engineer	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard mitigation planning, stormwater planning
Three Alternatives Considered (including No Action)			
<b>Alternatives:</b>	<b>Action</b>	<b>Estimated Cost</b>	<b>Evaluation</b>
	No Action	\$0	Current problem continues
	Elevate homes	\$200,000 per home	Costly and may not solve problems with access
	Buyout homes	N/A	Costly
Progress Report (for plan maintenance)			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			



Action Worksheet		
<b>Project Name:</b>	Lake Tranquility Drainage Study	
<b>Project Number:</b>	2021-Green-002	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	0	.
Property Protection	1	Reduction in flooding risk
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	1	Project would reduce flooding impacts.
Administrative	0	
Multi-Hazard	1	Flood, Severe Weather
Timeline	0	
Agency Champion	1	Engineering
Other Community Objectives	1	
<b>Total</b>	8	
<b>Priority (High/Med/Low)</b>	Medium	



Action Worksheet			
<b>Project Name:</b>	Stand Pipes at Draft Sites		
<b>Project Number:</b>	2021-Green-003		
<b>Risk / Vulnerability</b>			
<b>Hazard(s) of Concern:</b>	Hazmat, Wildfire		
<b>Description of the Problem:</b>	Water systems are limited in Green Township therefore the need for a water source to combat fires is paramount. The Township has a lack of stand pipes at draft stations for emergency equipment.		
<b>Action or Project Intended for Implementation</b>			
<b>Description of the Solution:</b>	Additional areas for the installation of a stand pipe or draft stations will be researched and determined. Once the locations are established funding and or easements will need to be secured.		
<b>Is this project related to a Critical Facility?</b>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
<b>Level of Protection:</b>	To be determined	<b>Estimated Benefits (losses avoided):</b>	Fire hydrants and water lines maintained for emergency response
<b>Useful Life:</b>	20 years	<b>Goals Met:</b>	2
<b>Estimated Cost:</b>	Medium	<b>Mitigation Action Type:</b>	Structure and Infrastructure Project
<b>Plan for Implementation</b>			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	Within 5 years
<b>Estimated Time Required for Project Implementation:</b>	Within 5 years	<b>Potential Funding Sources:</b>	HMGP, Township budget
<b>Responsible Organization:</b>	Administrator, OEM Coordinator	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard mitigation, emergency management
<b>Three Alternatives Considered (including No Action)</b>			
<b>Alternatives:</b>	<b>Action</b>	<b>Estimated Cost</b>	<b>Evaluation</b>
	No Action	\$0	Problem continues.
	Purchase tanker truck for water	\$190,000	Slow emergency service response times.
	Develop contract with neighboring towns for fire response	N/A	Too slow of response times, towns may be unable
<b>Progress Report (for plan maintenance)</b>			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			



Action Worksheet		
<b>Project Name:</b>	Stand Pipes at Draft Sites	
<b>Project Number:</b>	2021-Green-003	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Emergency response preserved to protect life
Property Protection	1	Emergency response preserved to protect property
Cost-Effectiveness	1	
Technical	1	
Political	1	
Legal	1	
Fiscal	0	Project requires funding support
Environmental	1	
Social	1	
Administrative	1	
Multi-Hazard	1	Hazmat, Wildfire
Timeline	0	Within 5 years
Agency Champion	1	Administrator, OEM Coordinator
Other Community Objectives	1	
<b>Total</b>	12	
<b>Priority (High/Med/Low)</b>	High	



Action Worksheet			
<b>Project Name:</b>	Pequest River		
<b>Project Number:</b>	2021-Green-005		
<b>Risk / Vulnerability</b>			
<b>Hazard(s) of Concern:</b>	Flood, Severe Weather		
<b>Description of the Problem:</b>	The Pequest River experiences streambank erosion.		
<b>Action or Project Intended for Implementation</b>			
<b>Description of the Solution:</b>	Identify areas of the Pequest River where erosion and undermining of the river bank are occurring. Work with the Township Engineer and private land owners in developing plans to stabilize these locations.		
<b>Is this project related to a Critical Facility?</b>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
<b>Level of Protection:</b>	N/A	<b>Estimated Benefits (losses avoided):</b>	Erosion and flood issues reduced
<b>Useful Life:</b>	1 year	<b>Goals Met:</b>	1, 2
<b>Estimated Cost:</b>	Medium	<b>Mitigation Action Type:</b>	Natural Systems Protection
<b>Plan for Implementation</b>			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	Within 5 years
<b>Estimated Time Required for Project Implementation:</b>	1 year	<b>Potential Funding Sources:</b>	HMGP, BRIC, Township budget
<b>Responsible Organization:</b>	Township Engineer	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard mitigation
<b>Three Alternatives Considered (including No Action)</b>			
<b>Alternatives:</b>	<b>Action</b>	<b>Estimated Cost</b>	<b>Evaluation</b>
	No Action	\$0	Problem continues.
	Retreat from areas near Creek	High	Costly, unpopular
	Levees along Creek	High	Not feasible/environmentally damaging, costly
<b>Progress Report (for plan maintenance)</b>			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			



Action Worksheet		
<b>Project Name:</b>	Pequest River	
<b>Project Number:</b>	2021-Green-005	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	0	
Property Protection	1	Project will protect properties 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, Severe Weather
Timeline	0	
Agency Champion	1	Administration
Other Community Objectives	1	Restore natural floodplain function
<b>Total</b>	10	
<b>Priority (High/Med/Low)</b>	High	





Action Worksheet			
<b>Project Name:</b>	Hunts School Road		
<b>Project Number:</b>	2021-Green-008		
Risk / Vulnerability			
<b>Hazard(s) of Concern:</b>	Flood, Severe Weather		
<b>Description of the Problem:</b>	Hunts School Road has an undersized drainage pipe that contributes to flooding.		
Action or Project Intended for Implementation			
<b>Description of the Solution:</b>	The Township Public Works Department will determine the proper size needed to adequately service Hunts School Road and will then replace and upsize the drainage pipe.		
<b>Is this project related to a Critical Facility or Lifeline?</b>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
<b>Level of Protection:</b>	TBD by size selected	<b>Estimated Benefits (losses avoided):</b>	Reduction in flood risk
<b>Useful Life:</b>	30 years	<b>Goals Met:</b>	2
<b>Estimated Cost:</b>	\$75,000	<b>Mitigation Action Type:</b>	Structure and Infrastructure Projects
Plan for Implementation			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	Within 5 years
<b>Estimated Time Required for Project Implementation:</b>	6 months	<b>Potential Funding Sources:</b>	HMGP, BRIC, municipal budget
<b>Responsible Organization:</b>	Engineering	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard mitigation planning
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues
	Elevate roadway	\$500,000	Costly and may not solve problem
	Relocate roadway	N/A	Not possible
Progress Report (for plan maintenance)			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			



Action Worksheet		
<b>Project Name:</b>	Hunts School Road	
<b>Project Number:</b>	2021-Green-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	
<b>Total</b>	9	
<b>Priority (High/Med/Low)</b>	High	



Action Worksheet			
<b>Project Name:</b>	Post Office Backup Power		
<b>Project Number:</b>	2021-Green-009		
<b>Risk / Vulnerability</b>			
<b>Hazard(s) of Concern:</b>	Severe Weather, Severe Winter Weather, Hurricane, Nor'Easter		
<b>Description of the Problem:</b>	Backup power sources are necessary to maintain critical services for critical facilities. The Tranquility Post Office and the Greendell Post Office lack backup power. The Township owns both properties.		
<b>Action or Project Intended for Implementation</b>			
<b>Description of the Solution:</b>	The Township will consider the installation of backup generators at each site. The Engineer will research what size generator is needed to power the facilities. The Township will then purchase and install the selected generator and necessary electrical components to supply backup power to the facilities.		
<b>Is this project related to a Critical Facility?</b>	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
<b>Level of Protection:</b>	N/A	<b>Estimated Benefits (losses avoided):</b>	Ensures continuity of operations of Post Office
<b>Useful Life:</b>	20 years	<b>Goals Met:</b>	2, 6
<b>Estimated Cost:</b>	\$50,000 per generator	<b>Mitigation Action Type:</b>	Structure and Infrastructure Projects (SIP)
<b>Plan for Implementation</b>			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	Within 5 years
<b>Estimated Time Required for Project Implementation:</b>	1 year	<b>Potential Funding Sources:</b>	FEMA HMGP and BRIC, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Municipal Budget
<b>Responsible Organization:</b>	OEM, Engineer, Administration	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard Mitigation, Emergency Management
<b>Three Alternatives Considered (including No Action)</b>			
<b>Alternatives:</b>	<b>Action</b>	<b>Estimated Cost</b>	<b>Evaluation</b>
	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
<b>Progress Report (for plan maintenance)</b>			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			



Action Worksheet		
<b>Project Name:</b>	Post Office Backup Power	
<b>Project Number:</b>	2021-Green-009	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Project will protect critical services of Post Offices
Property Protection	1	Project will protect buildings 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	Severe Weather, Severe Winter Weather, Hurricane, Nor'Easter
Timeline	0	Within 5 years
Agency Champion	1	OEM, Engineer, Administration
Other Community Objectives	1	
<b>Total</b>	12	
<b>Priority (High/Med/Low)</b>	High	



## 9.10 BOROUGH OF HAMBURG

This section presents the jurisdictional annex for the Borough of Hamburg. The annex includes a general overview of the Borough of Hamburg; an assessment of the Borough of Hamburg’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.

### 9.10.1 Hazard Mitigation Planning Team

The Borough of Hamburg 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 9.10-1. Hazard Mitigation Planning Team**

Primary Point of Contact		Alternate Point of Contact
Name / Title: Keith Sukennikoff, OEM Coordinator Address: 16 Walkill Avenue, Hamburg, NJ 07419 Phone Number: (973) 670-0105 Email: oem@hamburgnj.org		Name / Title: Michael Postorino, Public Safety/Police Director Address: 16 Walkill Avenue, Hamburg, NJ 07419 Phone Number: (973) 827-9230 Email: mpostorino@hamburgpolice.org
NFIP Floodplain Administrator		
Name / Title: John Ruschke, Borough Engineer Address: 412 Mt. Kemble Avenue, Suite G22 Morristown NJ 07960 Phone Number: (973) 827-9230 Email: John.ruschke@mottmac.com		
Name	Title	Method of Participation
John Ruschke, PE & Samantha Anello, PE	Borough Engineers	NFIP floodplain managers, contributed to the mitigation strategies, reviewed annex. John attended the kickoff meeting. Samantha attended the risk assessment meeting and mitigation strategy workshop. Reviewed annex*
Keith Sukennikoff	OEM Coordinator	Primary point of contact; attended the kickoff meeting, reviewed annex*
Michael Postorino	Public Safety/Police Director	Alternate point of contact
Paul Marino	Mayor	Reviewed annex*
Christine Licata	Fiscal/CFO	Reviewed annex*
Joseph Butto	Construction Official	Reviewed annex*
Michael Schneider	Public Works	Reviewed annex*
Jason Tangola	Police	Reviewed annex*
Richard Padgett Jr	Fire	Reviewed annex*

\*Refer to Jurisdictional Annex Review Sign-Off Sheet in Appendix B.



### 9.10.2 Jurisdiction Profile

The Borough of Hamburg is located in northern Sussex County. It is bordered to the north, east and west by the Township of Hardyston and to the south by the Borough of Franklin. The Borough covers an area of approximately 1.2 square miles. A tributary of the Wallkill River flows through the northern section of the Borough and along the Wallkill River forms the western border between the Borough and Township of Hardyston. Hamburg Creek is located in the southern end of the Borough. Hardistonville is an unincorporated area of the Borough.

According to the U.S. Census, the 2010 population for the Borough of Hamburg was 3,277. The estimated 2018 population was 3,152, a 3.8 percent decrease from the 2010 Census. Data from the 2018 U.S. Census American Community Survey indicate that 4.2 percent of the population is 5 years of age or younger and 15.4 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.

### 9.10.3 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 9.9-2 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 9.10-2. 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	0	0	0	0	0	0	0	0	0	0
Multi-Family	0	0	0	0	0	0	0	0	0	0
Other (commercial, mixed-use, etc.)	0	0	0	0	0	0	0	0	0	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										
Fairways at Wallkill	Residential	68		G/B Castle Road Block 11 Lot 30 and Block 11.01 Lot 1		1% and 0.2% Flood Hazard Areas, Railway Incident Hazard Area, Hazardous Material Incident Area, Nuclear Incident Hazard Area, Carbonate Soil,		Ongoing		



				Steep Slopes, Wildfire	
<b>Known or Anticipated Major Development and Infrastructure in the Next Five (5) Years</b>					
None anticipated					

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

### 9.10.4 Capability Assessment

Section 5 (Capability Assessment) describes the components included in the capability assessment and their significance for hazard mitigation planning. The Borough of Hamburg 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 Borough of Hamburg 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 Borough of Hamburg and where hazard mitigation has been integrated.

**Table 9.10-3. 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.
<b>Codes, Ordinances, &amp; Requirements</b>					
<b>Building Code</b>	Yes	State & Local	Yes	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>• 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</li> <li>• This code follows State Uniform Construction Code Act (N.J.S. 52:27D-119 et seq).</li> </ul>					
<b>Zoning Code</b>	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		
<b>Comment:</b> <ul style="list-style-type: none"> <li>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.</li> <li>The Zoning Department is responsible for this code in compliance with Chapter 215.</li> </ul>					
Subdivisions	Yes	Local	Yes – if municipality has a Planning Board	Yes	-
<b>Comment:</b> <ul style="list-style-type: none"> <li>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.</li> <li>The LUB is responsible for this ordinance in compliance with Chapter 186.</li> </ul>					
Stormwater Management	Yes	Local	Yes	Yes	-
<b>Comment:</b> <ul style="list-style-type: none"> <li>See Title 7 of the NJ Administrative Code, N.J.A.C. 7:8</li> <li>The LUB is responsible for this ordinance in compliance with Chapter 182.</li> </ul>					
Post-Disaster Recovery	No	-	No	-	-
<b>Comment:</b>					
Real Estate Disclosure	Yes	State, Division of Consumer Affairs	Yes	Yes	
<b>Comment:</b> 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	No	-	Yes – if municipality has a Planning Board	-	-
<b>Comment:</b> <ul style="list-style-type: none"> <li>State mandated on a municipal level. See Zoning Ordinance ; Also - Plan Endorsement Process via the State Development &amp; 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.</li> </ul>					
Site Plan Review	Yes	Local	Yes – if municipality has a Planning Board	Yes	-
<b>Comment:</b> <ul style="list-style-type: none"> <li>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 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</li> </ul>					





	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.
<p><i>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.</i></p> <ul style="list-style-type: none"> <li><i>The LUB is responsible for these requirements in compliance with Chapter 171.</i></li> </ul>					
<b>Environmental Protection</b>	Yes	State	No	Yes	-
<p><b>Comment:</b></p> <ul style="list-style-type: none"> <li><i>Chapter 215-20 of the Hamburg Code regulates development in critical areas. According to the code, all open water, streams, ponds, detention basins, wetlands as defined on the Army Corps of Engineers' wetlands survey and floodplains shall be excluded from the land area used by an applicant for development in the calculation of permitted densities for construction.</i></li> </ul>					
<b>Flood Damage Prevention</b>	Yes	Federal, State & Local	Yes	Yes	-
<p><b>Comment:</b></p> <ul style="list-style-type: none"> <li><i>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.</i></li> <li><i>The Construction Official is responsible for this ordinance in compliance with Chapter 215-20.</i></li> </ul>					
<b>Wellhead Protection</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Emergency Management</b>	Yes	State and Local	No	No	-
<p><b>Comment:</b></p> <ul style="list-style-type: none"> <li><i>Chapter 20 Fire Department</i></li> <li><i>Chapter 44 Police Department</i></li> </ul>					
<b>Climate Change</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Disaster Recovery Ordinance</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Disaster Reconstruction Ordinance</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Other: Municipal Separate Storm Sewer System (MS4)</b>	Yes	Local	No	Yes	-
<p><b>Comment:</b></p> <ul style="list-style-type: none"> <li><i>The DPW is responsible for this ordinance in compliance with Chapter 182.</i></li> </ul>					
<b>Planning Documents</b>					
<b>Comprehensive / Master Plan</b>	Yes	Local	Yes	Yes	-
<p><b>Comment:</b></p> <ul style="list-style-type: none"> <li><i>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.</i></li> </ul>					



	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.
<ul style="list-style-type: none"> <li>The LUB is responsible for this plan. The plan was adopted in 1997 and a re-examination report was completed in November of 2006.</li> </ul>					
<b>Capital Improvement Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Disaster Debris Management Plan</b>	No	-	No	-	2020-Hamburg-006
<i>Comment:</i>					
<b>Floodplain or Watershed Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Stormwater Management Plan</b>	Yes	Local	Yes	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>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.</li> <li>This plan was adopted on April 20, 2005.</li> <li>The MC is responsible for this plan in compliance with Chapter 182.</li> </ul>					
<b>Stormwater Pollution Prevention Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>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.</li> <li>Hamburg is a Tier B community and a Stormwater Pollution Prevention Plan is not required.</li> </ul>					
<b>Urban Water Management Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Habitat Conservation Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Economic Development Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Shoreline Management Plan</b>	No	-	Yes – if located in a coastal zone	-	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>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.</li> </ul>					



	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.
<b>Community Wildfire Protection Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Community Forest Management Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Transportation Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Agriculture Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Climate Action Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Tourism Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Business Development Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Other: Open Space Plan</b>	Yes	Local	No	No	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>This plan was adopted on June 24, 2003.</li> <li>The MC is responsible for this plan in compliance with Chapter 215.</li> </ul>					
<b>Response/Recovery Planning</b>					
<b>Comprehensive Emergency Management Plan (CEMP) / Emergency Operations Plan (EOP)</b>	Yes	Local	Yes	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>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.</li> <li>This plan was adopted in 2010, updated in March 2019, and approved by the New Jersey State Police.</li> <li>The Office of Emergency Management is responsible for this plan.</li> </ul>					
<b>Threat &amp; Hazard Identification &amp; Risk Assessment (THIRA)</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Post-Disaster Recovery Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Continuity of Operations Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Public Health Plan</b>	Yes	County	Yes	-	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>There is a public health plan within the Emergency Operations Plan and is subject to the jurisdiction of the Sussex County Health Department.</li> </ul>					
<b>Other</b>	No	-	No	-	-
<i>Comment:</i>					



**Table 9.10-4. Development and Permitting Capability**

Criterion	Response
Does your jurisdiction issue development permits? - If no, who does? If yes, which department?	Yes, Construction Department
Does your jurisdiction have the ability to track permits by hazard area?	Yes, the Borough has access to the County GIS system
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 Borough of Hamburg.

**Table 9.10-5. Administrative and Technical Capabilities**

Staff/Personnel Resource	Available?	Department/Agency/Position
<b>Administrative Capability</b>		
Planning Board	Yes	Lane Use Board
Mitigation Planning Committee	No	-
Environmental Board / Commission	No	-
Open Space Board / Committee	Yes	Land Use Board, Recreation Commission
Economic Development Commission / Committee	No	-
Warning Systems / Services (reverse 911, outdoor warning signals)	No	-
Maintenance program to reduce risk	No	-
Mutual aid agreements	Yes	Mayor and Council
<b>Technical/Staffing Capability</b>		
Planners or engineers with knowledge of land development and land management practices	Yes	Mayor and Council
Engineers or professionals trained in building or infrastructure construction practices	Yes	Mayor and Council
Planners or engineers with an understanding of natural hazards	Yes	Mayor and Council
Staff with training in benefit/cost analysis	Yes	Engineer
Staff with training in green infrastructure	Yes	Engineer
Staff with education/knowledge/training in low impact development	Yes	Engineer
Surveyor	Yes	Mayor and Council
Stormwater engineer	Yes	Engineer
Personnel skilled or trained in GIS applications	Yes	Mayor and Council
Local or state water quality professional	Yes	John Perry-
Scientist familiar with natural hazards in local area	Yes	Mayor and Council
Emergency manager	Yes	Mayor and Council
Watershed planner	No	-
Environmental specialist	Yes	Engineer
Grant writers	Yes	Jeff Stevens
Resilience Officer	No	-



**FISCAL CAPABILITY**

The table below summarizes financial resources available to the Borough of Hamburg.

**Table 9.10-6. Fiscal Capabilities**

Financial Resource	Accessible or Eligible to Use?
Community Development Block Grants (CDBG, CDBG-DR)	Yes
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service	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
State-Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	No
Clean Water Act 319 Grants (Nonpoint Source Pollution)	No
Other: Open Space Acquisition Funding Programs	Yes

**EDUCATION AND OUTREACH CAPABILITY**

The table below summarizes the education and outreach resources available to the Borough of Hamburg.

**Table 9.10-7. Education and Outreach Capabilities**

Criterion	Response
Do you have a public information officer or communications office?	No
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.	No
Do you have any other programs already in place that could be used to communicate hazard-related information? If yes, briefly describe.	No

**COMMUNITY CLASSIFICATIONS**

The table below summarizes the classifications for community programs available to the Borough of Hamburg.

**Table 9.10-8. Community Classifications**

Program	Participating?	Classification	Date Classified
Community Rating System	No	-	-
Building Code Effectiveness Grading Schedule (BCEGS)	Yes	Hardyston Building Department	Hardyston Building Department
Public Protection (Fire ISO Protection Class)	Yes	Hardyston Building Department	Hardyston Building Department





Program	Participating?	Classification	Date Classified
Storm Ready Certification	No	-	-
Firewise Community Classification	No	-	-
Sustainable Jersey	No	-	-

**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 9.10-9. Adaptive Capacity**

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

**NATIONAL FLOOD INSURANCE PROGRAM**

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

**Table 9.10-10. National Flood Insurance Program Compliance**

Criterion	Response
What local department is responsible for floodplain management?	Engineering
Who is your floodplain administrator? (name, department/position)	John Ruschke, PE, CFM – Borough Engineer; Samantha Anello, PE, CFM - Engineering
Are any certified floodplain managers on staff in your jurisdiction?	Yes - John Ruschke, PE, CFM – Borough Engineer; Samantha Anello, PE, CFM - Engineering
What is the date that your flood damage prevention ordinance was last amended?	August 2011



Criterion	Response
Does your floodplain management program meet or exceed minimum requirements? -If exceeds, in what ways?	The program meets minimum requirements.
When was the most recent Community Assistance Visit or Community Assistance Contact?	December 7, 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.	No
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 consider attending continuing education and/or certification training on floodplain management if offered.
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
How many flood insurance policies are in force in your jurisdiction?*	4 policies
-What is the insurance in force?	\$1,225,000 insurance in force
-What is the premium in force?	\$1,712 premium in force
How many total loss claims have been filed in your jurisdiction?*	0 claims or payments
-How many claims are still open or were closed without payment?	
-What were the total payments for losses?	
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?	Not currently

According to FEMA statistics as of October 13, 2020  
Reference: FEMA 2020

**OPPORTUNITIES FOR FUTURE INTEGRATION**

- **Disaster Debris Management Plan:** The Borough will develop a Disaster Debris Management Plan (2020-Hamburg-006).

**9.10.5 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 Borough of Hamburg’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 9.9-11 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 9.10-11. 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 Weather and Snowstorm	Yes	A major nor'easter, produced record snowfall and blizzard conditions in parts of New Jersey on January 23 <sup>rd</sup> and 24 <sup>th</sup> .	Although the County was impacted, the Borough did not report damages.
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 Borough was subject to closures and social distance and masking mandates.
2020	Rainstorm	No	Large storm event resulted in significant wash out at the Limekiln Road culvert in 2020. Resulted	The Borough incurred costs for DPW overtime to clean-up

Source: FEMA 2020, NOAA NCEI 2020

### 9.10.6 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 Borough of Hamburg 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 Borough of Hamburg 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 Borough of Hamburg has significant exposure.

#### REPETITIVE FLOOD LOSSES

The following summarizes the repetitive and severe repetitive flood losses in the Borough of Hamburg.

- 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

#### 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 9.10-12. Critical Facilities and Lifelines Flood Exposure**

Name	Type	Exposure	
		1% Event	0.2% Event
Wheatsworth Mill #1 Dam	Dam	X	X
Wheatsworth Mill #2 Dam	Dam	X	X

Source: Sussex County Planning Partnership 2020







**IDENTIFIED ISSUES AND PROBLEM AREAS**

The jurisdiction has identified the following vulnerabilities within their community:

- The Borough has noted that dams in Hamburg need to be brought into compliance with NJDEP requirements. Currently, there are no Emergency Action Plans in place.
- The Borough has reported the need to install a backup generator at the Hamburg Elementary School and to install portable generators to deploy on an as-needed basis.
- Limekiln Road has been identified as having undersized culverts that result in periodic road flooding.
- North Governor Haines Street has been identified as being a drainage problem area.
- The Borough has identified inflow/infiltration issues with Hamburg’s water/sewer system and proposes monitoring and remedies to manage the issue.

**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 Borough of Hamburg 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 Borough of Hamburg. The Borough of Hamburg 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 Borough of Hamburg indicated the following reasons why hazard rankings have changed since the 2016 HMP:

- In 2016, the Dam Failure ranking was listed as high. In the initial 2020 risk assessment, the hazard was ranked low. The Borough requested that the ranking should be changed to high to reflect the lack of evidence for existing dams’ compliance and the lack of an Emergency Action Plan.

**Table 9.10-13. Borough of Hamburg Hazard Ranking**

<b>Dam Failure</b>	<b>Disease Outbreak</b>	<b>Drought</b>	<b>Earthquake</b>	<b>Flood</b>	<b>Geologic</b>	
High	Medium	Medium	Low	Medium	Low	
<b>Hazardous Materials</b>	<b>Hurricane and Tropical Storm</b>	<b>Invasive Species</b>	<b>Nor’Easter</b>	<b>Severe Weather</b>	<b>Severe Winter Weather</b>	<b>Wildfire</b>
Medium	High	Medium	High	High	High	Low

**9.10.7 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 9.9-15 and Table 9.9-16 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 9.10-14. 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	Enter 2021 HMP Action #
Hamburg-1 (old #1)	Backup generator for shelter at Hamburg Elementary School located on Linwood Avenue.	OEM Coordinator	No Progress	X	2021-Hamburg-001
Hamburg-2 (old #2)	Retrofit roof to meet current snow load standards on Hamburg Elementary School located on Linwood Avenue.	School Administrator, Municipal Engineer	In-Progress, 50% complete	X	2021-Hamburg-002
Hamburg-3 (revised old #4)	Develop, implement, and facilitate a multi-hazard public awareness program. Provide information on all types of hazards, preparedness and mitigation measures via the Borough website and social media.	OEM Coordinator, in coordination with SCDEM	No Progress	X	2021-Hamburg-003
Hamburg-4 (new)	Multi-purpose emergency vehicle to support highways	Borough OEM	No Progress	X	2021-Hamburg-004
Hamburg-5 (new)	Purchase Bobcat Skid-Steer to use during debris cleanup operations and post-hazard events.	Borough DPW	No Progress	X	2021-Hamburg-005
Hamburg-6 (new)	Create and maintain a plan for adequate road and debris clearing capabilities within the Borough.	Borough DPW	No Progress	X	2021-Hamburg-006
Hamburg-7 (new)	Purchase portable generator for critical facilities	Municipal Engineer, OEM Coordinator	No Progress	X	2021-Hamburg-007
Hamburg-8 (new)	Utilize the Hazard Mitigation Plan (HMP) when updating the Comprehensive Master Plan; consider including hazard identification, hazard zones risk assessment information, and hazard mitigation goals as identified in the HMP. Further, the findings and recommendation of the HMP will be considered during any future site plan review processes.	Planning	No Progress	X	2021-Hamburg-008
Hamburg-9 (new)	During the Borough's rezoning procedures or update of the	Borough Administration	No Progress	X	2021-Hamburg-009



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 #
	zoning ordinance, the Borough will recognize hazard areas as limits on changes to zoning within the municipality.				
Hamburg-10 (new)	Prepare and enforce a fire plan for the Borough and recognize the existence of wildfire hazards and identify risk areas based on a vulnerability assessment.	OEM Coordinator	No Progress	X	2021-Hamburg-010
Hamburg-11 (new)	The Borough will work with local school districts and assist with community service projects regarding hazards and mitigation.	OEM Coordinator	No Progress	X	2021-Hamburg-011
Hamburg-12 (new)	Catch Basin & General Stormwater Facility Maintenance: The continual maintenance of catch basins and stormwater facilities is critical especially before and after large storm events	Borough DPW and Engineer	In Progress	X	2021-Hamburg-012
Hamburg-13 (new)	Sanitary Sewer Reinforcement: Perform a study to determine where sanitary sewer reinforcement is needed due to most imminent threats of failure or cracking.	Borough Engineer	No Progress	X	2021-Hamburg-013
Hamburg-14 (new)	Tree Removal and Maintenance in the Vicinity of Power Lines: Tree removal and maintenance in the vicinity of power lines will help minimize power outages during Severe Weather events.	Borough DPW	In Progress	X	2021-Hamburg-014

**PROPOSED HAZARD MITIGATION INITIATIVES FOR THE PLAN UPDATE**

The Borough of Hamburg 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 Borough of Hamburg 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 9.9-15 summarizes the comprehensive-range of specific mitigation initiatives the Borough of Hamburg 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 9.9-16 provides a summary of the prioritization of all proposed mitigation initiatives for this HMP update.



Table 9.10-15. 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-Hamburg-001	Generator Installation	<p><b>Problem:</b> The Hamburg Elementary School does not have a backup generator to power the facility during a power outage. Because the facility is used as a shelter for the municipality, it is critical to install a generator to power the facility to be used during hazard events.</p> <p><b>Solution:</b> Install 3 phase backup generator for shelter at Hamburg Elementary School located on Linwood Avenue. The Borough Engineer and the school maintenance crew shall work together to purchase and install the generator.</p>	New	Flood, Severe Weather, Severe Winter Weather	1, 2, 3, 5, 6	OEM Coordinator	HMGP, Municipal Budget	Continued Operation	\$150k	1 year	Medium	SIP	PP, PR, ES
2021-Hamburg-002	Roof Upgrade	<p><b>Problem:</b> The roof of the Hamburg Elementary</p>	Existing	Severe Winter Weather	1, 2, 5	School Administrator, Municipal Engineer	Municipal Budget, School Budget	Structural Mitigation	Medium	1 year	Medium	SIP	PR, 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
		School cannot handle the snow load that accumulates during severe snowstorms.  <b>Solution:</b> Retrofit roof to meet current snow load standards on Hamburg Elementary School located on Linwood Avenue.											
2021-Hamburg-003	Multi-Hazard Public Awareness Program	<b>Problem:</b> There is a lack of knowledge around hazard mitigation in the region and residents are underprepared for potential natural hazard events  <b>Solution:</b> Develop, implement, and facilitate a multi-hazard public awareness program. Provide information on all types of hazards, preparedness and mitigation measures via the Borough	New	All Hazards	1, 2, 3, 4, 5, 6	OEM Coordinator, in coordination with SCDEM	Municipal Budget	Preparedness and Increase Public Knowledge	Low	5 years	Medium	EAP	PR, 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
		website and social media.											
2021-Hamburg-004	Purchase Emergency vehicle	<p><b>Problem:</b> The municipality does not have an emergency vehicle to support highway and issues related to road closures and issues related to severe weather. Additional vehicles will increase capacity and overall response.</p> <p><b>Solution:</b> The municipality shall purchase a multi-purpose emergency vehicle to support highways.</p>	New	All Hazards	3, 5, 6	Borough OEM	Municipal Budget, HMGP,	Increased Capacity	Low	5 year	Medium	SIP	PP, ES
2021-Hamburg-005	Purchase Bobcat Skid-Steer	<p><b>Problem:</b> The municipality struggles to keep up with debris cleanup operation immediately after storm events. This could cause significant issues around subsequent flooding due to clogging of roadways and waterbodies.</p>	New	Severe Weather, Flood	1, 2, 4, 5	Borough DPW	Municipal Budget, HMGP, New Jersey Department of Transportation – Local Aid Program	Increased capability	Medium	1 year	Medium	SIP	PR, PP



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
		<b>Solution:</b> Purchase Bobcat Skid-Steer to use during debris cleanup operations and post-hazard events.											
2021-Hamburg-006	Develop Disaster Debris Management Plan	<b>Problem:</b> The municipality has not developed a comprehensive strategy to address debris clearing during and after a hazard event.  <b>Solution:</b> Create and maintain a plan for adequate road and debris clearing capabilities within the Borough.	New	All Hazards	1, 2, 4, 5	Borough DPW	Municipal Budget	Streamlined Response	Low	1 year	High	LPR	ES
2021-Hamburg-007	Portable Generator	<b>Problem:</b> Not all critical facilities have backup power.  <b>Solution:</b> Purchase portable generators for critical facilities that can be used to power the bare essentials during a hazard event	New	Hurricane, Nor'Easter, Severe Weather, Severe Winter Weather	1, 2, 3, 5	Municipal Engineer, OEM Coordinator	HMGP	Continued Operation	Low	1 year	Medium	LPR	PR
2021-Hamburg-008	HMP Implementation	<b>Problem:</b> The municipality has previously not been successful	Existing	All	1, 2, 3, 4, 5, 6, 7	Planning	Municipal Budget	Enhanced Planning	Low	5 years	High	LPR	PR





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
		<p>in implementing hazard mitigation actions within the municipality.</p> <p><b>Solution:</b> Utilize the Hazard Mitigation Plan (HMP) when updating the Comprehensive Master Plan; consider including hazard identification, hazard zones risk assessment information, and hazard mitigation goals as identified in the HMP. Further, the findings and recommendation of the HMP will be considered during any future site plan review processes.</p>											
2021-Hamburg-009	Hazard Area Identification and Plan Implementation	<p><b>Problem:</b> The municipality has previously not been successful in identifying potential hazard areas within the municipality.</p> <p><b>Solution:</b> During the Borough's</p>	Existing	All	1, 2, 3, 4, 5, 6, 7	Borough Administration	Municipal Budget as Needed	Hazard Mitigation	Low	5 years and longer	High	LPR	PR



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
		rezoning procedures or update of the zoning ordinance, the Borough will recognize hazard areas as limits on changes to zoning within the municipality.											
2021-Hamburg-010	Fire Plan Implementation	<p><b>Problem:</b> The municipality has previously not been successful in implementing the municipal fire plan proposed actions.</p> <p><b>Solution:</b> Prepare and enforce a fire plan for the Borough and recognize the existence of wildfire hazards and identify risk areas based on a vulnerability assessment.</p>	Existing	All	1, 2, 3, 4, 5, 6, 7	OEM Coordinator	Municipal Budget as Needed	All	Low	5 years and longer	High	LPR	PR
2021-Hamburg-011	Local School Districts HMP Implementation	<b>Problem:</b> The municipality has previously not been able to successfully implement hazard mitigation actions in coordination	Existing	All	1, 2, 3, 4, 5, 6, 7	OEM Coordinator	Municipal Budget as Needed	HMP Integration	Low	5 years	Medium	LPR	PR



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
		with the local school districts. <b>Solution:</b> The Borough will work with local school districts and assist with community service projects regarding hazards and mitigation.											
2021-Hamburg-012	Stormwater Maintenance Program	<b>Problem:</b> The municipality has previously had trouble around stormwater infrastructure maintenance capabilities <b>Solution:</b> The municipality would like to increase maintenance capabilities of catch basins and stormwater facilities is critical especially before and after large storm events. The municipality can do this by developing a program that can be coordinated with other municipalities to facilitate the maintained of	New	Flood, Severe Weathers	1, 2, 3, 5	Borough DPW and Engineer	HMGP, BRIC Municipal Budget as needed; New Jersey Water Bank; Environmental Infrastructure Financing Program	Increased organized capacity	Low	5 years	High	LPR	PR



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-Hamburg-013	Reinforcements	<p>local stormwater infrastructure.</p> <p><b>Problem:</b> The Sewer Sanitary Facility has been having issues around building cracking which has led to the threat of potential disrupted operation of the critical service.</p> <p><b>Solution:</b> Sanitary Sewer Reinforcement: Perform a study to determine where sanitary sewer reinforcement is needed due to most imminent threats of failure or cracking.</p>	New	Flood, Severe Weather	1, 2, 3, 5	Borough Engineer	HMGP, Municipal Budget	Fix Structure disrepairs	Low	2 years	Medium	SIP	SP
2021-Hamburg-014	Tree Maintenance	<p><b>Problem:</b> In previous years, the municipality has experienced accidents around tree falling and disrupting the utility lines, subsequently causing power outages. The Borough is now on the power company's tree trimming program which</p>	New	Hurricane, Nor'Easter, Severe Weather, Severe Winter Weather	1, 2, 3, 4, 5	Borough DPW	HMGP, Municipal Budget	Better Tree Maintenance	High	2 years	Medium	LPR SP,	PP, NR



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
		is implemented every three years. <b>Solution:</b> Tree Removal and Maintenance in the Vicinity of Power Lines: Tree removal and maintenance in the vicinity of power lines will help minimize power outages during severe weather events. The municipality will then work with the County to develop strategy to conduct tree maintenance.											
2021-Hamburg-015	Hamburg Borough Building Code Update	<b>Problem:</b> Building Codes need to be periodically reviewed for updates to keep up with changing regulations and reduce hazard risks <b>Solution:</b> Perform periodical building code reviews and make updates as required	Existing	All Hazards	1	Construction Code Official	N/A – Staff Time	Low	Low	Ongoing once established	High	LPR	PR, PP



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-Hamburg-016	Evaluation of Bridges and Other River Structures	<p><b>Problem:</b> Aged Infrastructure</p> <p><b>Solution:</b> A comprehensive master plan should be developed for appropriate sizing of the bridge openings and setting road elevations to provide maximum benefits as the bridges are eventually replaced over time.</p>	Existing	Flood, Severe Weather	1	<u>Borough Administration</u> , Township Engineer	Borough	High	High	Short	High	LPR	PR
2021-Hamburg-017	Hazard Warning System	<p><b>Problem:</b> Hazard warning systems need to be developed.</p> <p><b>Solution:</b> The hazard warning system resources available to the Borough will be reviewed and utilized.</p>	Existing	All Hazards	1, 2, 3, 4	<u>Borough Administration</u> , Borough Engineer	Borough	High	Low	Short	High	EAP	PI
2021-Hamburg-018	Stream Cleaning & Maintenance	<p><b>Problem:</b> The required removal of built-up debris and sediment/silt buildup within streams and rivers. Bridge openings must be maintained.</p> <p><b>Solution:</b> Removal of</p>	Existing	Flood, Severe Weather, Severe Winter Weather	1, 3	<u>Borough Administration</u> , Borough Engineer	Borough, Capital Improvements	High	Low	Short – Annual Basis	High	NSP	PR, PP, NR, SP



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
		debris, sediment, and silt from the channel as well as bridge openings by volunteer groups and outside contractors when needed.											
2021-Hamburg-019	GIS Mapping of Catch Basin & General Stormwater Facilities	<p><b>Problem:</b> The location of all catch basins and stormwater facilities, both private and public, need to be identified, mapped, and located for planning and maintenance</p> <p><b>Solution:</b> Create a GIS mapping system of catch basins, stormwater facilities, basins, culverts, and other drainage features and structures</p>	Existing	Flood, Severe Weather	1	Borough Administration, Borough Engineer, DPW Supervisor	Borough budget	High	Low	Short	High	NSP, SIP	PR, PP
2021-Hamburg-020	Dam project	<b>Problem:</b> There is no evidence of existing dams being in compliance with Dam Safety Requirements; No Emergency Action Plan for Dam failure.	Existing	Dam Failure	7	Administration, Dam owners	Borough budget	Dams brought into compliance with NJDEP Dam Safety Requirements	Staff time	1 year	High	EAP	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
		<b>Solution:</b> The Borough will work with dam owners to gain copies of Emergency Action Plans or instruct them to develop Plan in conjunction with NJDEP.											
2021-Hamburg-021	North Governor Haines Street Drainage	<p><b>Problem:</b> North Governor Haines Street experiences drainage issues.</p> <p><b>Solution:</b> The Borough will conduct a feasibility study for North Governor Haines Street drainage issues. If cost-effective measures are identified, the Borough will pursue grant funding and implement the selected actions.</p>	Existing	Flood, Severe Weather	2	Engineer, DPW	HMGP, BRIC, municipal budget	Reduction in flood risk	\$200,000	Within 5 years	High	SIP	SP
2021-Hamburg-022	Limekiln Road Drainage Improvement Project	<b>Problem:</b> The existing culvert on Limekiln Road does not have adequate capacity, resulting in flooding on roadway and near the Pump Station.	Existing	Flood, Severe Weather	2	Engineering	HMGP, BRIC, Municipal Budget	Reduction in flood Risk	\$500,000	Within 5 years	High	SIP	SP





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
		<b>Solution:</b> The Borough Engineer will determine the necessary culvert and drainage channel improvements that are required to pass required capacity. The Borough will then complete the identified improvements.											

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:

- BRIC Building Resilient Infrastructure and Communities
- FMA Flood Mitigation Assistance Grant Program
- HMGP Hazard Mitigation Grant 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 9.10-16. 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-Hamburg-001	Generator Installation	0	0	1	0	0	0	0	0	1	1	1	1	1	1	7	Medium
2021-Hamburg-002	Roof Upgrade	1	1	1	1	0	0	0	0	0	0	1	1	1	1	7	Medium
2021-Hamburg-003	Multi-Hazard Public Awareness Program	0	0	1	1	0	0	0	0	0	1	1	1	1	0	6	Medium
2021-Hamburg-004	Purchase Emergency Vehicle	1	0	1	0	0	0	1	0	0	1	1	1	1	1	8	Medium
2021-Hamburg-005	Purchase Bobcat Skid-Steer	1	0	1	0	0	0	1	0	0	1	1	1	1	1	8	Medium
2021-Hamburg-006	Develop Disaster Debris Management Plan	1	1	1	1	0	0	0	0	0	1	1	1	1	1	9	High
2021-Hamburg-007	Portable Generator	0	0	1	0	0	0	0	0	1	1	1	1	1	1	7	Medium
2021-Hamburg-008	HMP Implementation	1	1	1	1	1	0	0	0	0	1	1	1	1	1	10	High
2021-Hamburg-009	Hazard Area Identification and Plan Implementation	1	1	1	1	1	0	0	0	0	1	1	1	1	1	10	High
2021-Hamburg-010	Fire Plan Implementation	1	1	1	1	1	0	0	0	0	1	1	1	1	1	10	High
2021-Hamburg-011	Local School Districts HMP Implementation	0	0	1	1	0	0	0	0	0	1	1	1	1	0	6	Medium



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-Hamburg-012	Stormwater Maintenance Program	0	1	1	0	0	0	0	1	1	1	1	1	1	1	9	High
2021-Hamburg-013	Reinforcements	0	1	1	1	0	0	0	0	0	1	0	1	1	1	7	Medium
2021-Hamburg-014	Tree Maintenance	0	1	1	0	0	0	0	1	1	1	0	1	1	1	8	Medium
2021-Hamburg-015	Hamburg Borough Building Code Update	0	1	1	1	0	1	0	0	0	1	1	1	1	0	8	Medium
2021-Hamburg-016	Evaluation of Bridges and Other River Structures	1	1	1	1	0	0	0	1	0	1	1	1	0	1	9	High
2021-Hamburg-017	Hazard Warning System	1	0	1	0	0	1	1	0	1	1	1	0	1	1	9	High
2021-Hamburg-018	Stream Cleaning & Maintenance	0	1	1	0	0	0	0	1	1	1	1	1	1	1	9	High
2021-Hamburg-019	GIS Mapping of Catch Basin & General Stormwater Facilities	0	0	1	1	0	0	0	1	1	1	1	1	1	1	9	High ▲
2021-Hamburg-020	Dam project	1	1	1	1	1	1	1	1	1	1	0	1	1	1	13	High
2021-Hamburg-021	North Governor Haines Street Drainage	0	1	0	1	1	1	0	1	0	1	1	0	1	1	9	High ▲
2021-Hamburg-022	Limekiln Road Drainage Improvement Project	1	1	0	1	1	1	0	1	0	1	1	0	1	1	10	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 9.10-17. 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	X	X		X			X
Disease Outbreak	X	X	X		X			X
Drought	X	X	X		X			X
Earthquake	X	X	X		X			X
Flood	X	X	X	X	X	X		X
Geologic	X	X	X		X			X
Hazardous Materials	X	X	X		X			X
Hurricane and Tropical Storm	X	X	X		X			X
Invasive Species	X	X	X		X			X
Nor'Easter	X	X	X		X			X
Severe Weather	X	X	X	X	X	X		X
Severe Winter Weather	X	X	X	X	X			X
Wildfire	X	X	X		X			X

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

**RED** high ranked hazard

**ORANGE** medium ranked hazard

**YELLOW** low ranked hazard



Figure 9.10-1. Borough of Hamburg Hazard Area Extent and Location Map 1

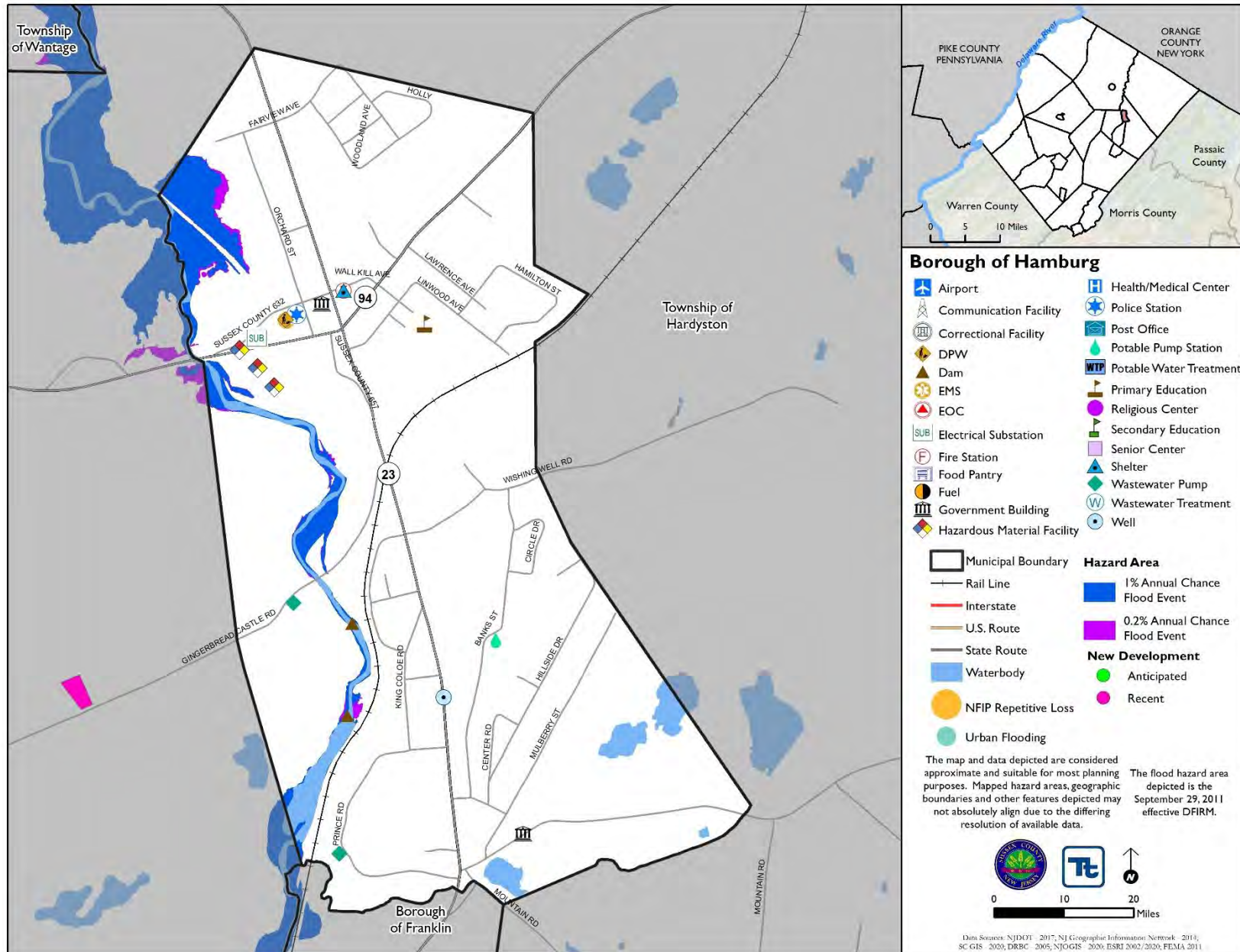




Figure 9.10-2. Borough of Hamburg Hazard Area Extent and Location Map 2

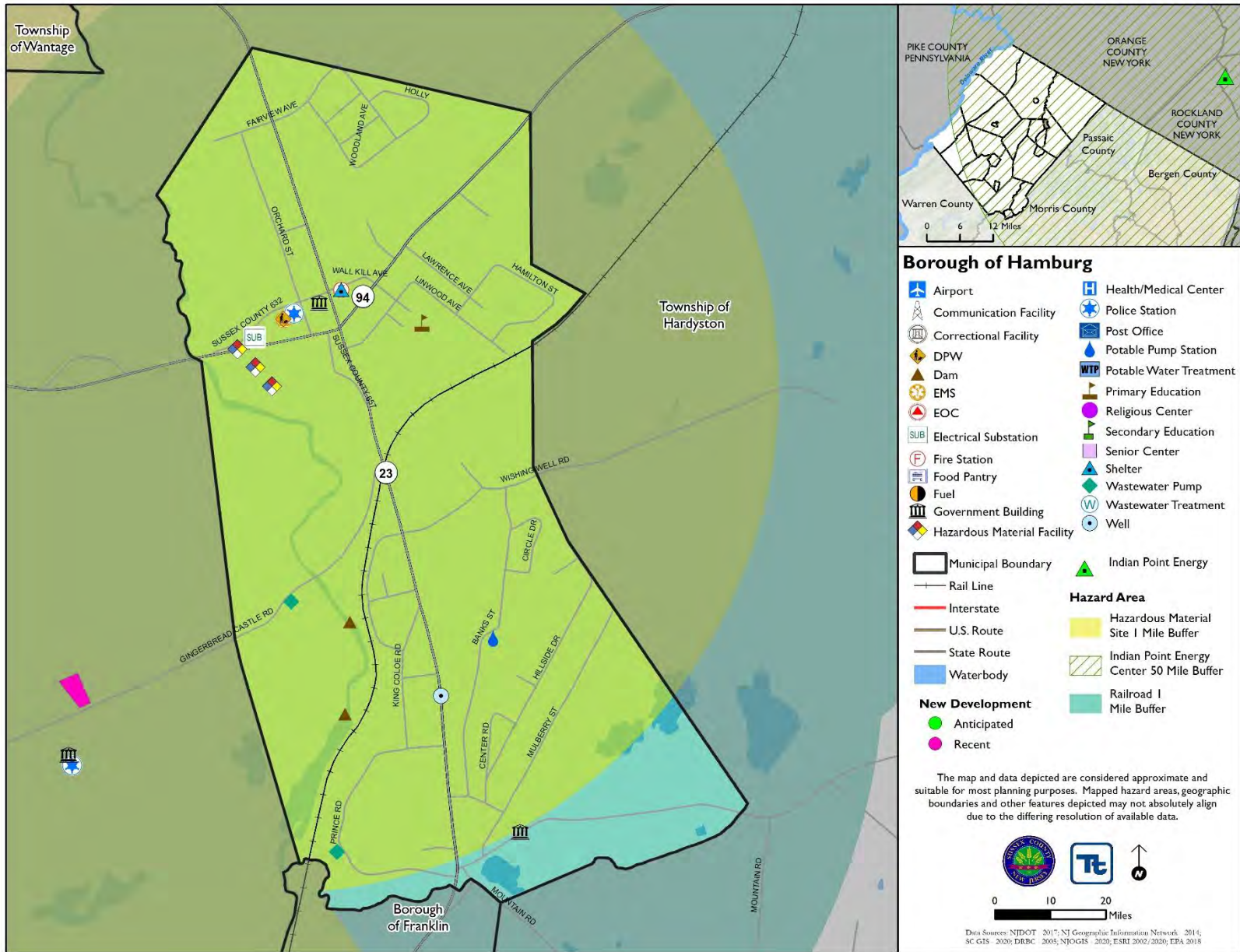
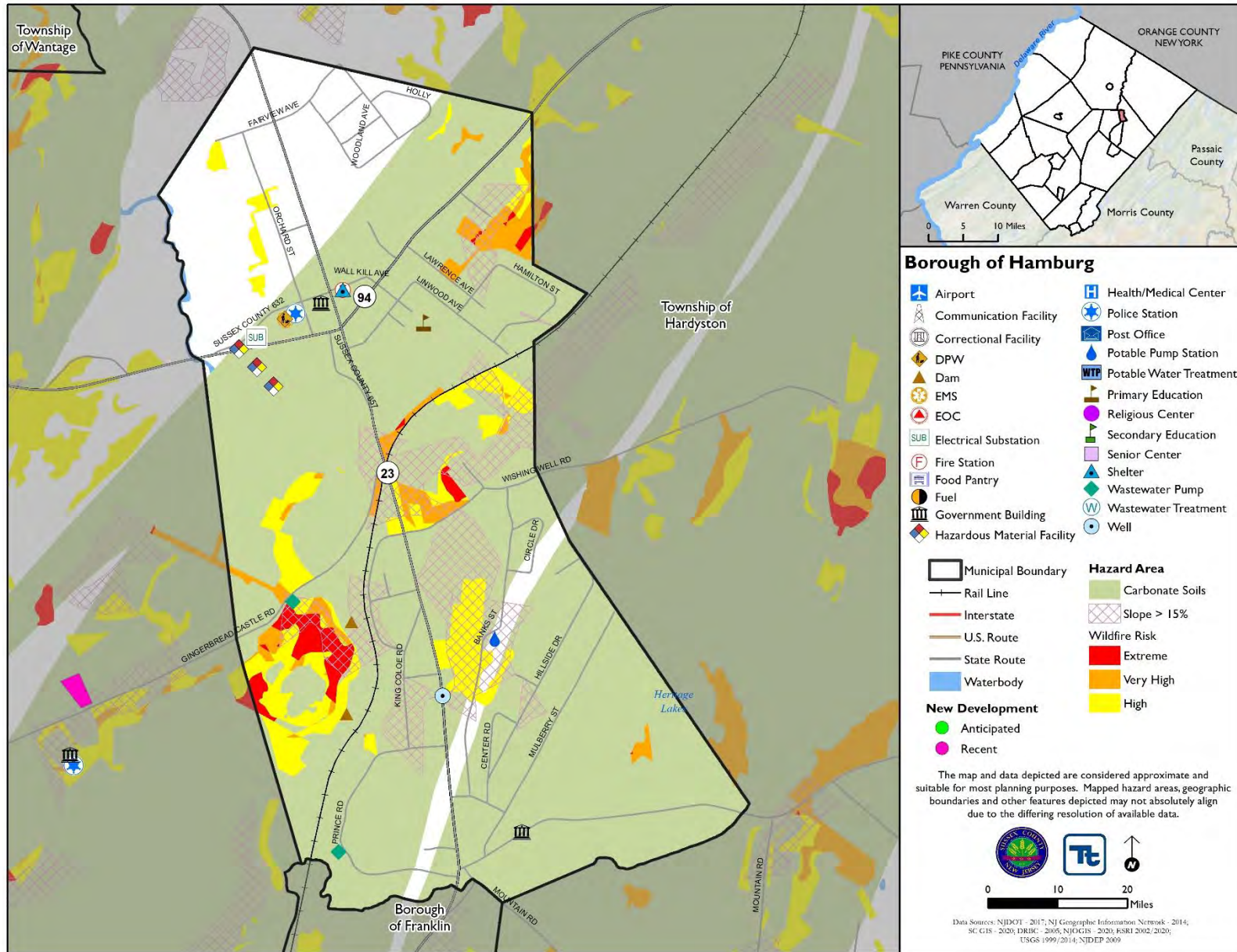






Figure 9.10-3 Borough of Hamburg Hazard Area Extent and Location Map 3





Action Worksheet			
<b>Project Name:</b>	Generator Installation		
<b>Project Number:</b>	2020-Hamburg-001		
Risk / Vulnerability			
<b>Hazard(s) of Concern:</b>	Flood, Severe Weather, Severe Winter Weather		
<b>Description of the Problem:</b>	The Hamburg Elementary School does not have a backup generator to power the facility during a power outage. Because the facility is used as a shelter for the municipality, it is critical to install a generator to power the facility to be used during hazard events.		
Action or Project Intended for Implementation			
<b>Description of the Solution:</b>	Install 3 phase backup generator for shelter at Hamburg Elementary School located on Linwood Avenue. The Borough Engineer and the school maintenance crew shall work together to purchase and install the generator.		
<b>Is this project related to a Critical Facility or Lifeline?</b>	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
<b>Level of Protection:</b>	500-year storm	<b>Estimated Benefits (losses avoided):</b>	Continued Operation
<b>Useful Life:</b>	20 years	<b>Goals Met:</b>	1, 2, 3, 5, 6
<b>Estimated Cost:</b>	100k	<b>Mitigation Action Type:</b>	Structural and Infrastructure Project
Plan for Implementation			
<b>Prioritization:</b>	Medium	<b>Desired Timeframe for Implementation:</b>	1 year once funding received
<b>Estimated Time Required for Project Implementation:</b>	1 year	<b>Potential Funding Sources:</b>	HMGP
<b>Responsible Organization:</b>	OEM Coordinator	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard Mitigation
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues
	Install Solar	High	Weather Dependent
	Generator Installation	Medium	Best alternative
Progress Report (for plan maintenance)			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			



Action Worksheet		
<b>Project Name:</b>	Generator Installation	
<b>Project Number:</b>	2020-Hamburg-001	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	0	This project protects life and property
Property Protection	0	This project protects life and property
Cost-Effectiveness	1	
Technical	0	Additional technical resources are needed
Political	0	There are no known political complications
Legal	0	There are no known legal complications
Fiscal	0	Additional funding is needed
Environmental	0	No adverse environmental impacts
Social	1	
Administrative	1	
Multi-Hazard	1	
Timeline	1	
Agency Champion	1	
Other Community Objectives	1	
<b>Total</b>	7	
<b>Priority (High/Med/Low)</b>	Medium	



Action Worksheet			
<b>Project Name:</b>	Purchase Bobcat Skid-Steer		
<b>Project Number:</b>	2020-Hamburg-005		
Risk / Vulnerability			
<b>Hazard(s) of Concern:</b>	Flood, Severe Weather, Severe Winter Weather		
<b>Description of the Problem:</b>	The municipality struggles to keep up with debris cleanup operation immediately after storm events. This could cause significant issues around subsequent flooding due to clogging of roadways and waterbodies.		
Action or Project Intended for Implementation			
<b>Description of the Solution:</b>	Purchase Bobcat Skid-Steer to use during debris cleanup operations and post-hazard events. Details are unknown at this point. The DPW shall determine the size needed for the municipality and coordinate with the municipality on how to raise money to purchase the machinery.		
<b>Is this project related to a Critical Facility or Lifeline?</b>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
<b>Level of Protection:</b>	500-year storm	<b>Estimated Benefits (losses avoided):</b>	Continued Operation
<b>Useful Life:</b>	20 years	<b>Goals Met:</b>	1, 2, 4, 5
<b>Estimated Cost:</b>	Medium	<b>Mitigation Action Type:</b>	Structural and Infrastructure Project
Plan for Implementation			
<b>Prioritization:</b>	Medium	<b>Desired Timeframe for Implementation:</b>	1 year once funding received
<b>Estimated Time Required for Project Implementation:</b>	1 year	<b>Potential Funding Sources:</b>	HMGP, New Jersey Department of Transportation - Local Aid Program, Municipal Budget
<b>Responsible Organization:</b>	Borough DPW	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard Mitigation
Three Alternatives Considered (including No Action)			
<b>Alternatives:</b>	<b>Action</b>	<b>Estimated Cost</b>	<b>Evaluation</b>
	No Action	\$0	Current problem continues
	Hire contractor to conduct any additional work	Low	Low cost but dependent on external aid which might not be fully reliable
	Purchase Bobcat Skid Steer	Medium	Best alternative
Progress Report (for plan maintenance)			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			



Action Worksheet		
<b>Project Name:</b>	Purchase Bobcat Skid-Steer	
<b>Project Number:</b>	2020-Hamburg-005	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	
Property Protection	0	This project protects property
Cost-Effectiveness	1	
Technical	0	Additional technical resources are needed
Political	0	There are no known political complications
Legal	0	There are no known legal complications
Fiscal	1	
Environmental	0	No adverse environmental impacts
Social	0	There are no social effects
Administrative	1	
Multi-Hazard	1	
Timeline	1	
Agency Champion	1	
Other Community Objectives	1	
<b>Total</b>	8	
<b>Priority (High/Med/Low)</b>	Medium	



Action Worksheet			
<b>Project Name:</b>	Develop Debris Management Plan		
<b>Project Number:</b>	2020-Hamburg-006		
Risk / Vulnerability			
<b>Hazard(s) of Concern:</b>	All Hazards		
<b>Description of the Problem:</b>	The municipality has not developed a comprehensive strategy to address debris clearing during and after a hazard event. As a result, the municipality is unable to respond to debris clearance in a concise and organized manner. While increased capacity would also be beneficial, better organization and coordination of existing resources can also be useful.		
Action or Project Intended for Implementation			
<b>Description of the Solution:</b>	Create and maintain a plan for adequate road and debris clearing capabilities within the Borough. Coordinate with the DPW and County to develop an inventory of existing sites that need constant debris clearance and for repetitive flooded sites that pose constant issues for the municipality, develop relevant mitigation actions. Finally, develop methodologies for addressing debris management after a Severe Weather and areas that require immediate response.		
<b>Is this project related to a Critical Facility or Lifeline?</b>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
<b>Level of Protection:</b>	500-year storm	<b>Estimated Benefits (losses avoided):</b>	Streamlined Operations
<b>Useful Life:</b>	5 years	<b>Goals Met:</b>	1, 2, 4, 5
<b>Estimated Cost:</b>	Medium	<b>Mitigation Action Type:</b>	Local Plans and Regulations
Plan for Implementation			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	1 year once funding received
<b>Estimated Time Required for Project Implementation:</b>	1 year	<b>Potential Funding Sources:</b>	Municipal Budget
<b>Responsible Organization:</b>	Borough DPW	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard Mitigation
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues
	Increase current capacity	High	Would need additional equipment, staff, and larger facility
	Debris management plan	Low	Best solution
Progress Report (for plan maintenance)			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			



Action Worksheet		
<b>Project Name:</b>	Develop Debris Management Plan	
<b>Project Number:</b>	2020-Hamburg-006	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	
Property Protection	1	
Cost-Effectiveness	1	
Technical	1	
Political	0	There might be some political complications
Legal	0	There are potential legal complications
Fiscal	0	Resource needs have not yet been identified
Environmental	0	There are no adverse environmental impacts
Social	0	There are no adverse social impacts
Administrative	1	
Multi-Hazard	1	All Hazards
Timeline	1	
Agency Champion	1	
Other Community Objectives	1	
<b>Total</b>	9	
<b>Priority (High/Med/Low)</b>	High	



Action Worksheet			
<b>Project Name:</b>	Stormwater Maintenance Program		
<b>Project Number:</b>	2020-Hamburg-012		
Risk / Vulnerability			
<b>Hazard(s) of Concern:</b>	Severe Weather, Flood		
<b>Description of the Problem:</b>	The municipality has previously had trouble around stormwater infrastructure maintenance capabilities and would like to increase its overall capacity.		
Action or Project Intended for Implementation			
<b>Description of the Solution:</b>	The municipality would like to increase maintenance capabilities of catch basins and stormwater facilities is critical especially before and after large storm events. The municipality can do this by developing a program that can be coordinated with other municipalities to facilitate the maintained of local stormwater infrastructure.		
<b>Is this project related to a Critical Facility or Lifeline?</b>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
<b>Level of Protection:</b>	500-year storm	<b>Estimated Benefits (losses avoided):</b>	Increased organized capacity
<b>Useful Life:</b>	NA	<b>Goals Met:</b>	1, 2, 3, 5
<b>Estimated Cost:</b>	Low	<b>Mitigation Action Type:</b>	Local Plans and Regulations
Plan for Implementation			
<b>Prioritization:</b>	Medium	<b>Desired Timeframe for Implementation:</b>	1 year once funding received
<b>Estimated Time Required for Project Implementation:</b>	1 year	<b>Potential Funding Sources:</b>	HMGP, BRIC Municipal Budget as needed; New Jersey Water Bank; Environmental Infrastructure Financing Program
<b>Responsible Organization:</b>	Borough DPW and Engineer	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard Mitigation
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues
	Hire contractor to conduct any additional work	Low	Low cost but dependent on external aid which might not be fully reliable
	Purchase Bobcat Skid Steer	Medium	Best alternative
Progress Report (for plan maintenance)			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			





Action Worksheet		
<b>Project Name:</b>	Stormwater Maintenance Program	
<b>Project Number:</b>	2020-Hamburg-012	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	
Property Protection	1	
Cost-Effectiveness	1	
Technical	0	Technical issues have not been identified
Political	0	Political issues have not been identified
Legal	0	No legal issues have been identified
Fiscal	0	The exact cost has not yet been identified
Environmental	1	
Social	1	
Administrative	1	
Multi-Hazard	1	
Timeline	1	
Agency Champion	1	
Other Community Objectives	1	
<b>Total</b>	10	
<b>Priority (High/Med/Low)</b>	High	



Action Worksheet			
<b>Project Name:</b>	Reinforcements		
<b>Project Number:</b>	2020-Hamburg-013		
Risk / Vulnerability			
<b>Hazard(s) of Concern:</b>	Severe Weather, Flood		
<b>Description of the Problem:</b>	The Sewer Sanitary Facility has been having issues around building cracking which has led to the threat of potential disrupted operation of the critical service. The facility deals with municipal sewer and therefore needs to be in full operation at all times.		
Action or Project Intended for Implementation			
<b>Description of the Solution:</b>	The municipal DPW shall perform a study to determine where sanitary sewer reinforcement is needed due to most imminent threats of failure or cracking. The DPW and borough engineer could hire a contractor to conduct this assessment and determine the steps that need to be taken.		
<b>Is this project related to a Critical Facility or Lifeline?</b>	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
<b>Level of Protection:</b>	500-year storm	<b>Estimated Benefits (losses avoided):</b>	Fix Structure disrepairs
<b>Useful Life:</b>	15 years	<b>Goals Met:</b>	1, 2, 3, 5
<b>Estimated Cost:</b>	Low	<b>Mitigation Action Type:</b>	Structural and Infrastructure Projects
Plan for Implementation			
<b>Prioritization:</b>	Medium	<b>Desired Timeframe for Implementation:</b>	1 year once funding received
<b>Estimated Time Required for Project Implementation:</b>	2 years	<b>Potential Funding Sources:</b>	HMGP, Municipal Budget
<b>Responsible Organization:</b>	Borough Engineer	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard Mitigation
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues
	Construct a new facility	High	Existing facility needs to be closed
	Reinforcements Study	Low	Best solution
Progress Report (for plan maintenance)			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			



Action Worksheet		
<b>Project Name:</b>	Reinforcements	
<b>Project Number:</b>	2020-Hamburg-013	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	0	
Property Protection	1	
Cost-Effectiveness	1	
Technical	0	Technical issues have not been identified
Political	0	Political issues have not been identified
Legal	0	No legal issues have been identified
Fiscal	0	The exact cost has not yet been identified
Environmental	0	No adverse environmental impact
Social	1	
Administrative	0	No known administrative issues
Multi-Hazard	1	
Timeline	1	
Agency Champion	1	
Other Community Objectives	1	
<b>Total</b>	7	
<b>Priority (High/Med/Low)</b>	Medium	



Action Worksheet			
<b>Project Name:</b>	North Governor Haines Street Drainage		
<b>Project Number:</b>	2021-Hamburg-021		
Risk / Vulnerability			
<b>Hazard(s) of Concern:</b>	Flood, Severe Weather		
<b>Description of the Problem:</b>	North Governor Haines Street experiences drainage issues.		
Action or Project Intended for Implementation			
<b>Description of the Solution:</b>	The Borough will conduct a feasibility study for North Governor Haines Street drainage issues. If cost-effective measures are identified, the Borough will pursue grant funding and implement the selected actions.		
<b>Is this project related to a Critical Facility or Lifeline?</b>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
<b>Level of Protection:</b>	TBD by feasibility study	<b>Estimated Benefits (losses avoided):</b>	Reduction in flood risk
<b>Useful Life:</b>	TBD by feasibility study	<b>Goals Met:</b>	2
<b>Estimated Cost:</b>	TBD by feasibility study	<b>Mitigation Action Type:</b>	Local Plans and Regulations, Structure and Infrastructure Projects
Plan for Implementation			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	Within 5 years
<b>Estimated Time Required for Project Implementation:</b>	5 years	<b>Potential Funding Sources:</b>	HMGP, BRIC, municipal budget
<b>Responsible Organization:</b>	Engineer, DPW	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard mitigation planning, stormwater planning
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues
	Elevate roadways	\$500,000	Costly and may not solve problem
	Relocate roadways	N/A	Not possible
Progress Report (for plan maintenance)			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			



Action Worksheet		
<b>Project Name:</b>	North Governor Haines Street Drainage	
<b>Project Number:</b>	2021-Hamburg-021	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	0	
Property Protection	1	Reduction in flooding risk
Cost-Effectiveness	0	
Technical	1	Technically feasible project
Political	1	
Legal	1	The Borough 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	1	
Multi-Hazard	1	Flood, Severe Weather
Timeline	0	
Agency Champion	1	Engineer, DPW
Other Community Objectives	1	
<b>Total</b>	9	
<b>Priority (High/Med/Low)</b>	High	



Action Worksheet			
<b>Project Name:</b>	Limekiln Road Drainage Improvement Project		
<b>Project Number:</b>	2021-Hamburg-022		
Risk / Vulnerability			
<b>Hazard(s) of Concern:</b>	Flood, Severe Weather		
<b>Description of the Problem:</b>	The existing culvert on Limekiln Road does not have adequate capacity, resulting in flooding on roadway and near the Pump Station.		
Action or Project Intended for Implementation			
<b>Description of the Solution:</b>	The Borough Engineer will determine the necessary culvert and drainage channel improvements that are required to pass required capacity. The Borough will then complete the identified improvements.		
<b>Is this project related to a Critical Facility or Lifeline?</b>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
<b>Level of Protection:</b>	TBD by size selected	<b>Estimated Benefits (losses avoided):</b>	Reduction in flood risk
<b>Useful Life:</b>	30 years	<b>Goals Met:</b>	2
<b>Estimated Cost:</b>	\$500,000	<b>Mitigation Action Type:</b>	Structure and Infrastructure Projects
Plan for Implementation			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	Within 5 years
<b>Estimated Time Required for Project Implementation:</b>	6 months	<b>Potential Funding Sources:</b>	HMGP, BRIC, municipal budget
<b>Responsible Organization:</b>	Engineering	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard mitigation planning
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues
	Elevate roadway	\$500,000	Costly and may not solve problem
	Relocate roadway	N/A	Not possible
Progress Report (for plan maintenance)			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			



Action Worksheet		
<b>Project Name:</b>	Limekiln Road Drainage Improvement Project	
<b>Project Number:</b>	2021-Hamburg-022	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
<b>Life Safety</b>	1	Protects life from flooding.
<b>Property Protection</b>	1	Protects culvert from flood damage
<b>Cost-Effectiveness</b>	0	
<b>Technical</b>	1	Technically feasible project
<b>Political</b>	1	
<b>Legal</b>	1	The Borough has the legal authority to conduct the project.
<b>Fiscal</b>	0	Project will require grant funding.
<b>Environmental</b>	1	
<b>Social</b>	0	Project would reduce flooding impacts
<b>Administrative</b>	1	
<b>Multi-Hazard</b>	1	Flood, Severe Weather
<b>Timeline</b>	0	Within 5 years
<b>Agency Champion</b>	1	Engineering
<b>Other Community Objectives</b>	1	
<b>Total</b>	10	
<b>Priority (High/Med/Low)</b>	High	



## 9.11 TOWNSHIP OF HAMPTON

This section presents the jurisdictional annex for the Township of Hampton. The annex includes a general overview of the Township of Hampton; an assessment of the Township of Hampton’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.

### 9.11.1 Hazard Mitigation Planning Team

The Township of Hampton 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 9.11-1. Hazard Mitigation Planning Team**

Primary Point of Contact		Alternate Point of Contact
Name / Title: Edward Hayes, Township Emergency Management Coordinator Address: 1 Rumsey Way, Newton, NJ 07860 Phone Number: (973) 592-2767 Email: biged5679@yahoo.com		Name / Title: Jessica M. Caruso, Administrator Address: 1 Rumsey Way, Newton, NJ 07860 Phone Number: (973) 383-5570 Email: administrator@hamptontwp-nj.org
NFIP Floodplain Administrator		
Name / Title: Harold E. Pellow, Township Engineer 17 Plains Road, August, NJ 07822 Phone Number: 973-948-6463 Email: hpellow@hpellow.com		
Name	Title	Method of Participation
Jessica Caruso	Township Administrator	Attended the kickoff meeting, risk assessment meeting and mitigation strategy workshop; provided data and information for annex development; reviewed annex*
Ed Hayes	OEM Coordinator	Attended the kickoff meeting, annex training, risk assessment meeting and mitigation strategy workshop; provided data and information for annex development; reviewed annex*
Daniel Bayles	CPWM	Contributed to annex development; reviewed annex*
Harold E. Pellow	Engineer and NFIP Floodplain Administrator	Reviewed annex*
Robert W. Huber	Building Code Official	Reviewed annex*
Daniel Bayles	Public Works	Reviewed annex*
Lt. J. Shawell	NJ State Police Station Commander	Reviewed annex*
Chief	Hampton Fire & Rescue	Reviewed annex*

\*Refer to Jurisdictional Annex Review Sign-Off Sheet in Appendix B.







### 9.11.2 Jurisdiction Profile

The Township of Hampton is located in northwestern Sussex County. It has a total area of approximately 25.3 square miles. The Township is bordered to the north by Frankford Township, to the south by Fredon Township and the Town of Newton, to the east by the Townships of Lafayette and Andover, and to the west by the Township of Stillwater. The following unincorporated communities are located within the Township: Crandon Lakes, Myrtle Grove, Balesville, Halsey, and Washingtonville. Numerous ponds and lakes are found throughout the Township. The Paulins Kill flows through the center of the Township. Other streams found in Hampton Township include Troys Brook, Clearview Creek, Swartswood Creek, and smaller tributaries of Paulins Kill.

According to the U.S. Census, the 2010 population for the Township of Hampton was 5,196. The estimated 2018 population was 4,916, a 5.3 percent decrease from the 2010 Census. Data from the 2018 U.S. Census American Community Survey indicate that 2.8 percent of the population is 5 years of age or younger and 19.4 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.

### 9.11.3 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 9.10-2 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 9.11-2. Recent and Expected Future Development**

Type of Development	2015		2016		2017		2018		2019	
<b>Number of Building Permits for New Construction Issued Since the Previous HMP</b>										
	<b>Total</b>	<b>Within SFHA</b>	<b>Total</b>	<b>Within SFHA</b>	<b>Total</b>	<b>Within SFHA</b>	<b>Total</b>	<b>Within SFHA</b>	<b>Total</b>	<b>Within SFHA</b>
Single and Two-Family Units	0	0	1	0	4	0	1	0	3	0
Multi-Family	0	0	0	0	0	0	0	0	0	0
Other (commercial, mixed-use, etc.)	0	0	0	0	0	0	0	0	0	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		
<b>Recent Major Development and Infrastructure from 2015 to Present</b>										
None identified.										
<b>Known or Anticipated Major Development and Infrastructure in the Next Five (5) Years</b>										
None anticipated.										

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

### 9.11.4 Capability Assessment

Section 5 (Capability Assessment) describes the components included in the capability assessment and their significance for hazard mitigation planning. The Township of Hampton 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 Hampton 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 Hampton and where hazard mitigation has been integrated.

**Table 9.11-3. 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.
<b>Codes, Ordinances, &amp; Requirements</b>					
<b>Building Code</b>	Yes	State & Local	Yes	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>• 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</li> <li>• The Building Department is responsible for this code in compliance with State Uniform Construction Code Act (N.J.S. 52:27D-119 et seq.).</li> </ul>					
<b>Zoning Code</b>	Yes	Local	Yes – if municipality has a Planning Board	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>• 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.</li> <li>• The Planning Board is responsible for this code in compliance with Chapter 108 of Hampton Township Code.</li> </ul>					
<b>Subdivisions</b>	Yes	Local	Yes – if municipality has a Planning Board	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>• 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</li> </ul>					





	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.
<p><i>the filing of such plats with the county recording officer and approval of site plans by resolution of the planning board as a condition for the issuance of a permit for any development, except that subdivision or individual lot applications for detached one or two dwelling-unit buildings shall be exempt from such site plan review and approval; provided that the resolution of the board of adjustment shall substitute for that of the planning board whenever the board of adjustment has jurisdiction over a subdivision or site plan pursuant to subsection 63b. of this act . Dictated by the Municipal Land Use Law. NJ Statute 40:27-6.2 - the board of commissioners of any county having a county planning board shall provide for the review of all subdivisions of land within the county by said county planning board and for the approval of those subdivisions affecting county road or drainage facilities as set forth and limited hereinafter in this section.</i></p> <ul style="list-style-type: none"> <li><i>The Planning Board is responsible for this ordinance in compliance with Chapter 85 of Hampton Township Code.</i></li> </ul>					
<b>Stormwater Management</b>	Yes	State & Local	Yes	Yes	-
<p><b>Comment:</b></p> <ul style="list-style-type: none"> <li>See Title 7 of the NJ Administrative Code, N.J.A.C. 7:8</li> <li>The Planning Board is responsible for this ordinance in compliance with Chapter 109.</li> </ul>					
<b>Post-Disaster Recovery</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Real Estate Disclosure</b>	Yes	State, Division of Consumer Affairs	Yes	Yes	-
<p><b>Comment:</b></p> <ul style="list-style-type: none"> <li>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.</li> </ul>					
<b>Growth Management</b>	Yes	Local	Yes – if municipality has a Planning Board	Yes	-
<p><b>Comment:</b></p> <ul style="list-style-type: none"> <li>State Mandated on a municipal level. See Zoning Ordinance; Also - Plan Endorsement Process via the State Development &amp; 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.</li> <li>The Planning Board is responsible for these ordinances in compliance with Chapter 108-53 of Hampton Twp. Code.</li> </ul>					
<b>Site Plan Review</b>	Yes	Local	Yes – if municipality has a Planning Board	Yes	-
<p><b>Comment:</b></p> <ul style="list-style-type: none"> <li>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 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.</li> <li>The Planning Board is responsible for these requirements in compliance with Chapter 85 of the Hampton Twp. Code.</li> </ul>					
<b>Environmental Protection</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Flood Damage Prevention</b>	Yes	Federal, State & Local	Yes	Yes	2021-HamptonTwp-008
<b>Comment:</b>					



	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.
<ul style="list-style-type: none"> <li>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.</li> <li>The Township Engineer is responsible for this ordinance in compliance with Chapter 62.</li> <li>The Ordinance lacks discussion of the state's mandated freeboard requirement and requires update.</li> </ul>					
<b>Wellhead Protection</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Emergency Management</b>	Yes	County and Local	No	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>Chapter 12, Fire Department, Volunteer</li> </ul>					
<b>Climate Change</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Disaster Recovery Ordinance</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Disaster Reconstruction Ordinance</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Other [Special Purpose Ordinances (i.e., sensitive areas, steep slope)]</b>	Yes	Local	Yes	Yes	-
<i>Comment:</i> The Township is responsible for these ordinances in compliance with Chapter 48 – Carbonate Area Development, Chapter 87 – Soil Removal, and Chapter 95 – Trees. The Township's Stormwater Management ordinance (Chapter 207) regulates soils.					
<b>Planning Documents</b>					
<b>Comprehensive / Master Plan</b>	Yes	Local	Yes	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>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.</li> <li>The Planning Board is responsible for this plan in compliance with Township of Hampton Master Plan, 2002.</li> </ul>					
<b>Capital Improvement Plan</b>	Yes	Local	No	No	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>The Finance Department is responsible for this plan in compliance with the Township Budget,</li> </ul>					
<b>Disaster Debris Management Plan</b>	No	-	Yes	-	2021-HamptonTwp-007
<i>Comment:</i>					
<b>Floodplain or Watershed Plan</b>	Yes	State & Local	No	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>The Township Engineer is responsible for this plan in compliance with Chapter 62 Entitled Flood Damage Prevention Adopted 1982 and Updated 2011.</li> </ul>					





	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.
<b>Stormwater Management Plan</b>	Yes	State & Local	Yes	Yes	-
<b>Comment:</b> <ul style="list-style-type: none"> <li>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.</li> <li>State/Local are responsible for this plan, which was adopted in 2006 entitled "Storm Water Control."</li> </ul>					
<b>Stormwater Pollution Prevention Plan</b>	No	State & Local	No	-	-
<b>Comment:</b> <ul style="list-style-type: none"> <li>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.</li> </ul>					
<b>Urban Water Management Plan</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Habitat Conservation Plan</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Economic Development Plan</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Shoreline Management Plan</b>	No	-	Yes – if located in a coastal zone	-	-
<b>Comment:</b> <ul style="list-style-type: none"> <li>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.</li> </ul>					
<b>Community Wildfire Protection Plan</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Community Forest Management Plan</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Transportation Plan</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Agriculture Plan</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Climate Action Plan</b>	No	-	No	-	-
<b>Comment:</b>					





	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.
<b>Tourism Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Business Development Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Other: Open Space Plan</b>	Yes	Local	No	No	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>The Planning Board is responsible for this plan in compliance with Chapter 17 of Hampton Twp. Code. The plan was adopted in November 2000 and revised and updated in January of 2013.</li> </ul>					
<b>Response/Recovery Planning</b>					
<b>Comprehensive Emergency Management Plan (CEMP) / Emergency Operations Plan (EOP)</b>	Yes	County & Local	Yes	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>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.</li> <li>The County is responsible for this plan in compliance with Hampton Township Emergency Operations Plan – Updated 2014.</li> </ul>					
<b>Threat &amp; Hazard Identification &amp; Risk Assessment (THIRA)</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Post-Disaster Recovery Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Continuity of Operations Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Public Health Plan</b>	Yes	County	No	No	-
<i>Comment:</i>					
<b>Other: Watershed Management or Protection Plan</b>	Yes	State & Local	No	No	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>The Planning Board is responsible for this plan in compliance with Chapter 109-9, 11 &amp; 13 and adopted 2006 Storm Water Control.</li> </ul>					

**Table 9.11-4. Development and Permitting Capability**

Criterion	Response
Does your jurisdiction issue development permits? - If no, who does? If yes, which department?	Yes; Planning and Zoning; Construction Dept
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.	Yes; The Township completed a Housing Plan in 2019 with regard to its affordable housing obligation. The plan included a buildable land inventory that identified two major tracts of land for low and moderate income housing, with one located in the sewer service area.





**ADMINISTRATIVE AND TECHNICAL CAPABILITY**

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

**Table 9.11-5. Administrative and Technical Capabilities**

Staff/Personnel Resource	Available?	Department/Agency/Position
<b>Administrative Capability</b>		
Planning Board	Yes	Planning Board/Governing Body
Mitigation Planning Committee	Yes	Emergency Management Coordinator
Environmental Board / Commission	No	-
Open Space Board / Committee	Yes	Open Space Committee
Economic Development Commission / Committee	No	-
Warning Systems / Services (reverse 911, outdoor warning signals)	Yes	Reverse 9-1-1 (opt-in)
Maintenance program to reduce risk	Yes	Risk Management Consultant/Statewide Insurance
Mutual aid agreements	Yes	Local/County
<b>Technical/Staffing Capability</b>		
Planners or engineers with knowledge of land development and land management practices	Yes	Township Engineer Harold E. Pellow
Engineers or professionals trained in building or infrastructure construction practices	Yes	Township Engineer Harold E. Pellow
Planners or engineers with an understanding of natural hazards	Yes	Township Engineer Harold E. Pellow
Staff with training in benefit/cost analysis	Yes	Township Administrator Jessica Caruso
Staff with training in green infrastructure	Yes	Township Engineer Harold E. Pellow
Staff with education/knowledge/training in low impact development	Yes	Township Engineer Harold E. Pellow
Surveyor	Yes	Township Engineer Harold E. Pellow
Stormwater engineer	Yes	Township Engineer Harold E. Pellow
Personnel skilled or trained in GIS applications	Yes	Township Engineer Harold E. Pellow
Local or state water quality professional	No	-
Scientist familiar with natural hazards in local area	No	-
Emergency manager	Yes	Emergency Management Coordinator Edward Hayes
Watershed planner	No	-
Environmental specialist	No	-
Grant writers	Yes	Township Administrator Jessica Caruso
Resilience Officer	No	-
Other: NFIP Floodplain Administrator	Yes	Township Engineer Harold E. Pellow
Other: Professionals trained in conducting damage assessments	Yes	Construction Official and Local Sub-code Officials

**FISCAL CAPABILITY**

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

**Table 9.11-6. Fiscal Capabilities**

Financial Resource	Accessible or Eligible to Use?
Community Development Block Grants (CDBG, CDBG-DR)	Yes





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

**EDUCATION AND OUTREACH CAPABILITY**

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

**Table 9.11-7. Education and Outreach Capabilities**

Criterion	Response
Do you have a public information officer or communications office?	Yes; Edward Hayes (Emergency Management)
Do you have personnel skilled or trained in website development?	Yes; website creation in progress
Do you have hazard mitigation information available on your website? -If yes, briefly describe.	Yes; COVID-19 info and HMP poll/survey
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.	No
Do you have any other programs already in place that could be used to communicate hazard-related information? If yes, briefly describe.	Yes; OEM Register Ready

**COMMUNITY CLASSIFICATIONS**

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

**Table 9.11-8. Community Classifications**

Program	Participating?	Classification	Date Classified
Community Rating System	No	-	-
Building Code Effectiveness Grading Schedule (BCEGS)	No	-	-
Public Protection (Fire ISO Protection Class)	Yes	9	2020
Storm Ready Certification	No	-	-
Firewise Community Classification	No	-	-
Sustainable Jersey	No	-	-

**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 9.11-9. 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	Strong
Invasive Species	Moderate
Nor’Easter	Strong
Severe Weather	Strong
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.

**NATIONAL FLOOD INSURANCE PROGRAM**

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

**Table 9.11-10. National Flood Insurance Program Compliance**

Criterion	Response
What local department is responsible for floodplain management?	Township Engineer & DPW
Who is your floodplain administrator? (name, department/position)	Harold E. Pellow & Associates, Inc.
Are any certified floodplain managers on staff in your jurisdiction?	No
What is the date that your flood damage prevention ordinance was last amended?	September 29, 2011
Does your floodplain management program meet or exceed minimum requirements? -If exceeds, in what ways?	The program meets minimum requirements set by FEMA and the State.
When was the most recent Community Assistance Visit or Community Assistance Contact?	July 30, 2012
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?	No





Criterion	Response
If so, state what they are.	
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?	Continuing education and certification training on floodplain management would be welcomed by the FPA if it were offered in the County.
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, however the County has considered joining and would attend a CRS seminar if offered locally.
How many flood insurance policies are in force in your jurisdiction?*	7 policies
-What is the insurance in force?	\$2,256,500 insurance in force
-What is the premium in force?	\$5,135 premium in force
How many total loss claims have been filed in your jurisdiction?*	1 claim
-How many claims are still open or were closed without payment?	\$0 in payments
-What were the total payments for losses?	
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

### 9.11.5 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 Hampton’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 9.10-11 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 9.11-11. 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 23 <sup>rd</sup> and 24 <sup>th</sup> .	Although the County was impacted, the Township did not report damages or impacts.
March 7, 2018	Winter Storm	No	An area of low pressure moving into the region caused considerable snowfall in Sussex County.	The Township did not experience property damage. The Township expanded funds for overtime for DPW.
May 2018	Rain/Wind Event	No	The County experienced a rain/wind event causing localized damage.	The Township did not experience property damage. The Township expanded funds for overtime for DPW.
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.	As of December 24, 2020, the Township has had 117 reported cases of COVID-19.

Source: FEMA 2020; NOAA-NCEI 2020; Sussex County





### 9.11.6 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 Hampton 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 Hampton 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 Hampton has significant exposure.

#### REPETITIVE FLOOD LOSSES

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

- 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

#### 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 9.11-12. Critical Facilities and Lifelines Flood Exposure

Name	Type	Exposure	
		1% Event	0.2% Event
22-23 Howell Mill Pond	Dams	X	X
22-24 Balesville Dam	Dams	X	X

Source: Sussex County Planning Partnership 2020

#### IDENTIFIED ISSUES AND PROBLEM AREAS

The jurisdiction has identified the following vulnerabilities within their community:

- The Township has two culverts that experience drainage issues. One culvert is located at the corner of Ike Williams Road and Dickson Road; the other is located at Old Swartswood Road.
- The Township’s trees and forest stands have been impacted by Gypsy moths and lantern fly infestations. The past infestations have left a number of dead standing oaks.

#### 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 Hampton 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 Hampton. The Township of Hampton 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 Hampton indicated that the risk for drought had decreased since 2016.

**Table 9.11-13. Township of Hampton Hazard Ranking**

<b>Dam Failure</b>	<b>Disease Outbreak</b>	<b>Drought</b>	<b>Earthquake</b>	<b>Flood</b>	<b>Geologic</b>	
Low	Medium	Low	Low	Medium	Low	
<b>Hazardous Materials</b>	<b>Hurricane and Tropical Storm</b>	<b>Invasive Species</b>	<b>Nor’Easter</b>	<b>Severe Weather</b>	<b>Severe Winter Weather</b>	<b>Wildfire</b>
Medium	High	Medium	High	High	High	Medium

### 9.11.7 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 9.10-15 and Table 9.10-16 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 9.11-14. 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	Enter 2021 HMP Action #
Hampton-1 (new)	Ensure continuity of operations by purchasing and installing emergency generators	Township Administration	Completed		
Hampton-2 (old #3)	Develop and implement an enhanced all-hazards, public outreach / education / mitigation information program on natural hazard risks and what they can do in the way of mitigation and preparedness, including flood insurance.	Township Administration	Ongoing Capability		



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 #
Hampton-3 (new)	Purchase emergency vehicles – fire truck and ambulance	Township Fire and Rescue	In Progress	X	2021-HamptonTwp-002
Hampton-4 (new)	Stabilize Ike Williams and Old Swartswood Roads to ensure life safety and passage – roads are deteriorating due to erosion from water.	Township and NJDEP	No Progress	X	2021-HamptonTwp-001, 2021-HamptonTwp-003
Hampton-5 (old #1)	Retrofit roof to meet current snow load standards on Department of Public Works facility located on Rumsey Way.	Township DPW	In Progress	X	2021-HamptonTwp-004
Hampton-6 (old #3)	Implement Fire Wise program throughout Township.	OEM Coordinator	In Progress	X	2021-HamptonTwp-005

The Township of Hampton did not identify any additional mitigation projects/activities that were completed.

**PROPOSED HAZARD MITIGATION INITIATIVES FOR THE PLAN UPDATE**

The Township of Hampton 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 Hampton 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 9.10-15 summarizes the comprehensive-range of specific mitigation initiatives the Township of Hampton 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 9.10-16 provides a summary of the prioritization of all proposed mitigation initiatives for this HMP update.





Table 9.11-15. 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-Hampton Twp-001	Old Swartswood Road Culvert Mitigation	<b>Problem:</b> The culvert located at the northern intersection of CR-622 (Swartswood Road) and Old Swartswood is deteriorating. The 36" RCCP drain requires replacement and may cause the road to collapse. The shoulder of the road has longitudinal cracking, and there is significant erosion downstream of the culvert. The concrete is separating in several areas, and rip rap has fallen through the pipe separation. The runoff derives from two ponds at the Salesian Sisters property, where the channel runs downhill, under the road, the enters a small pond. From the pond, the channel runs underneath the Township and County Road.	Existing	Flood; Hurricane/Tropical Storm; Nor'easter; Severe Weather; Severe Winter Weather	1, 2, 4, 6	Township DPW/Engineer; DEP; Sussex County; private owners	HMGP; BRIC; Local match; County funds	Preservation of road functions	Medium	3 years	High	SIP	SP
		<b>Solution:</b> The Township proposes to re-examine drainage in the area and implement mitigating measures for the culvert.											
2021-Hampton Twp-002	Ambulance Acquisition	<b>Problem:</b> The Township has been losing emergency vehicles due to aging equipment and loss of staff. The Township has identified a need for an ambulance.	New	All Hazards	1, 3, 5, 6	Hampton Fire Rescue	AFG; Local match	Enhanced emergency services operations	Medium	5 years	Medium	SIP	ES
		<b>Solution:</b> The Township proposes to acquire a new ambulance.											
2021-Hampton Twp-003	Ike Williams/Dickson Road Mitigation	<b>Problem:</b> Ike Williams Road and Dickson Road comprise a continuous 1.6-mile road that branches off Route 521. The terminus of these two roads occurs at a curve located adjacent to private properties, where a tributary of Little Swartswood Lake runs southward towards the lake. Due to the unique topography of the area, water runs off the surrounding hills and washes out the culvert located at the curve. The private property ownership complicates potential mitigation solutions.	Existing	Flood; Geological; Hurricane/Tropical Storm; Nor'easter; Severe Weather	1, 2, 4, 6	Township DPW; DEP; Private owner	HMGP; BRIC; Transportation Trust Fund; Local match	Protection of public infrastructure and private	Medium	3 years	High	SIP	SP



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
		In addition to this culvert, Ike Williams Road shows longitudinal cracking along the roadway where the creek under the aforementioned intersection runs under Ike Williams Road approximately 150 feet to the southwest.  <b>Solution:</b> The Township proposes to study the drainage issue and implement mitigation measures to protect the roadway intersection, downstream properties, and the Ike Williams Road culvert. Potential mitigation measures could include retention basins.											
2021-Hampton Twp-004	DPW Roof Retrofit	<b>Problem:</b> The roof of the Township’s DPW facility requires a retrofit for compliance.  <b>Solution:</b> The Township proposes to examine the roof of the DPW and determine and implement design solutions for the roof.	Existing	Hurricane/ Tropical Storm Nor’easter; Severe Weather; Severe Winter Weather	1, 2, 4, 6	Township DPW; Engineer	Township funds; HMGP	Protection of DPW facility	Low	1 year	High	SIP	PP
2021-Hampton Twp-005	Firewise Participation	<b>Problem:</b> The Township has a significant wildfire risk that is exacerbated by dead trees resulting from pest infestations (gypsy moth and lantern flies) and federal/state land management issues.  <b>Solution:</b> The Township proposes to participate in the Firewise program to mitigate wildfire risk.	Existing	Wildfire	1, 2, 3, 4, 5, 6	NJDEP; Hampton Fire Rescue	Township funds	Increased preparation/responsiveness to wildfires	No cost	1 year	High	EAP	ES
2021-Hampton Twp-006	OEM Trailer Acquisition	<b>Problem:</b> The Township buildings lack a capacity for OEM functions and storage of records related to emergency management.  <b>Solution:</b> The Township proposes to acquire a trailer to house OEM functions and consolidate records that need to be retained from hazard events.	New	All hazards	3, 5, 6	Township OEM	FEMA; Township Funds	Storage; communications safety; consolidation of records /FEMA	Low	Short term	Medium	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
2021-Hampton Twp-007	Disaster Debris Management Plan	<b>Problem:</b> The Township lacks a debris management plan.	N/A	All Hazards	4, 6	Hampton Twp. - Administration	Municipal budget	Plan in place for debris management	Staff time	1 year	High	LPR	ES
		<b>Solution:</b> The Township will develop and adopt a Disaster Debris Management Plan.											
2021-Hampton Twp-008	Flood Damage Prevention Ordinance	<b>Problem:</b> The Township’s Flood Damage Prevention Ordinance lacks the state mandated 1 foot of freeboard.	New	Flood	2	Administration, FPA	Township budget	Increased flood protection for new construction	Staff time	6 months	High	LPR	PR
		<b>Solution:</b> The Township will update the ordinance to include 1 foot of freeboard for new construction in the SFHA.											

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:

- BRIC Building Resilient Infrastructure and Communities
- FMA Flood Mitigation Assistance Grant Program
- HMGP Hazard Mitigation Grant 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 9.11-16. 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-HamptonTwp-001	Old Swartswood Road Culvert Mitigation	1	1	1	1	1	1	-1	1	1	1	1	1	1	1	13	High
2021-HamptonTwp-002	Ambulance Acquisition	1	1	1	1	1	1	-1	1	1	1	1	1	1	1	13	High
2021-HamptonTwp-003	Ike Williams/Dickson Road Mitigation	1	1	1	1	1	1	-1	1	1	1	1	1	1	1	13	High
2021-HamptonTwp-004	DPW Roof Retrofit	1	1	1	1	1	1	-1	1	1	1	1	1	1	1	13	High
2021-HamptonTwp-005	Firewise Participation	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	High
2021-HamptonTwp-006	OEM Trailer Acquisition	0	1	0	1	1	1	-1	0	1	1	1	1	1	0	8	Medium
2021-HamptonTwp-007	Disaster Debris Management Plan	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	High
2021-HamptonTwp-008	Flood Damage Prevention Ordinance	0	1	1	1	1	1	1	1	1	0	1	1	1	1	12	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 9.11-17. 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				X			
Disease Outbreak	X				X			
Drought	X				X			
Earthquake	X				X			
Flood	X				X			
Geologic	X				X			
Hazardous Materials	X				X			
Hurricane and Tropical Storm	X	X			X	X		
Invasive Species	X				X			
Nor’Easter	X	X			X	X		
Severe Weather	X	X			X	X		
Severe Winter Weather	X	X			X	X		
Wildfire	X				X			X

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

**RED** high ranked hazard

**ORANGE** medium ranked hazard

**YELLOW** low ranked hazard



Figure 9.11-1. Township of Hampton Hazard Area Extent and Location Map 1

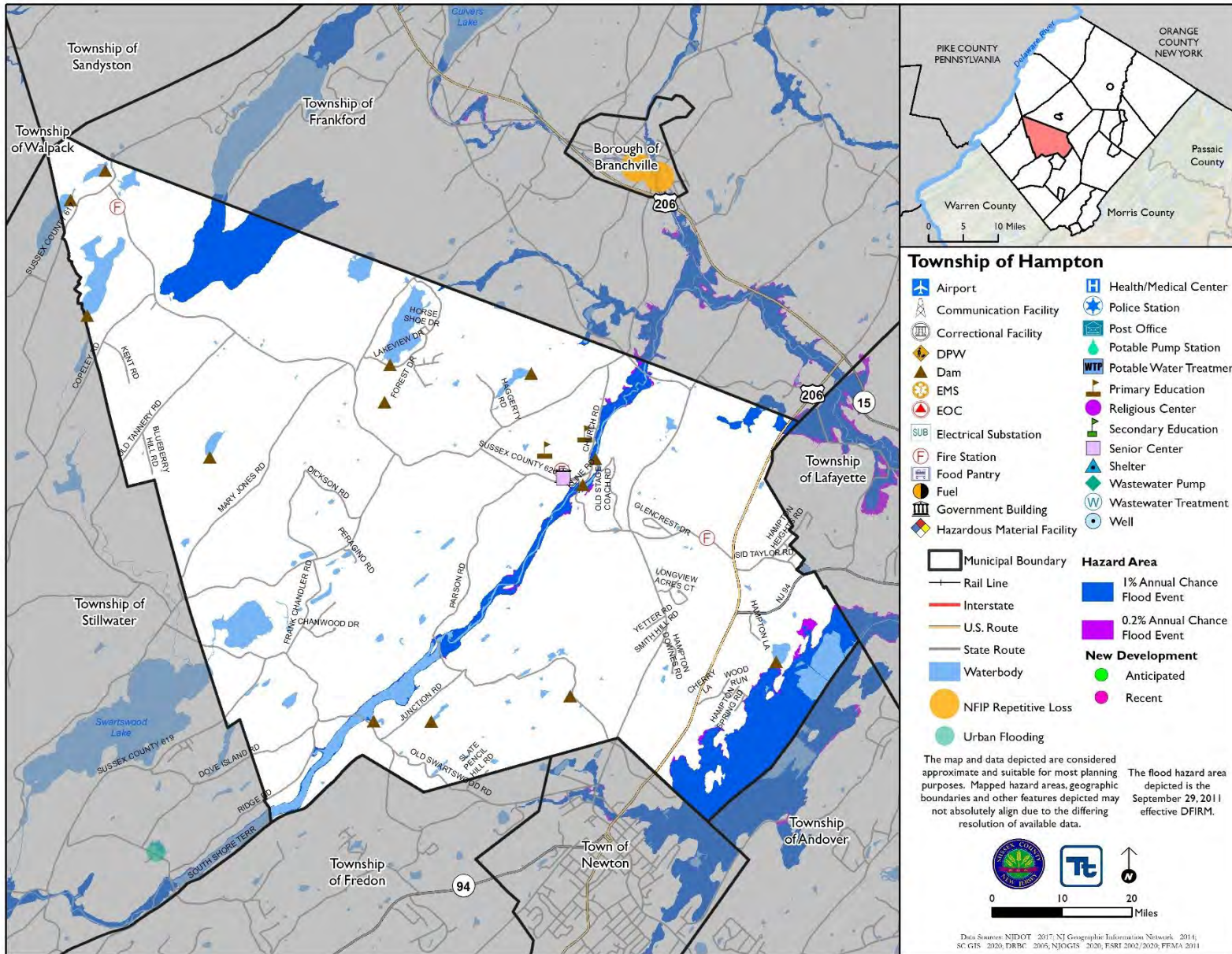




Figure 9.11-2. Township of Hampton Hazard Area Extent and Location Map 2

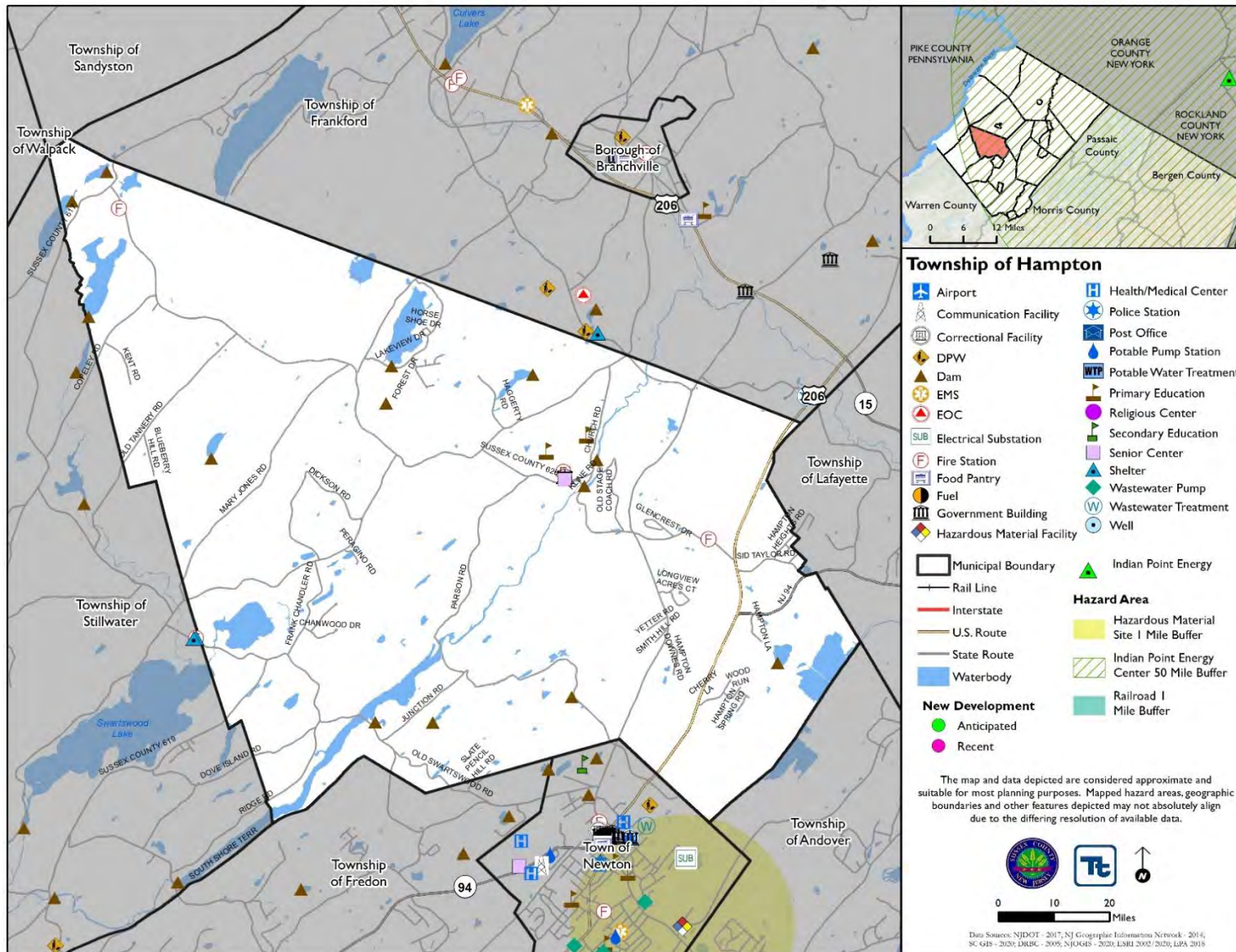
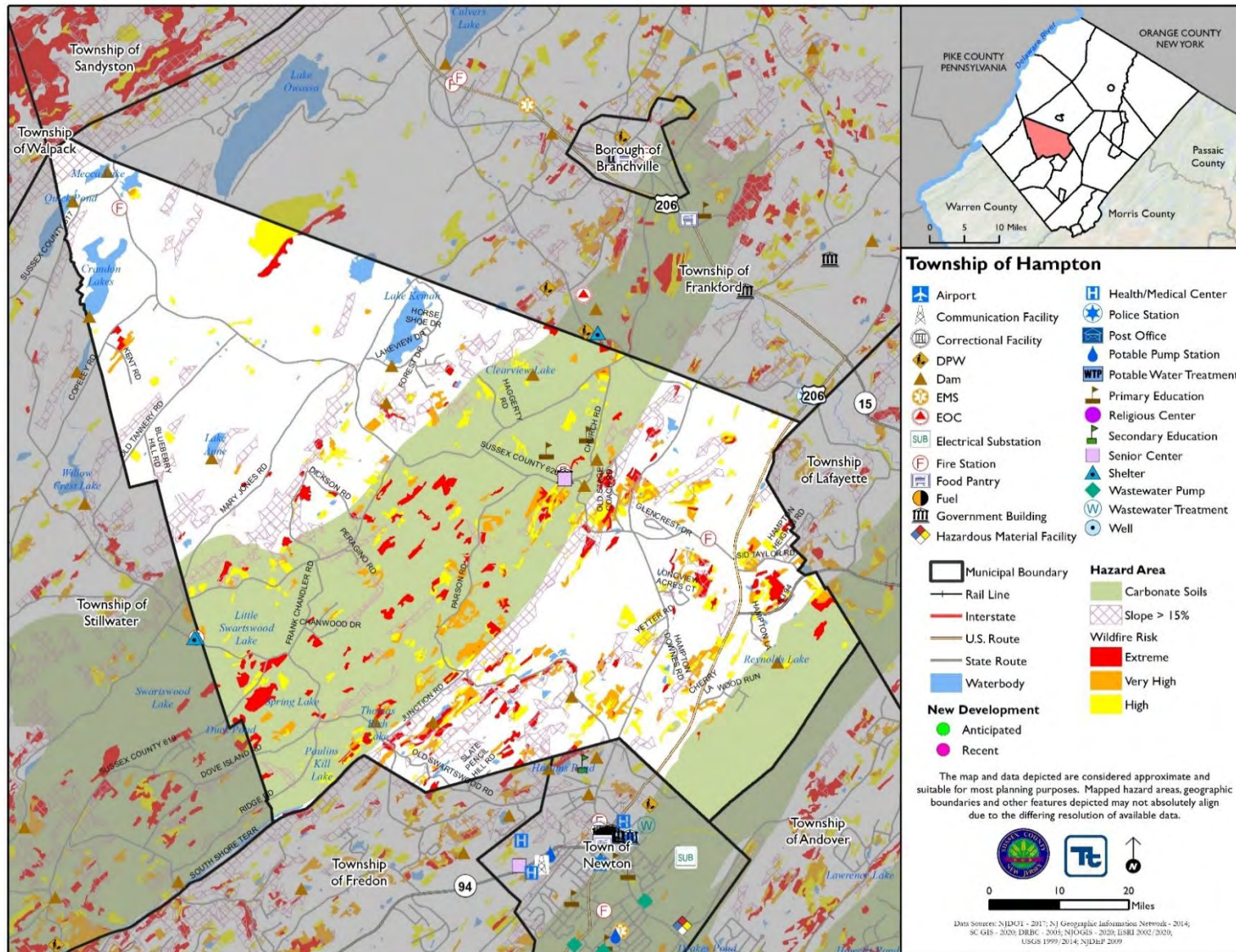




Figure 9.11-3 Township of Hampton Hazard Area Extent and Location Map 3





Action Worksheet			
<b>Project Name:</b>	Old Swartswood Road Culvert Mitigation		
<b>Project Number:</b>	2021-HamptonTwp-001		
Risk / Vulnerability			
<b>Hazard(s) of Concern:</b>	Flood; Hurricane Tropical Storm; Nor'easter; Severe Weather; Severe Winter Weather		
<b>Description of the Problem:</b>	The culvert located at the northern intersection of CR-622 (Swartswood Road) and Old Swartswood is deteriorating. The 36" RCCP drain requires replacement and may cause the road to collapse. The shoulder of the road has longitudinal cracking, and there is significant erosion downstream of the culvert. The concrete is separating in several areas, and rip rap has fallen through the pipe separation. The runoff derives from two ponds at the Salesian Sisters property, where the channel runs downhill, under the road, the enters a small pond. From the pond, the channel runs underneath the Township and County Road.		
Action or Project Intended for Implementation			
<b>Description of the Solution:</b>	The Township proposes to re-examine drainage in the area and implement mitigating measures for the culvert.		
<b>Is this project related to a Critical Facility or Lifeline?</b>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
<b>Level of Protection:</b>	N/A	<b>Estimated Benefits (losses avoided):</b>	Preservation of road functions
<b>Useful Life:</b>	30 years	<b>Goals Met:</b>	1, 2, 4, 6
<b>Estimated Cost:</b>	TBD	<b>Mitigation Action Type:</b>	Structure and Infrastructure Project
Plan for Implementation			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	5 years
<b>Estimated Time Required for Project Implementation:</b>	1 year	<b>Potential Funding Sources:</b>	HMGP; BRIC; Local match; County funds
<b>Responsible Organization:</b>	Township DPW/Engineer; DEP; Sussex County; private owners	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Capital Improvement Plan
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues
	Road abandonment	Low	Not logistically feasible
	Culvert Mitigation	TBD	Technically feasible
Progress Report (for plan maintenance)			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			



Action Worksheet		
<b>Project Name:</b>	Old Swartswood Road Culvert Mitigation	
<b>Project Number:</b>	2021-HamptonTwp-001	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	
Property Protection	1	Culvert Mitigation will protect road and downstream properties
Cost-Effectiveness	1	
Technical	1	
Political	1	
Legal	1	
Fiscal	-1	Project requires funding
Environmental	1	
Social	1	Project prevents social disruption from utility interruption
Administrative	1	
Multi-Hazard	1	Flood; Hurricane Tropical Storm; Nor'easter; Severe Weather; Severe Winter Weather
Timeline	1	
Agency Champion	1	Township will champion
Other Community Objectives	1	
<b>Total</b>	13	
<b>Priority (High/Med/Low)</b>	High	



Old Swartswood Rd Detain 12/16/20



Outlet



Outlet down hill



Pipe Separation



Upstream - Recently dug out  
by property owner  
- Root exposure



Action Worksheet			
<b>Project Name:</b>	Ike Williams/Dickson Road Mitigation		
<b>Project Number:</b>	2021-HamptonTwp-003		
Risk / Vulnerability			
<b>Hazard(s) of Concern:</b>	Flood; Hurricane Tropical Storm; Nor'easter; Severe Weather; Severe Winter Weather		
<b>Description of the Problem:</b>	<p>Ike Williams Road and Dickson Road comprise a continuous 1.6-mile road that branches off Route 521. The terminus of these two roads occurs at a curve located adjacent to private properties, where a tributary of Little Swartswood Lake runs southward towards the lake. Due to the unique topography of the area, water runs off the surrounding hills and washes out the culvert located at the curve. The private property ownership complicates potential mitigation solutions.</p> <p>In addition to this culvert, Ike Williams Road shows longitudinal cracking along the roadway where the creek under the aforementioned intersection runs under Ike Williams Road approximately 150 feet to the southwest.</p>		
Action or Project Intended for Implementation			
<b>Description of the Solution:</b>	The Township proposes to study the drainage issue and implement mitigation measures to protect the roadway intersection, downstream properties, and the Ike Williams Road culvert. Potential mitigation measures could include retention basins.		
<b>Is this project related to a Critical Facility or Lifeline?</b>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
<b>Level of Protection:</b>	N/A	<b>Estimated Benefits (losses avoided):</b>	Protection of public infrastructure and private
<b>Useful Life:</b>	30 years	<b>Goals Met:</b>	1, 2, 4, 6
<b>Estimated Cost:</b>	TBD	<b>Mitigation Action Type:</b>	Structure and Infrastructure Project
Plan for Implementation			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	3 years
<b>Estimated Time Required for Project Implementation:</b>	1 year	<b>Potential Funding Sources:</b>	HMGP; BRIC; Transportation Trust Fund; Local match
<b>Responsible Organization:</b>	Township DPW/Engineer; DEP; Sussex County; private owners	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Capital Improvement Plan
Three Alternatives Considered (including No Action)			
<b>Alternatives:</b>	<b>Action</b>	<b>Estimated Cost</b>	<b>Evaluation</b>
	No Action	\$0	Current problem continues
	Road abandonment	Low	Not logistically feasible
	Culvert Mitigation	TBD	Technically feasible
Progress Report (for plan maintenance)			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			



Action Worksheet		
<b>Project Name:</b>	Ike Williams/Dickson Road Mitigation	
<b>Project Number:</b>	2021-HamptonTwp-003	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	
Property Protection	1	Culvert Mitigation will protect road and downstream properties
Cost-Effectiveness	1	
Technical	1	
Political	1	
Legal	1	
Fiscal	-1	Project requires funding
Environmental	1	
Social	1	Project prevents social disruption from utility interruption
Administrative	1	
Multi-Hazard	1	Flood; Hurricane Tropical Storm; Nor'easter; Severe Weather; Severe Winter Weather
Timeline	1	
Agency Champion	1	Township will champion
Other Community Objectives	1	
<b>Total</b>	13	
<b>Priority (High/Med/Low)</b>	High	



Action Worksheet			
<b>Project Name:</b>	DPW Roof Retrofit		
<b>Project Number:</b>	2021-HamptonTwp-004		
Risk / Vulnerability			
<b>Hazard(s) of Concern:</b>	Hurricane/Tropical Storm Nor'easter; Severe Weather; Severe Winter Weather		
<b>Description of the Problem:</b>	The roof of the Township's DPW facility requires a retrofit for compliance.		
Action or Project Intended for Implementation			
<b>Description of the Solution:</b>	The Township proposes to examine the roof of the DPW and determine and implement design solutions for the roof.		
<b>Is this project related to a Critical Facility or Lifeline?</b>	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
<b>Level of Protection:</b>	N/A	<b>Estimated Benefits (losses avoided):</b>	Protection of DPW facility
<b>Useful Life:</b>	50 years	<b>Goals Met:</b>	1, 2, 4, 6
<b>Estimated Cost:</b>	TBD	<b>Mitigation Action Type:</b>	Structure and Infrastructure Project
Plan for Implementation			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	1 year
<b>Estimated Time Required for Project Implementation:</b>	1 year	<b>Potential Funding Sources:</b>	Township funds; HMGP
<b>Responsible Organization:</b>	Township DPW; Engineer	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Capital Improvement Plan
Three Alternatives Considered (including No Action)			
<b>Alternatives:</b>	<b>Action</b>	<b>Estimated Cost</b>	<b>Evaluation</b>
	No Action	\$0	Current problem continues
	Facility Replacement	High	Not cost effective
	Roof retrofit	TBD	Technically feasible
Progress Report (for plan maintenance)			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			



Action Worksheet		
<b>Project Name:</b>	DPW Roof Retrofit	
<b>Project Number:</b>	2021-HamptonTwp-004	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Project will protect workers in facility
Property Protection	1	Project will protect DPW facility
Cost-Effectiveness	1	
Technical	1	
Political	1	
Legal	1	
Fiscal	-1	Project requires funding
Environmental	1	
Social	1	Project prevents social disruption from loss of facility
Administrative	1	
Multi-Hazard	1	Hurricane/Tropical Storm Nor'easter; Severe Weather; Severe Winter Weather
Timeline	1	
Agency Champion	1	Township will champion
Other Community Objectives	1	
<b>Total</b>	13	
<b>Priority (High/Med/Low)</b>	High	



Action Worksheet			
<b>Project Name:</b>	OEM Trailer Acquisition		
<b>Project Number:</b>	2021-HamptonTwp-006		
Risk / Vulnerability			
<b>Hazard(s) of Concern:</b>	All hazards		
<b>Description of the Problem:</b>	The Township buildings lack a capacity for OEM functions and storage of records related to emergency management.		
Action or Project Intended for Implementation			
<b>Description of the Solution:</b>	The Township proposes to acquire a trailer to house OEM functions and consolidate records that need to be retained from hazard events.		
<b>Is this project related to a Critical Facility or Lifeline?</b>	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
<b>Level of Protection:</b>	N/A	<b>Estimated Benefits (losses avoided):</b>	Storage; communications safety; consolidation of records
<b>Useful Life:</b>	30 years	<b>Goals Met:</b>	3, 5, 6
<b>Estimated Cost:</b>	Low	<b>Mitigation Action Type:</b>	Structure and Infrastructure Project
Plan for Implementation			
<b>Prioritization:</b>	Medium	<b>Desired Timeframe for Implementation:</b>	Short-term
<b>Estimated Time Required for Project Implementation:</b>	1 year	<b>Potential Funding Sources:</b>	FEMA; Township Funds
<b>Responsible Organization:</b>	Township OEM	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Capital Improvement Plan
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues
	Building addition	High	Not cost effective
	Trailer acquisition	TBD	Technically feasible
Progress Report (for plan maintenance)			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			



Action Worksheet		
<b>Project Name:</b>	OEM Trailer Acquisition	
<b>Project Number:</b>	2021-HamptonTwp-006	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	0	
Property Protection	1	Protection of records
Cost-Effectiveness	0	
Technical	1	
Political	1	
Legal	1	
Fiscal	-1	Project requires funding
Environmental	0	
Social	1	Project prevents social disruption from loss of facility
Administrative	1	
Multi-Hazard	1	Project will protect records from all types of hazard events
Timeline	1	
Agency Champion	1	Township will champion
Other Community Objectives	0	
<b>Total</b>	8	
<b>Priority (High/Med/Low)</b>	Medium	



## 9.12 TOWNSHIP OF HARDYSTON

This section presents the jurisdictional annex for the Township of Hardyston. The annex includes a general overview of the Township of Hardyston; an assessment of the Township of Hardyston’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.

### 9.12.1 Hazard Mitigation Planning Team

The Township of Hardyston 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 9.12-1. Hazard Mitigation Planning Team**

Primary Point of Contact		Alternate Point of Contact
Name / Title: William Hickerson, OEM Coordinator Address: 149 Wheatsworth Road, Suite A, Hardyston, NJ 07419 Phone Number: (973) 615-5687 Email: whickerson@gmail.com		Name / Title: Carrine Piccolo-Kaufer, Township Manager/Planner Address: 149 Wheatsworth Road, Suite A, Hardyston, NJ 07419 Phone Number: (973) 823-7020 Email: cpiccolo@hardyston.com
NFIP Floodplain Administrator		
Name / Title: Joseph Butto, Construction Official Address: 149 Wheatworth Road Suite A Hardyston NJ 07419 Phone Number: (973) 823-7020 Email: jbutto@hardyston.com		
Name	Title	Method of Participation
William Hickerson	OEM Coordinator	Attended the kickoff meeting, annex training, risk assessment meeting and mitigation strategy workshop. Provided data and information for the annex update. Reviewed annex*
Carrine Piccolo-Kaufer	Township Manager and Planner	Alternate point of contact, reviewed annex*
Joseph Butto	Construction Official	NFIP Floodplain Administrator, reviewed annex*
Michael Vreeland	Engineer	Reviewed annex*
Grant W. Rome	Fiscal/CFO	Reviewed annex*
Robert Shultz	Public Works	Reviewed annex*
Scott M. Lobban	Police Chief	Reviewed annex*
Raymond Marion	Fire Department	Reviewed annex*

\*Refer to Jurisdictional Annex Review Sign-Off Sheet in Appendix B.





### 9.12.2 Jurisdiction Profile

The Township of Hardyston is located in northeastern Sussex County. It is bordered to the north by the Townships of Vernon and Wantage, to the south by the Township of Sparta and Morris County, to the east by Vernon Township and Morris County, and to the west by Lafayette Township. The Township covers an area of approximately 32.6 square miles. There are numerous streams located within the Township and include: Wallkill River, Hamburg Creek, Mud Pond Outlet Stream, Pequannock River, Lake Stockholm Brook, Franklin Pond Creek, Beaver Run, and Black Creek. The following unincorporated communities are located within the Township: Beaver Run, North Church, Big Springs, Rudeville, and Beaver Lake.

According to the U.S. Census, the 2010 population for the Township of Hardyston was 8174. The estimated 2018 population was 7786, a 4 percent decrease from the 2010 Census. Data from the 2018 U.S. Census American Community Survey indicate that 5.5 percent of the population is 5 years of age or younger and 18.8 percent is 65 years of age or older. Communities must deploy a support system that enables all populations to safely reach shelters or to quickly evacuate a hazard area.

### 9.12.3 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 9.11-2 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 9.12-2. 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	6	0	2	0	3	0	13	0	0	0
Multi-Family	0	0	0	0	0	0	0	0	0	0
Other (commercial, mixed-use, etc.)	1	0	3	0	0	0	2	0	0	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										
Crystal Springs - Shotmeyer	Single Family	38		Coventry, Woodcot, Tarrington, Blocks 16.28,16.30, 16.34, 16.37		Railway Incident Hazard Area, Nuclear Incident Hazard Area, Carbonate Soil, Steep Slopes, Wildfire		Under Construction		
Crystal Springs – Shotmeyer	Multi-Family	1 (18 Units)		Tarrington Road, Block 16.29 Lot 1		Railway Incident Hazard Area, Nuclear Incident Hazard Area, Carbonate Soil, Wildfire		Approved		



Emerald Estates	Single Family	4	Emerald Drive/Ruby Court, Block 63, Lots 26.15,26.16,26.17,27.01	Railway Incident Hazard Area, Hazardous Material Incident Area, Nuclear Incident Hazard Area, Carbonate Soil, Steep Slopes, Wildfire	Under Construction
Estell Manor	Single Family	3	Estell Drive, Block 75 Lot 11.03	Railway Incident Hazard Area, Hazardous Material Incident Area, Nuclear Incident Hazard Area, Carbonate Soil, Wildfire	Under Construction
N/A	None	Under construction	Block 75.01 Lots 1 & 16	Railway Incident Hazard Area, Hazardous Material Incident Area, Nuclear Incident Hazard Area, Carbonate Soil, Wildfire	Under Construction
Ridgefield Commons	Single Family - Townhouse	8	Brookview, Block 67.23 Lots 1-8	Nuclear Incident Hazard Area, Carbonate Soil, Wildfire	Under Construction
<b>Known or Anticipated Major Development and Infrastructure in the Next Five (5) Years</b>					
Crystal Springs – Balmorale	Single Family	15	Exeter Lane/Sutton Court	Railway Incident Hazard Area, Nuclear Incident Hazard Area, Carbonate Soil, Steep Slopes, Wildfire	Anticipated
Brecia Farms	Single Family	18	Anthony Lane/Davon Court	Hazardous Material Incident Area, Nuclear Incident Hazard Area, Carbonate Soil, Steep Slopes, Wildfire	Anticipated

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

### 9.12.4 Capability Assessment

Section 5 (Capability Assessment) describes the components included in the capability assessment and their significance for hazard mitigation planning. The Township of Hardyston 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 planning, legal and regulatory capabilities
- Development and permitting capabilities
- An assessment of administrative and technical capabilities
- An assessment of fiscal capabilities
- An assessment of education and outreach capabilities
- Classification under various community mitigation programs
- The community’s adaptive capacity for the impacts of climate change
- Information on NFIP compliance



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 Hardyston 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 Hardyston and where hazard mitigation has been integrated.

**Table 9.12-3. 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.
<b>Codes, Ordinances, &amp; Requirements</b>					
<b>Building Code</b>	Yes	State & Local	Yes	Yes	-
<p><i>Comment:</i></p> <ul style="list-style-type: none"> <li>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</li> <li>The Construction Office is responsible for this code in compliance with State Uniform Construction Code Act (N.J.S. 52:27D-119 et seq.)</li> <li>The Township’s building code is found in Chapter 62 (Building Construction) of the municipal code. It was originally adopted in 1972 and revised in 1998 and 2000. Prior to the issuance of a building permit for any single-family home, the applicant must submit two copies of a detailed site plan to the building inspector. The site plan must show swales, brooks, streams, springs, retaining walls, terraces, sidewalks, slopes, major rock formations, existing easements, building line setback and elevation at the curb, where existing, and, if no curb, elevation at existing opposite lot corners and center line of driveway where building is to be located, and all provisions for the proper drainage thereof shall be shown on the plan.</li> </ul>					
<b>Zoning Code</b>	Yes	Local	Yes – if municipality has a Planning Board	Yes	-
<p><i>Comment:</i></p> <ul style="list-style-type: none"> <li>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.</li> <li>The Zoning Board is responsible for this code in compliance with the Town Council.</li> <li>The Zoning Code is found in Chapter 185 of the Township’s municipal code. It was adopted in 1972 and revised in 1998 and 2021. There are several purposes to the code including securing safety from fire, flood, panic and other natural and man-made disasters.</li> </ul>					
<b>Subdivisions</b>	Yes	Local	Yes – if municipality has a Planning Board	Yes	-
<p><i>Comment:</i></p> <ul style="list-style-type: none"> <li>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.</li> </ul>					



	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.
<ul style="list-style-type: none"> <li>Chapter 158 (Subdivision of Land) was first adopted in 1972 and amended in 1998. The purpose of this code is to provide rules, regulations and standards to guide land subdivision in the Township in order to promote the public health, safety, convenience and general welfare of the Township. It shall be administered to ensure the orderly growth and development, conservation, protection and proper use of land and adequate provision for circulation, utilities and services.</li> <li>The Zoning Board and Planning Board are responsible for administering this code.</li> </ul>					
<b>Stormwater Management</b>	Yes	State and Local	Yes	Yes	-
<b>Comment:</b> <ul style="list-style-type: none"> <li>See Title 7 of the NJ Administrative Code, N.J.A.C. 7:8</li> <li>The Town Council is responsible for this ordinance in compliance with the State.</li> <li>The Township's code contains a section regarding stormwater management in accordance with NJDEP. It is found in Chapter 185 (Zoning) of the municipal code. The purpose of the code is to establish minimum stormwater management requirements and controls for major development in the Township. Design standards for stormwater management measures should be designed to take into account existing site conditions including environmentally critical areas; wetlands; flood-prone areas; slopes; depth to seasonal high water table; soil type, permeability, and texture; drainage area and drainage patterns; and the presence of solution-prone carbonate rocks (limestone).</li> </ul>					
<b>Post-Disaster Recovery</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Real Estate Disclosure</b>	No	State, Division of Consumer Affairs	Yes	-	-
<b>Comment:</b> <ul style="list-style-type: none"> <li>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.</li> </ul>					
<b>Growth Management</b>	Yes	State	Yes – if municipality has a Planning Board	No	-
<b>Comment:</b> <ul style="list-style-type: none"> <li>State Mandated on a municipal level. See Zoning Ordinance ; Also - Plan Endorsement Process via the State Development &amp; 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.</li> <li>The Town Council is responsible for these ordinances in compliance with the State.</li> </ul>					
<b>Site Plan Review</b>	Yes	Local	Yes – if municipality has a Planning Board	Yes	-
<b>Comment:</b> <ul style="list-style-type: none"> <li>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 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.</li> <li>The Town Council is responsible for these requirements in compliance with the Town Council.</li> </ul>					
<b>Environmental Protection</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Flood Damage Prevention</b>	Yes	Federal, State & Local	Yes	Yes	2021-Hardyston-009



	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.
<b>Comment:</b> <ul style="list-style-type: none"> <li>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.</li> <li>The Construction official is responsible for this ordinance in compliance with Chapter 96.</li> <li>The ordinance lacks discussion of the state's freeboard requirement and requires update.</li> </ul>					
<b>Wellhead Protection</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Emergency Management</b>	Yes	Local	No	No	-
<b>Comment:</b> <ul style="list-style-type: none"> <li>Chapter 19 of the municipal code, adopted in 1972 and revised in 1998. The chapter identified the emergency management coordinator and council.</li> </ul>					
<b>Climate Change</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Disaster Recovery Ordinance</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Disaster Reconstruction Ordinance</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Other:</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Planning Documents</b>					
<b>Comprehensive / Master Plan</b>	Yes	State	Yes	Yes	-
<b>Comment:</b> <ul style="list-style-type: none"> <li>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.</li> <li>The Planning Board is responsible for this plan, which was adopted in 2014. Several objectives of the plan align with those identified in the HMP update.</li> <li>Portions of the Township are located in the Highlands Regions. The master plan conforms with the Highlands Regional Master Plan and supports elements and objectives of the overall master plan.</li> </ul>					
<b>Capital Improvement Plan</b>	Yes	Town Council	No	Yes	-
<b>Comment:</b> <ul style="list-style-type: none"> <li>The Town Manager is responsible for this plan, which was adopted in 2014.</li> <li>The Township's municipal budget outlines the capital budget and improvement program for the next three years. There is a line item for various capital improvements; however, details regarding the improvements is not listed in the 2020 budget.</li> </ul>					
<b>Disaster Debris Management Plan</b>	No	-	No	-	2021-Hardyston-008
<b>Comment:</b>					



	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.
<b>Floodplain or Watershed Plan</b>	Yes	State	No	Yes	-
<b>Comment:</b>					
<ul style="list-style-type: none"> <li>The Planning Board is responsible for this plan. This plan is a part of the Master Plan.</li> </ul>					
<b>Stormwater Management Plan</b>	Yes	State	Yes	Yes	-
<b>Comment:</b>					
<ul style="list-style-type: none"> <li>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.</li> <li>The Township's Municipal Stormwater Management Plan was adopted in March 2005. The plan documents the strategy for the Township to address stormwater-related impacts. Several goals of the plan aligns with the goals of the HMP update, including protecting public safety and reducing impacts of hazards (e.g. flood and erosion).</li> <li>The Town Council is responsible for this plan.</li> </ul>					
<b>Stormwater Pollution Prevention Plan</b>	Yes	-	Yes	-	-
<b>Comment:</b>					
<ul style="list-style-type: none"> <li>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.</li> </ul>					
<b>Urban Water Management Plan</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Habitat Conservation Plan</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Economic Development Plan</b>	Yes	Local	No	-	-
<b>Comment:</b>					
<b>Shoreline Management Plan</b>	No	-	Yes – if located in a coastal zone	-	-
<b>Comment:</b>					
<ul style="list-style-type: none"> <li>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.</li> </ul>					
<b>Community Wildfire Protection Plan</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Community Forest Management Plan</b>	Yes	Local	No	Yes	-
<b>Comment:</b>					
<ul style="list-style-type: none"> <li>Planning Board is responsible for this plan which is a part of the Master Plan</li> </ul>					
<b>Transportation Plan</b>	Yes	Local	No	Yes	-
<b>Comment:</b>					
<ul style="list-style-type: none"> <li>The Planning Board is responsible for this plan, which is a part of the Master Plan.</li> </ul>					



	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.
<b>Agriculture Plan</b>	Yes	Local	No	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>The Planning Board is responsible for this plan which is a part of the Master Plan</li> </ul>					
<b>Climate Action Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Tourism Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Business Development Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>While there is no plan in place, the Township has an Economic Development Advisory Commission that assists in attracting new business and industry as well as retaining established businesses.</li> </ul>					
<b>Other: Open Space Plan</b>	Yes	Local	No	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>The Planning Board is responsible for this plan, which is a part of the Master Plan.</li> </ul>					
<b>Stream Corridor Management Plan</b>	Yes	Local	No	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>The Planning Board is responsible for this plan, which is a part of the Master Plan.</li> </ul>					
<b>Watershed Management or Protection Plan</b>	Yes	Local	No	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>The Planning Board is responsible for this plan, which is a part of the Master Plan.</li> </ul>					
<b>Response/Recovery Planning</b>					
<b>Comprehensive Emergency Management Plan (CEMP) / Emergency Operations Plan (EOP)</b>	Yes	Township OEM	Yes	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>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.</li> <li>This plan was adopted in 2014.</li> <li>The Office of Emergency Management is responsible for this plan.</li> </ul>					
<b>Threat &amp; Hazard Identification &amp; Risk Assessment (THIRA)</b>	Yes	Township OEM	No	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>Included as part of the Township's EOP.</li> </ul>					
<b>Post-Disaster Recovery Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Continuity of Operations Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Public Health Plan</b>	Yes	County	No	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>Performed at the county level.</li> </ul>					
<b>Other</b>	No	-	No	-	-
<i>Comment:</i>					

**Table 9.12-4. Development and Permitting Capability**

Criterion	Response
Does your jurisdiction issue development permits? - If no, who does? If yes, which department?	Yes, Building Department



Criterion	Response
Does your jurisdiction have the ability to track permits by hazard area?	Yes
Does your jurisdiction have a buildable lands inventory? -If yes, please describe briefly. -If no, please quantitatively describe the level of buildout in the jurisdiction.	Yes, the Township completed a buildable land inventories as part of its housing element.

**ADMINISTRATIVE AND TECHNICAL CAPABILITY**

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

**Table 9.12-5. Administrative and Technical Capabilities**

Staff/Personnel Resource	Available?	Department/Agency/Position
<b>Administrative Capability</b>		
Planning Board	Yes	Planning Board and Zoning Bord of Adjustment
Mitigation Planning Committee	Yes	OEM
Environmental Board / Commission	Yes	Clean Communities Program
Open Space Board / Committee	No	-
Economic Development Commission / Committee	Yes	Hardyston Township Economic Development Advisory Commission - composed of volunteer Township residents, assists in attracting new business and industry as well as retaining established businesses. Their mission is to maintain the quality of life of our residents by stabilizing and expanding our local tax base.
Warning Systems / Services (mass notification system, outdoor warning signals)	Yes	Swift911 and PSAP
Maintenance program to reduce risk	Yes	Town Manager Insurance related
Mutual aid agreements	Yes	Fire Department, Police and EMS
<b>Technical/Staffing Capability</b>		
Planners or engineers with knowledge of land development and land management practices	Yes	Deputy Manager/planner and Construction
Engineers or professionals trained in building or infrastructure construction practices	Yes	Construction
Planners or engineers with an understanding of natural hazards	Yes	Deputy Manager/Planner
Staff with training in benefit/cost analysis	Yes	OEM and Deputy Manager
Staff with training in green infrastructure	Yes	Land Use/Town Manager
Staff with education/knowledge/training in low impact development	Yes	Town Manager
Surveyor	No	-
Stormwater engineer	Yes	Township Engineering dept
Personnel skilled or trained in GIS applications	Yes	Zoning
Local or state water quality professional	No	Use Sussex County BOH
Scientist familiar with natural hazards in local area	No	-
Emergency manager	Yes	OEM
Watershed planner	Yes	Town planner/Manager
Environmental specialist	No	-
Grant writers	Yes	OEM and Deputy Manager
Resilience Officer	No	-





Staff/Personnel Resource	Available?	Department/Agency/Position
Other: NFIP Floodplain Administrator	Yes	Construction Official
Other: Professionals trained in conducting damage assessments	Yes	OEM and Construction

**FISCAL CAPABILITY**

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

**Table 9.12-6. Fiscal Capabilities**

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

**EDUCATION AND OUTREACH CAPABILITY**

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

**Table 9.12-7. 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.	The Township’s municipal website has notices and announcements specific to the municipality. They also have a storm preparation checklist on their main page.
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.	No
Do you have any other programs already in place that could be used to communicate hazard-related information? If yes, briefly describe.	Yes, Township Lake and development associations

**COMMUNITY CLASSIFICATIONS**

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





**Table 9.12-8. Community Classifications**

Program	Participating?	Classification	Date Classified
Community Rating System	No	-	-
Building Code Effectiveness Grading Schedule (BCEGS)	No	-	-
Public Protection (Fire ISO Protection Class)	Yes	-	-
Storm Ready Certification	No	-	-
Firewise Community Classification	No	-	-
Sustainable Jersey	Yes	Not certified	Joined program on September 7, 2010

**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 9.12-9. 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.*

**NATIONAL FLOOD INSURANCE PROGRAM**

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



**Table 9.12-10. National Flood Insurance Program Compliance**

Criterion	Response
What local department is responsible for floodplain management?	Building Department
Who is your floodplain administrator? (name, department/position)	Joe Butto, 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?	July 5, 2011
Does your floodplain management program meet or exceed minimum requirements? -If exceeds, in what ways?	This program exceeds the minimum requirements set by the FEMA and the State. The master plan and planning board have a review for flood zones during application process.
When was the most recent Community Assistance Visit or Community Assistance Contact?	January 10, 1995
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.	No
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?	No
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 community has not considered joining CRS at this time.
How many flood insurance policies are in force in your jurisdiction?*	8 policies
-What is the insurance in force?	\$2,338,000 insurance in force
-What is the premium in force?	\$3,498 premium in force
How many total loss claims have been filed in your jurisdiction?*	2 claims
-How many claims are still open or were closed without payment?	\$60,787 in payments
-What were the total payments for losses?	
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

Reference: FEMA 2020

**OPPORTUNITIES FOR FUTURE INTEGRATION**

- **Firewise Program:** 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 (2021-Hardyston-002).
- **Disaster Debris Management Plan:** The Township will develop a debris management plan that will assist the municipality when they need to facilitate response and recovery after a debris-causing incident. The plan will provide direction to facilitate and coordinate the management of debris following a disaster (2021-Hardyston-008).
- **Flood Damage Prevention Ordinance:** The Township will update its flood damage prevention ordinance to meet the New Jersey requirement of one foot of freeboard (2021-Hardyston-009).





### 9.12.5 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 Hardyston’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 9.11-11 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 9.12-11. 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 23 <sup>rd</sup> and 24 <sup>th</sup> .	Although the County was impacted, the Township did not report damages.
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.	Currently \$30K request for cost reimbursement submitted.

Source: FEMA 2020, NOAA NCEI 2020

### 9.12.6 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 Hardyston 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 Hardyston 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 Hardyston has significant exposure.

#### REPETITIVE FLOOD LOSSES

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

- 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





**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 9.12-12. Critical Facilities and Lifelines Flood Exposure**

Name	Type	Exposure	
		1% Event	0.2% Event
22-192 Canistear Reservoir #1 Dam	Dam	X	X

Source: Sussex County Planning Partnership 2020

Note:

\*Identified lifeline

**IDENTIFIED ISSUES AND PROBLEM AREAS**

The jurisdiction has identified the following vulnerabilities within their community:

- The Township’s DPW fuel station is a critical facility and provides essential services to the community. The station currently does not have a source of backup power. In the event of a power outage, the station can fuel municipal vehicles.
- Hardyston Township has over 4,000 acres of State and Newark Watershed woods that in many cases backup to housing developments. This exposes many homes to wildfire and brush fire events.
- Colson Terrace experiences storm drainage issues during periods of rain. This reduces access to this road and the facilities located there, including the EMS and fire departments.
- It is unknown if the roof of the elementary school meets the current snow load standards.
- It is unknown if the windows of the elementary school are impact resistant.
- It is unknown if the windows on the southwest side of the municipal building are impact resistant.
- Due to the current COVID-19 pandemic, the Township has identified several areas in their buildings that could be enhanced to reduce expose to bacteria and viruses.
- The Township currently does not have an adopted debris management plan. 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 Township’s current flood damage prevention ordinance was last adopted in 2011. It currently does not have a freeboard requirement and does not meeting New Jersey’s minimum requirement.

**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 Hardyston 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 Hardyston. The Township of Hardyston 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 Hardyston agreed with the calculated hazard rankings.

**Table 9.12-13. Township of Hardyston Hazard Ranking**

<b>Dam Failure</b>	<b>Disease Outbreak</b>	<b>Drought</b>	<b>Earthquake</b>	<b>Flood</b>	<b>Geologic</b>	
Medium	Medium	Medium	Medium	Medium	Low	
<b>Hazardous Materials</b>	<b>Hurricane and Tropical Storm</b>	<b>Invasive Species</b>	<b>Nor'Easter</b>	<b>Severe Weather</b>	<b>Severe Winter Weather</b>	<b>Wildfire</b>
Medium	High	Medium	High	High	High	Medium

**9.12.7 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 9.11-15 and Table 9.11-16 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 9.12-14. 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	Enter 2021 HMP Action #
Hardyston-1 (new)	Ensure continuity of operations at critical facilities and municipal buildings: Hardyston Township Critical Facilities Generators	OEM	Fire Houses and Police/Dispatch complete. DPW and fuel station no funding	X (for DPW)	2021-Hardyston-001
Hardyston-2 (old #1)	Implement Fire Wise Program throughout Township. Create an education program and set up town hall meetings.	OEM Coordinator	No Progress	X	2021-Hardyston-002
Hardyston-3 (old #3)	Stormwater management study to correct storm drainage system located on Colson Terrace.	DPW and OEM	No Progress	X	2021-Hardyston-003
Hardyston-4 (revised old #4)	Conduct engineering study to determine the correct actions for retrofitting the roof of the elementary school to meet current snow load standards. Once completed, identify mitigation actions to correct the problem.	School Board Administrator	No Progress	X	2021-Hardyston-004



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 #
Hardyston-5 (revised #5)	Conduct engineering study to determine the correct actions for retrofitting the gymnasium windows of the elementary school to make them impact resistant. Once completed, identify mitigation actions to correct the problem.	School Board Administrator	No Progress	X	2021-Hardyston-005
Hardyston-6 (revised #6)	Conduct engineering study to determine the correct actions for retrofitting the windows on the southwest side of the municipal building to make them impact resistant. Once completed, identify mitigation actions to correct the problem.	Township Manager	No Progress	X	2021-Hardyston-004
Hardyston-7 (revised #7)	Educate citizens on hazard mitigation and preparedness through Town Hall meetings and outreach programs.	OEM Coordinator	Ongoing Capability - meetings with lake and development associations on going	-	-
Hardyston-8 (new)	Establish a line item for mitigation project funding in both the municipal budget and Capital Improvement Plan.	Township	Ongoing Capability	-	-
Hardyston-9 (new)	Adopt and enforce codes and standards beyond FEMA and state NFIP minimum requirements.	Township	In Progress	X	2021-Hardyston-009
Hardyston-10 (new)	Where applicable, Township job descriptions will incorporate hazard mitigation.	Township	Ongoing Capability	-	-
Hardyston-11 (new)	Incorporate hazard mitigation in the daily practice of the Township; all projects identified in Township's annex will be a goal of the municipality.	Township	Ongoing Capability - Hardyston Township develops 5-year plans which address risk management.	-	-
Hardyston-12 (new)	Establish a community resilience committee and advisor for the Township which will increase the Township's capacity to prepare for, mitigate, respond to and recover from hazard events in the community.	Township Administration, OEM Coordinator	Ongoing Capability – Committee is comprised of representatives from OEM, Township Council, Police, Fire, DPW, Health, and Engineering Departments	-	-
Hardyston-13 (new)	Provide informational handouts or meetings to share best practices of hazard mitigation and increase the knowledge of mitigation throughout the Township.	Township Administration, OEM Coordinator	Complete. Available at Town Hall, adding to web pages	-	-
Hardyston-14 (new)	Develop a continuity of operations (COOP) plan	Township	In Progress. Plan is contained within EOP. However, plan requires	X	



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 #
	which will identify mitigation opportunities.		update to reflect lessons learned and strategies developed during coronavirus pandemic.		
Hardyston-15 (old #2)	Correct the stormwater drainage on Colson Terrace.	Township OEM and DPW	No Progress	X	2021-Hardyston-003

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

- None identified

**PROPOSED HAZARD MITIGATION INITIATIVES FOR THE PLAN UPDATE**

The Township of Hardyston 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 Hardyston 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 9.11-15 summarizes the comprehensive-range of specific mitigation initiatives the Township of Hardyston 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 9.11-16 provides a summary of the prioritization of all proposed mitigation initiatives for this HMP update.





Table 9.12-15. 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-Hardyston-001	DPW Fuel Station Generator	<p><b>Problem:</b> The Township's DPW fuel station is a critical facility and provides essential services to the community. The station currently does not have a source of backup power. In the event of a power outage, the station can fuel municipal vehicles.</p> <p><b>Solution:</b> Determine the proper size permanent generator for the fuel station; once determined, purchase and install generator.</p>	Existing	All	2, 6	Engineering, DPW, Township Administration	FEMA HMGP, Township Budget	Continuity of operations; provide fuel to municipal vehicles	\$100,000	Within 2 years	High	SIP	ES
2021-Hardyston-002	Firewise Program	<p><b>Problem:</b> Hardyston Township has over 4,000 acres of State and Newark Watershed woods that in many cases backup to housing developments. This exposes many homes to wildfire and brush fire events.</p> <p><b>Solution:</b> 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.</p>	Existing	Wildfire	1, 2, 3	Township Administration, Fire Department	Township budget	Increase wildfire awareness, provide grant opportunities for Township	<\$20,000	Within 4 years	Medium	LPR, EAP	PI, ES
2021-Hardyston-003	Colson Terrace Study	<p><b>Problem:</b> Colson Terrace experiences storm drainage issues during periods of rain. This reduces access to this road and the facilities located there, including the EMS and fire departments.</p> <p><b>Solution:</b> Conduct an engineering study to determine the drainage issues on Colson Terrace. Once study is complete and solutions are identified, obtain funding to</p>	Existing	Flood, Hurricane, Nor'Easter, Severe Weather, Severe Winter Weather	1, 2, 5	Engineering, DPW, Township Administration	Township Budget, FEMA BRIC and HMGP	Identify drainage issues and provide solutions to reduce or alleviate the problem	\$50,000+	Within 2 years	High	LPR, SIP	PR, SP



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
		implement best solution to alleviate the drainage issues.											
2021-Hardyston-004	Engineering Study (roof) on Elementary School	<p><b>Problem:</b> It is unknown if the roof of the elementary school meets the current snow load standards.</p> <p><b>Solution:</b> Conduct engineering study to determine the correct actions for retrofitting the roof of the elementary school to meet current snow load standards. Once completed, identify mitigation actions to correct the problem</p>	Existing	Severe Winter Weather, Nor'Easter	1, 2, 4	School Board Administration	School and Township Budgets	Identifies any required actions to protect the facility	\$25,000	Within 3 years	Medium	LPR, SIP	PR
2021-Hardyston-005	Engineering Study (windows) on Elementary School	<p><b>Problem:</b> It is unknown if the windows of the elementary school are impact resistant.</p> <p><b>Solution:</b> Conduct engineering study to determine the correct actions for retrofitting the gymnasium windows of the elementary school to make them impact resistant. Once completed, identify mitigation actions to correct the problem.</p>	Existing	Severe Weather, Hurricane, Nor'Easter	1, 2, 4	School Board Administration	School and Township Budgets	Identifies any required actions to protect the facility	\$25,000	Within 3 years	Medium	LPR, SIP	PR
2021-Hardyston-006	Engineering Study on Municipal Building	<p><b>Problem:</b> It is unknown if the windows on the southwest side of the municipal building are impact resistant.</p> <p><b>Solution:</b> Conduct engineering study to determine the correct actions for retrofitting the windows on the southwest side of the municipal building to make them impact resistant. Once completed, identify mitigation actions to correct the problem.</p>	Existing	Severe Weather, Hurricane, Nor'Easter	1, 2, 4	Township Administration	Township budget	Identifies any required actions to protect the facility	\$25,000	Within 3 years	Medium	LPR, SIP	PR
2021-Hardyston-007	Enhance Municipal Buildings	<p><b>Problem:</b> Due to the current COVID-19 pandemic, the Township has identified several areas in their buildings that could be enhanced to reduce expose to bacteria and viruses.</p>	Existing	Disease Outbreak	1, 2, 5	Township Administration	Township budget	Increase protection from diseases; decrease risk of spread	\$50,000+	Within 5 years	Medium	SIP	ES, PR



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
		<b>Solution:</b> The Township will upgrade the bathroom facilities in the town hall, EMS, police station, and fire department to touchless toilets and sinks. This will reduce exposure to germs and provide safer environments for municipal staff.											
2021-Hardyston-008	Develop Debris Management Plan	<p><b>Problem:</b> The Township currently does not have an adopted debris management plan. 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.</p> <p><b>Solution:</b> The Township will develop a debris management plan that will assist the municipality when they need to facilitate response and recovery after a debris-causing incident. The plan will provide direction to facilitate and coordinate the management of debris following a disaster.</p>	Existing	Flood, Hurricane, Nor'Easter, Severe Weather, Severe Winter Weather, Wildfire	3, 5, 6	OEM, Public Works	Township budget	Increased disaster capability and preparedness	Staff time	1 year	High	LPR	ES
2021-Hardyston-009	Update Flood Damage Prevention Ordinance	<p><b>Problem:</b> The Township’s current flood damage prevention ordinance was last adopted in 2011. It currently does not have a freeboard requirement and does not meet New Jersey’s minimum requirement.</p> <p><b>Solution:</b> The Township will update its flood damage prevention ordinance to meet the New Jersey requirement of one foot of freeboard.</p>	New and Existing	Flood	1, 2	Township Administration, Construction Official	Township budget	Meet state standards, reduce future flood risk	Staff time	6 months	High	LPR	PR
2021-Hardyston-010	Update EOP to Include Covid Strategies	<b>Problem:</b> The Emergency Operations Plan contains the Continuity of Operations Plan for the Township. During the coronavirus pandemic, new obstacles for continuity of operations were identified and	N/A	All Hazards	1, 2, 6	OEM	Township budget	Increased emergency planning and disaster capabilities	Staff time	6 months	High	LPR	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
		addressed but are not reflected in the Plan.  <b>Solution:</b> The Township will update the Emergency Operations Plan to include discussion of lessons learned and strategies developed during the coronavirus pandemic to maintain continuity of government services during and following disaster events.											

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
- PDM Pre-Disaster Mitigation Grant 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 9.12-16. Summary of Evaluation and Action Priorities

Initiative Number	Mitigation Initiative Name	Life Safety	Property Protection	Cost Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community Objectives	Total	High / Medium / Low
2021-Hardyston-001	DPW Fuel Station Generator	1	1	1	1	1	1	0	0	0	1	1	1	1	0	10	High ▲
2021-Hardyston-002	Firewise Program	1	1	1	1	0	0	1	1	0	1	0	1	0	0	8	Medium
2021-Hardyston-003	Colson Terrace Study	1	1	1	1	1	1	0	1	0	1	1	1	1	0	11	High
2021-Hardyston-004	Engineering Study (roof) on Elementary School	1	1	1	1	0	0	0	0	0	0	0	1	0	0	5	Medium
2021-Hardyston-005	Engineering Study (windows) on Elementary School	1	1	1	1	0	0	0	0	0	0	0	1	0	0	5	Medium
2021-Hardyston-006	Engineering Study on Municipal Building	1	1	1	1	1	1	0	0	0	1	0	1	0	0	8	Medium
2021-Hardyston-007	Enhance Municipal Buildings	1	1	1	1	1	1	0	0	0	1	0	1	0	0	8	Medium
2021-Hardyston-008	Develop Debris Management Plan	1	1	1	1	1	1	0	0	0	1	1	1	1	0	10	High
2021-Hardyston-009	Update Flood Damage Prevention Ordinance	1	1	1	1	1	1	1	0	0	1	0	1	1	0	10	High
2021-Hardyston-010	Update EOP to Include Covid Strategies	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	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 9.12-17. 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	X		X
Disease Outbreak	X				X	X		X
Drought					X	X		X
Earthquake					X	X		X
Flood	X				X	X	X	X
Geologic					X	X		X
Hazardous Materials					X	X		X
Hurricane and Tropical Storm	X				X	X		X
Invasive Species					X	X		X
Nor’Easter	X				X	X		X
Severe Weather	X				X	X		X
Severe Winter Weather	X				X	X		X
Wildfire	X		X		X	X		X

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

- RED** high ranked hazard
- ORANGE** medium ranked hazard
- YELLOW** low ranked hazard



Figure 9.12-1. Township of Hardyston Hazard Area Extent and Location Map 1

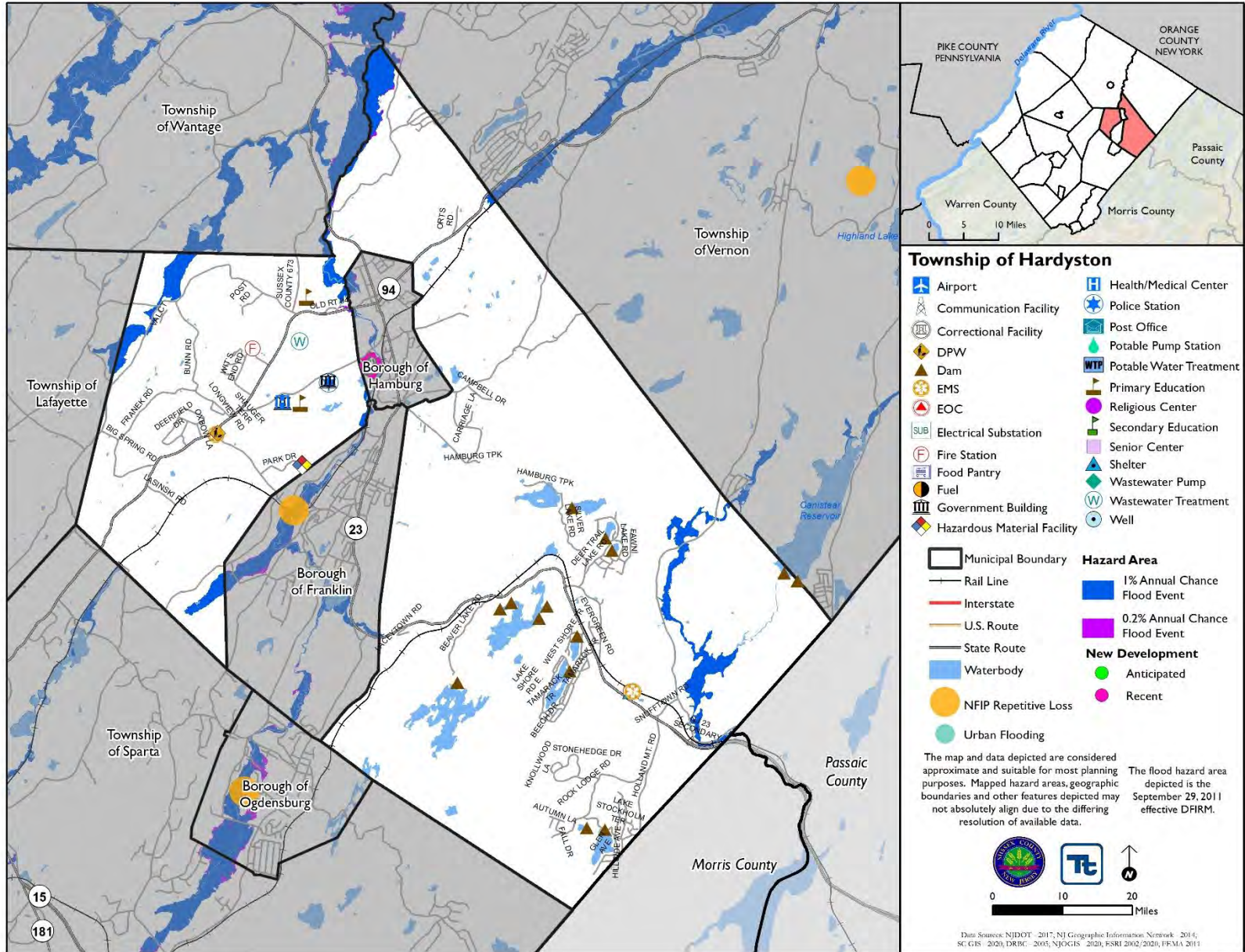




Figure 9.12-2. Township of Hardyston Hazard Area Extent and Location Map 2

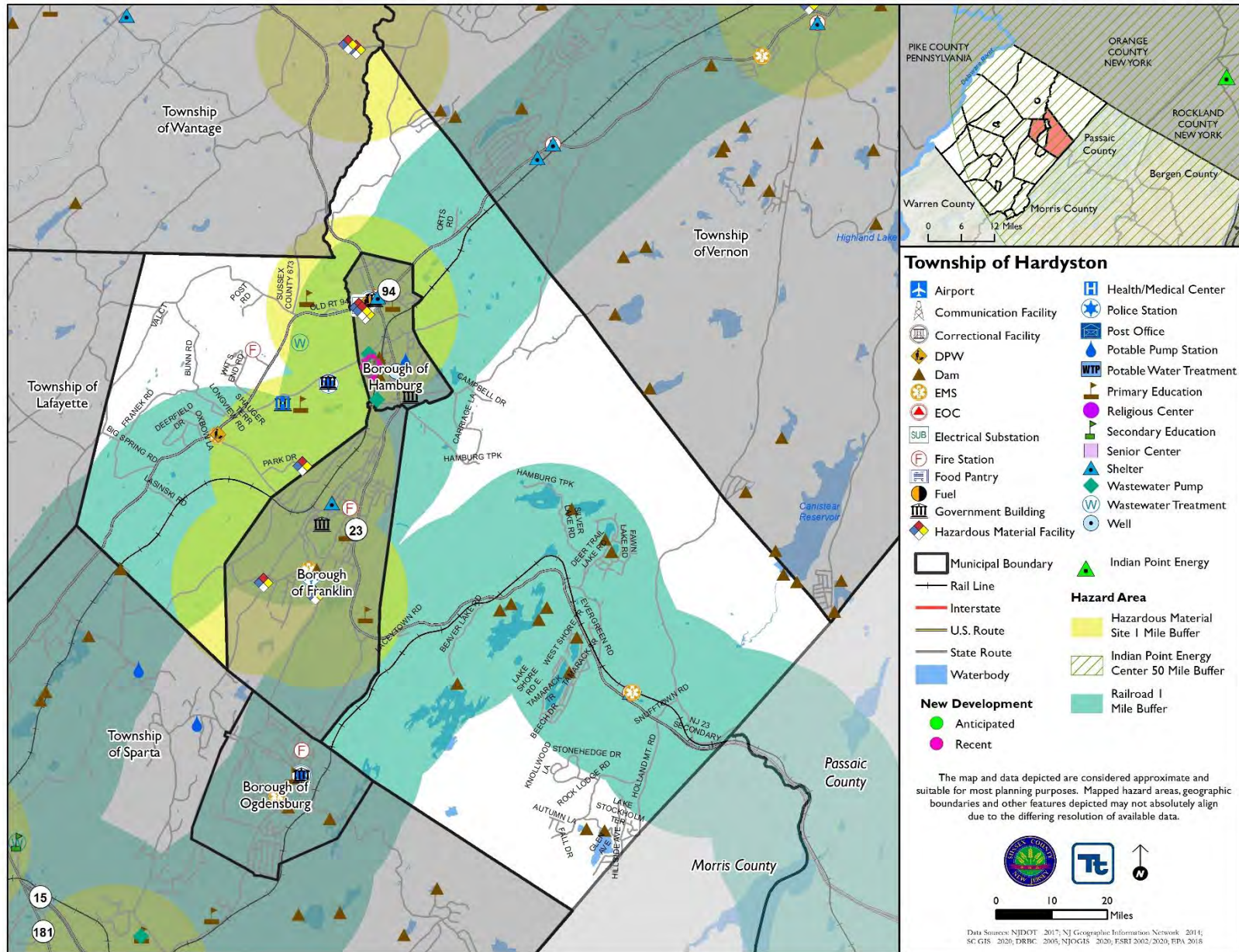
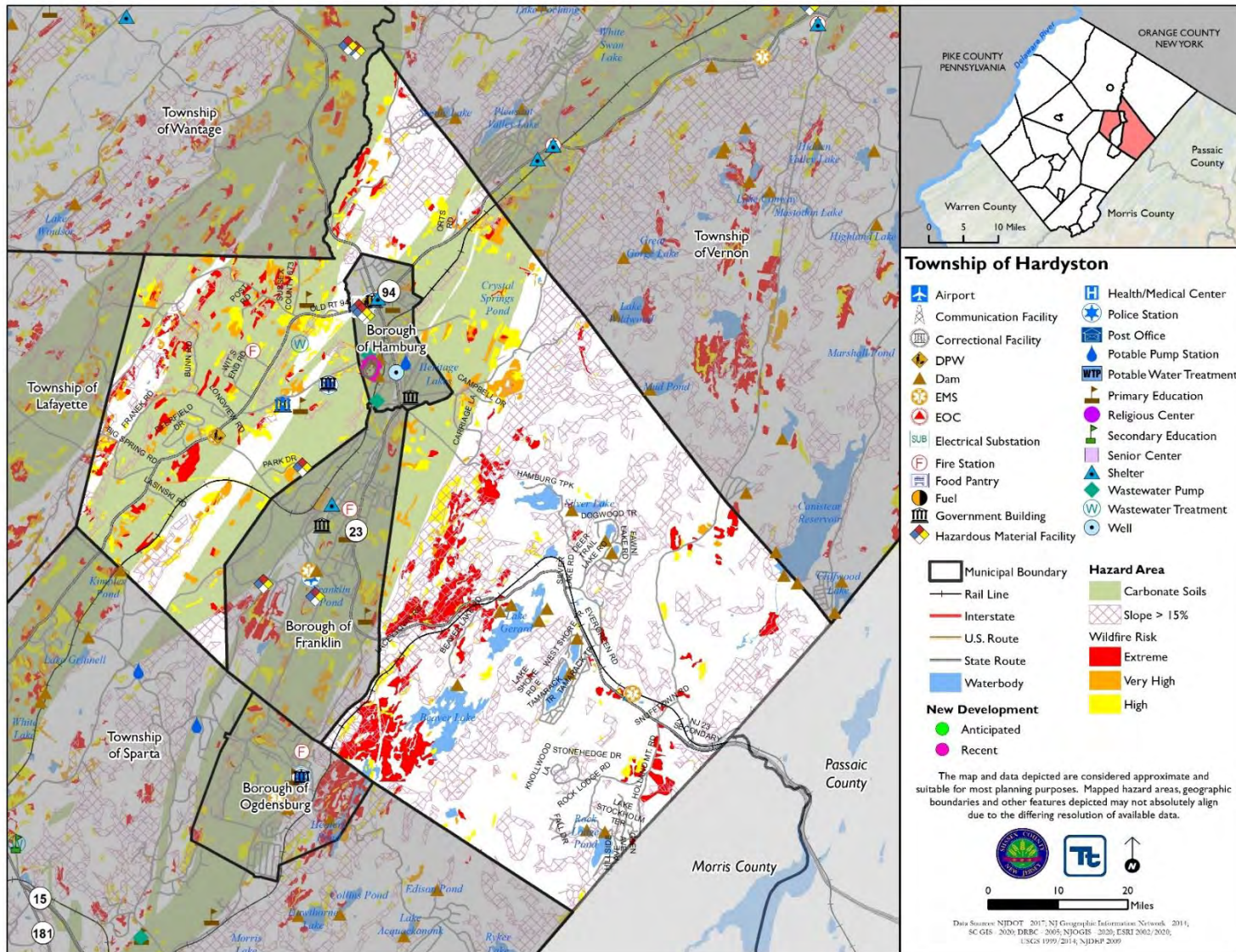






Figure 9.12-3 Township of Hardyston Hazard Area Extent and Location Map 3





Action Worksheet			
<b>Project Name:</b>	DPW Fuel Station Generator		
<b>Project Number:</b>	2021-Hardyston-001		
Risk / Vulnerability			
<b>Hazard(s) of Concern:</b>	All Hazards		
<b>Description of the Problem:</b>	The Township's DPW fuel station is a critical facility and provides essential services to the community. The station currently does not have a source of backup power. In the event of a power outage, the station can fuel municipal vehicles.		
Action or Project Intended for Implementation			
<b>Description of the Solution:</b>	Determine the proper size permanent generator for the fuel station; once determined, purchase and install generator.		
<b>Is this project related to a Critical Facility or Lifeline?</b>	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
<b>Level of Protection:</b>	N/A	<b>Estimated Benefits (losses avoided):</b>	Continuity of operations; provide fuel to municipal vehicles
<b>Useful Life:</b>	5 years	<b>Goals Met:</b>	2, 6
<b>Estimated Cost:</b>	\$100,000	<b>Mitigation Action Type:</b>	Structure and Infrastructure Project
Plan for Implementation			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	Within 2 years
<b>Estimated Time Required for Project Implementation:</b>	Within 2 years	<b>Potential Funding Sources:</b>	FEMA HMGP, Township Budget
<b>Responsible Organization:</b>	Engineering, DPW, Township Administration	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	N/A
Three Alternatives Considered (including No Action)			
<b>Alternatives:</b>	<b>Action</b>	<b>Estimated Cost</b>	<b>Evaluation</b>
	No Action	\$0	Current problem continues
	Install solar panels at fuel station	\$25,000+	Weather dependent; maintenance costs
	Install wind turbine	\$25,000+	Weather dependent; maintenance costs
Progress Report (for plan maintenance)			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			



Action Worksheet		
<b>Project Name:</b>	DPW Fuel Station Generator	
<b>Project Number:</b>	2021-Hardyston-001	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	
Property Protection	1	Provide continuity of operations; allows building to operate during power outage
Cost-Effectiveness	1	
Technical	1	
Political	1	
Legal	1	The Township has the legal authority to implement this project
Fiscal	0	The Township will need funding to complete project
Environmental	0	No environmental impacts
Social	0	No social impacts
Administrative	1	
Multi-Hazard	1	All hazards
Timeline	1	To be completed within 2 years
Agency Champion	1	
Other Community Objectives	0	
<b>Total</b>	10	
<b>Priority (High/Med/Low)</b>	High	



Action Worksheet			
<b>Project Name:</b>	Colson Terrace Study		
<b>Project Number:</b>	2021-Hardyston-003		
Risk / Vulnerability			
<b>Hazard(s) of Concern:</b>	Flood, Hurricane, Nor'Easter, Severe Weather, Severe Winter Weather		
<b>Description of the Problem:</b>	Colson Terrace experiences storm drainage issues during periods of rain. This reduces access to this road and the facilities located there, including the EMS and fire departments.		
Action or Project Intended for Implementation			
<b>Description of the Solution:</b>	Conduct an engineering study to determine the drainage issues on Colson Terrace. Once study is complete and solutions are identified, obtain funding to implement best solution to alleviate the drainage issues.		
<b>Is this project related to a Critical Facility or Lifeline?</b>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
<b>Level of Protection:</b>	N/A	<b>Estimated Benefits (losses avoided):</b>	Identify drainage issues and provide solutions to reduce or alleviate the problem
<b>Useful Life:</b>	N/A	<b>Goals Met:</b>	1, 2, 5
<b>Estimated Cost:</b>	\$50,000+	<b>Mitigation Action Type:</b>	Local Plans and Regulations, Structure and Infrastructure Project
Plan for Implementation			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	Within 2 years
<b>Estimated Time Required for Project Implementation:</b>	Within 2 years	<b>Potential Funding Sources:</b>	Township Budget, FEMA BRIC and HMGP
<b>Responsible Organization:</b>	Engineering, DPW, Township Administration	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	N/A
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues
	Elevate buildings located along Colson Terrace	\$1 million+	Costly; not feasible; not all buildings sustain flood damage
	Elevate roadway	\$100,000+	Costly; can lead to access issues to buildings
Progress Report (for plan maintenance)			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			



Action Worksheet		
<b>Project Name:</b>	Colson Terrace Study	
<b>Project Number:</b>	2021-Hardyston-003	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	
Property Protection	1	Protect buildings along roadway; allow critical facilities to be accessible
Cost-Effectiveness	1	
Technical	1	
Political	1	
Legal	1	The Township has jurisdiction to implement this project
Fiscal	0	Need grant funding to complete projects
Environmental	1	
Social	0	No social impacts
Administrative	1	The Township has the administrative capabilities to implement this project
Multi-Hazard	1	Flood, Hurricane, Nor'Easter, Severe Weather, Severe Winter Weather
Timeline	1	Within 2 years
Agency Champion	1	
Other Community Objectives	0	
<b>Total</b>	11	
<b>Priority (High/Med/Low)</b>	High	



## 9.13 BOROUGH OF HOPATCONG

This section presents the jurisdictional annex for the Borough of Hopatcong. The annex includes a general overview of the Borough of Hopatcong; an assessment of the Borough of Hopatcong’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.

### 9.13.1 Hazard Mitigation Planning Team

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

*Table 9.13-1. Hazard Mitigation Planning Team*

Primary Point of Contact		Alternate Point of Contact
Name / Title: Wade Crowley, OEM Coordinator Address: 111 River Styx Road, Hopatcong, NJ 07843 Phone Number: (973) 390-0988 Email: wcrowley@hopatcong.org		Name / Title: Ron Tappan, Administrator Address: 111 River Styx Road, Hopatcong, NJ 07843 Phone Number: (973) 770-1200 Email: rtappan@hopatcong.org
NFIP Floodplain Administrator		
Name / Title: William O'Connor, Construction Official Address: 111 River Styx Road, Hopatcong, NJ 07843 Phone Number: (973)770-1200 Email: woconner@hopatcong.org		
Name	Title	Method of Participation
Wade Crowley	OEM Coordinator	Primary point of contact, provided data and information, contributed to mitigation strategy; attended the risk assessment meeting and mitigation strategy workshop; reviewed the annex*
Ron Tappan	Administrator	Alternate point of contact, reviewed the annex*
William O'Connor	Construction Official	NFIP floodplain administrator, reviewed the annex*
Samantha Anello	Engineer	Provided data and information; contributed to mitigation strategy; attended the risk assessment meeting and mitigation strategy workshop
John K. Ruschke	Engineer	Reviewed the annex*
Loraine Rossetti	CFO	Reviewed the annex*
Robert Breenan	Chief of Police	Reviewed the annex*
Shaun Poland	Fire Chief	Reviewed the annex*
Pat Mason	Public Works Superintendent	Reviewed the annex*

\*Refer to Jurisdictional Annex Review Sign-Off Sheet in Appendix B.

### 9.13.2 Jurisdiction Profile

Hopatcong Borough is located in southwestern Sussex County. It is bordered to the north by Sparta Township, to the east and south by Morris County, and to the west by Byram Township and Stanhope Borough. The Borough has a total area of 12.4 square miles. The following unincorporated communities are located within the Borough: Northwood, Byram Cover, Sperry Springs, Bonaparte Landing, Hopatcong Hills, and Hopatcong Heights. Streams in the Borough include: the Musconetcong River which makes up the eastern border of the Borough, and Lubbers Run. A portion of Lake Hopatcong is found in eastern Hopatcong Borough.





According to the U.S. Census, the 2010 population for the Borough of Hopatcong was 15,147. The estimated 2018 population was 14,362, a 5.2 percent decrease from the 2010 Census. Data from the 2018 U.S. Census American Community Survey indicate that 5.1 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.

### 9.13.3 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 9.13-2 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 9.13-2. Recent and Expected Future Development**

Type of Development	2015		2016		2017		2018		2019	
<b>Number of Building Permits for New Construction Issued Since the Previous HMP</b>										
	<b>Total</b>	<b>Within SFHA</b>	<b>Total</b>	<b>Within SFHA</b>	<b>Total</b>	<b>Within SFHA</b>	<b>Total</b>	<b>Within SFHA</b>	<b>Total</b>	<b>Within SFHA</b>
Single and Two-Family Units	7	0	10	0	9	0	6	0	8	0
Multi-Family	0	0	0	0	0	0	2	0	2	0
Other (commercial, mixed-use, etc.)	0	0	0	0	0	0	0	0	0	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		
<b>Recent Major Development and Infrastructure from 2015 to Present</b>										
Mariners Point	Residential	10		16 Lawrie Ave/ Mariners Point		Non		Complete		
<b>Known or Anticipated Major Development and Infrastructure in the Next Five (5) Years</b>										
None anticipated										

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

### 9.13.4 Capability Assessment

Section 5 (Capability Assessment) describes the components included in the capability assessment and their significance for hazard mitigation planning. The Borough of Hopatcong 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 Borough of Hopatcong 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 Borough of Hopatcong and where hazard mitigation has been integrated.

**Table 9.13-3. 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.
<b>Codes, Ordinances, &amp; Requirements</b>					
<b>Building Code</b>	Yes	State & Local	Yes	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>• 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</li> <li>• The Borough is responsible for this code in compliance with State Uniform Construction Code Act (N.J.S. 52:27D-119 et seq.).</li> </ul>					
<b>Zoning Code</b>	Yes	Local	Yes – if municipality has a Planning Board	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>• 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.</li> <li>• The Zoning Department is responsible for this code in compliance with Chapter 242- Zoning.</li> </ul>					
<b>Subdivisions</b>	Yes	Local	Yes – if municipality has a Planning Board	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>• 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.</li> <li>• The Land Use Board is responsible for this ordinance in compliance with Chapter 209- Subdivision of Land.</li> </ul>					
<b>Stormwater Management</b>	Yes	State & Local	Yes	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>• See Title 7 of the NJ Administrative Code, N.J.A.C. 7:8</li> <li>• The Engineering Department is responsible for this ordinance in compliance with Chapter 242 – Zoning, Stormwater Management Requirements.</li> </ul>					







	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.
<b>Post-Disaster Recovery</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Real Estate Disclosure</b>	No	State, Division of Consumer Affairs	Yes	No	-
<i>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.</i>					
<b>Growth Management</b>	Yes	State	Yes – if municipality has a Planning Board	No	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>State Mandated on a municipal level. See Zoning Ordinance; Also - Plan Endorsement Process via the State Development &amp; 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.</li> <li>The Administration is responsible for these ordinances, which are due to Highlands.</li> </ul>					
<b>Site Plan Review</b>	Yes	State, County & Local	Yes – if municipality has a Planning Board	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>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 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.</li> <li>The Land Use Board is responsible for these requirements in compliance with Chapter 191- Site Plan Review.</li> </ul>					
<b>Environmental Protection</b>	Yes	Local	No	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>Chapter 143, Lawn Fertilizers</li> <li>Chapter 147, Littering</li> <li>Chapter 154 Natural Area Preserve</li> </ul>					
<b>Flood Damage Prevention</b>	Yes	Federal, State & Local	Yes	Yes	2021-Hopatcong-009
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>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.</li> <li>The Construction Department is responsible for this ordinance in compliance with Chapter 124-Floodplain Management.</li> <li>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:               <ul style="list-style-type: none"> <li>A. Protect human life and health;</li> <li>B. Minimize expenditure of public money for costly flood control projects;</li> <li>C. Minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;</li> <li>D. Minimize prolonged business interruptions;</li> </ul> </li> </ul>					



	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.
<ul style="list-style-type: none"> <li>o 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;</li> <li>o 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;</li> <li>o G. Ensure that potential buyers are notified that property is in an area of special flood hazard; and</li> <li>o H. Ensure that those who occupy the areas of special flood hazard assume responsibility for their actions.</li> </ul> <ul style="list-style-type: none"> <li>• The Flood Damage Prevention Ordinance lacks the state mandated freeboard requirement.</li> </ul>					
<b>Wellhead Protection</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Emergency Management</b>	Yes	Local	No	Yes	-
<i>Comment:</i>					
	<ul style="list-style-type: none"> <li>• Chapter 17, Fire Department</li> <li>• Chapter 39, Police Department</li> </ul>				
<b>Climate Change</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Disaster Recovery Ordinance</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Disaster Reconstruction Ordinance</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Municipal Separate Storm Sewer System (MS4)</b>	Yes	Local	No	Yes	-
<i>Comment: The Engineering Department is responsible for this ordinance in compliance with Chapter 203 – Storm Sewer System.</i>					
<b>Other [Special Purpose Ordinances (i.e., sensitive areas, steep slope)]</b>	Yes	Local	No	Yes	-
<i>Comment: The Borough is responsible for these ordinances in compliance with Chapter 100 – Deer Management, Chapter 132 – Highlands, and Chapter 154 – Natural Area Preserve.</i>					
<b>Planning Documents</b>					
<b>Comprehensive / Master Plan</b>	Yes	Local	Yes	Yes	-
<i>Comment:</i>					
	<ul style="list-style-type: none"> <li>• 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.</li> <li>• The Land Use Board is responsible for this plan in compliance with 2014 Master Plan Reexamination Report.</li> </ul>				
<b>Capital Improvement Plan</b>	Yes	Local	No	Yes	-
<i>Comment: The Administration is responsible for this plan</i>					
<b>Disaster Debris Management Plan</b>	No	-	No	-	2021-Hopatcong-010
<i>Comment:</i>					
<b>Floodplain or Watershed Plan</b>	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.
<i>Comment:</i>					
<b>Stormwater Management Plan</b>	No	State & Local	Yes	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>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.</li> </ul>					
<b>Stormwater Pollution Prevention Plan</b>	No	-	Yes	-	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>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.</li> </ul>					
<b>Urban Water Management Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Habitat Conservation Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Economic Development Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Shoreline Management Plan</b>	No	-	Yes – if located in a coastal zone	-	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>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.</li> </ul>					
<b>Community Wildfire Protection Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Community Forest Management Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Transportation Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Agriculture Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Climate Action Plan</b>	No	-	No	-	-
<i>Comment:</i>					





	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.
<b>Tourism Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Business Development Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Other: Open Space Plan</b>	Yes	Local	No	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>The Open Space Department is responsible for this plan in compliance with Open Space and Recreation Plan Update, 2011.</li> </ul>					
<b>Response/Recovery Planning</b>					
<b>Comprehensive Emergency Management Plan (CEMP) / Emergency Operations Plan (EOP)</b>	Yes	Local	Yes	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>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.</li> <li>The Office of Emergency Management is responsible for this plan in compliance with Emergency Operation Plan.</li> </ul>					
<b>Threat &amp; Hazard Identification &amp; Risk Assessment (THIRA)</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Post-Disaster Recovery Plan</b>	Yes	Local	No	Yes	-
<i>Comment: The Office of Emergency Management is responsible for this plan in compliance with the Emergency Operation Plan.</i>					
<b>Continuity of Operations Plan</b>	Yes	Local	No	Yes	-
<i>Comment:</i>					
<b>Public Health Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Other Plans</b>	Yes	State & Local	No	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>The Highlands Council is responsible for these plans in compliance with Borough of Hopatcong Highlands Environmental Resource Inventory, 2013.</li> </ul>					

**Table 9.13-4. Development and Permitting Capability**

Criterion	Response
Does your jurisdiction issue development permits? - If no, who does? If yes, which department?	Yes, Construction
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 Borough of Hopatcong.





**Table 9.13-5. Administrative and Technical Capabilities**

Staff/Personnel Resource	Available?	Department/Agency/Position
<b>Administrative Capability</b>		
Planning Board	Yes	Land Use Board
Mitigation Planning Committee	Yes	OEM
Environmental Board / Commission	Yes	Environmental Committee
Open Space Board / Committee	Yes	Open Space Board
Economic Development Commission / Committee	No	-
Warning Systems / Services (reverse 911, outdoor warning signals)	Yes	Nixle
Maintenance program to reduce risk	Yes	OEM
Mutual aid agreements	Yes	Fire Department/EMS/OEM
<b>Technical/Staffing Capability</b>		
Planners or engineers with knowledge of land development and land management practices	Yes	Land Use Board, Engineers
Engineers or professionals trained in building or infrastructure construction practices	Yes	Borough Engineer
Planners or engineers with an understanding of natural hazards	Yes	Borough Engineer
Staff with training in benefit/cost analysis	Yes	Administrator
Staff with training in green infrastructure	No	-
Staff with education/knowledge/training in low impact development	No	-
Surveyor	Yes	Borough Engineer
Stormwater engineer	No	-
Personnel skilled or trained in GIS applications	No	-
Local or state water quality professional	No	Borough Engineer
Scientist familiar with natural hazards in local area	No	-
Emergency manager	Yes	OEM
Watershed planner	No	-
Environmental specialist	No	-
Grant writers	Yes	Millennium
Resilience Officer	No	-
Other: Professionals trained in conducting damage assessments	Yes	Construction

**FISCAL CAPABILITY**

The table below summarizes financial resources available to the Borough of Hopatcong.

**Table 9.13-6. Fiscal Capabilities**

Financial Resource	Accessible or Eligible to Use?
Community Development Block Grants (CDBG, CDBG-DR)	Yes
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service	Yes
Incur Debt through General Obligation Bonds	Yes
Incur Debt through Special Tax Bonds	No





Financial Resource	Accessible or Eligible to Use?
Incur Debt through Private Activity Bonds	No
Withhold Public Expenditures in Hazard-Prone Areas	No
State-Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	No
Clean Water Act 319 Grants (Nonpoint Source Pollution)	No
Other: Open Space Acquisition Funding Programs	Yes

**EDUCATION AND OUTREACH CAPABILITY**

The table below summarizes the education and outreach resources available to the Borough of Hopatcong.

**Table 9.13-7. 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.	Yes, some information is available through Emergency Management and the Fire Department.
Do you use social media for hazard mitigation education and outreach? -If yes, briefly describe.	Yes; Facebook and Twitter
Do you have any citizen boards or commissions that address issues related to hazard mitigation? -If yes, briefly describe.	The Borough of Hopatcong has an Emergency Management Plan in effect, which contains procedures, resources, departments and agencies to keep the Borough in a state of readiness in case an emergency should occur, and to be implemented as need arises. Continuing review, up-dating and implementation of the Plan is the responsibility of the Emergency Management Council. The Emergency Management Council consists of ten members appointed by the Mayor. Of the ten members one is appointed Coordinator and four others as Deputies. The membership cuts across Borough Departments, Hopatcong School District, churches, and local organizations.
Do you have any other programs already in place that could be used to communicate hazard-related information? If yes, briefly describe.	Health Clinic, Fire Prevention Bureau

**COMMUNITY CLASSIFICATIONS**

The table below summarizes the classifications for community programs available to the Borough of Hopatcong.

**Table 9.13-8. Community Classifications**

Program	Participating?	Classification	Date Classified
Community Rating System	No	-	-
Building Code Effectiveness Grading Schedule (BCEGS)	Yes	6	Approx. 2013
Public Protection (Fire ISO Protection Class)	No	-	-
Storm Ready Certification	No	-	-
Firewise Community Classification	No	-	-
Sustainable Jersey	Yes	Bronze	December 16, 2020





N/A = Not Applicable. NP = Not Participating. - = Unavailable.

**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 9.13-9. Adaptive Capacity**

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

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.

**NATIONAL FLOOD INSURANCE PROGRAM**

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

**Table 9.13-10. 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)	William O'Connor, Construction Official
Are any certified floodplain managers on staff in your jurisdiction?	
What is the date that your flood damage prevention ordinance was last amended?	July 6, 2011
Does your floodplain management program meet or exceed minimum requirements? -If exceeds, in what ways?	The program meets the minimum requirements.
When was the most recent Community Assistance Visit or Community Assistance Contact?	February 3, 1994





Criterion	Response
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.	No
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 welcome any continuing education or certification trainings on floodplain management if offered in the County.
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 community hasn't considered joining.
How many flood insurance policies are in force in your jurisdiction?*	11 policies
-What is the insurance in force?	\$2,807,000 insurance in force
-What is the premium in force?	\$5,849 premium in force
How many total loss claims have been filed in your jurisdiction?*	12 claims
-How many claims are still open or were closed without payment?	\$54,193 in payments
-What were the total payments for losses?	
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  
Reference: FEMA 2020

**ADDITIONAL AREAS OF EXISTING INTEGRATION**

- **Sustainable Jersey:** The Borough of Hopatcong recently was awarded Bronze certification in the Sustainable Jersey Program. The Borough earned credit in the following areas related to hazard mitigation:
  - *Community Education and Outreach:* In September 2019, the Borough had a unique town wide clean-up in which cleaned up areas that were prone to litter with stagnant water and could be infested with mosquitoes. Paige Lockburner of Sussex County Mosquito Control gave a presentation on litter and how it aids in the breeding of mosquitos as well as the life span of mosquitos themselves.
  - *Fleet Inventory:* Hopatcong's fleet is currently comprised of sedans, vans, light and heavy duty trucks, and other equipment for more specialized fire and emergency services. The Borough's trucks are maintained regularly by staff mechanics and local, specialized, automotive and truck repair businesses. The Borough conducts Motor Vehicle Records abstract reports, once a year for all full time, part time or seasonal employees and volunteers who drive a municipal or personal vehicle as part of their job responsibilities. The Borough conducts Driver's Training and Instruction both internally and externally for all DPW employees as seasons and situations are identified. Hopatcong's fleet of vehicles are continually being replaced with more fuel efficient models when available.
  - *HAB Innovative Project:* In mid-July 2020 Hopatcong Borough installed a pilot project to remedy the harmful algal blooms (HAB's) that closed Lake Hopatcong last summer and caused extreme recreational and economic distress to the area. Water and air quality around the lake was affected and found to be toxic for pets and swimmers. The 60-acre Crescent Cove section of Hopatcong is one of the most impaired HAB areas on the lake and has been battling algal blooms for years prior to last year's closing. For this reason, it was the perfect site for the pilot project. Hopatcong's mayor, Michael Francis, did considerable research and settled on a bottom-diffused aeration system of controlling algal blooms







for which the borough received a \$145,680 grant from the DEP to purchase/install the system to demonstrate its effectiveness in the prevention, mitigation, and control of HAB's . The project has the potential of providing the state with validated results on whether this technology offers promise for the rest of Lake Hopatcong and other bodies of water in NJ. The project uses EverBlue-Lakes micro-porous ceramic aeration diffuser technology consisting of one land-based compressor system and 38 in-lake diffusers connected by a self-sinking airline. 10 diffusers form a Bubble Curtain at the mouth of the cove to reduce surface algal scums and floating weeds by keeping them from entering the treatment area. 28 additional diffusers are situated throughout Crescent Cove to circulate and aerate the remaining target area. Testing will be on-going and results will be accumulated and reported at the end of one year as required by the grant. The objective is to maintain Algal cell counts below the threshold of 20,000 cells/millilitre. If this pilot project is successful similar aeration systems could be installed elsewhere on LH and around NJ, and Crescent Cove will be free of HAB's.

- o *Environmental Commission:* The Hopatcong Environmental Commission is one of the more active organizations in the Borough of Hopatcong. The group has had a long history of service to the town and in the last several years has become very active in organizing and promoting green events and coordinating programs that benefit the community such as Town Cleanup and Free Trees to residents through the NJ Tree Recovery Program. In addition, they have worked with the LHF on lake clean up and screening for invasive aquatic weeds. Members assist the Musconetcong Water Assoc in water testing of the Musconetcong River downstream from its headwaters of Lake Hopatcong and they have marked storm drains throughout the borough to curb dumping.
- o *Tree Protection Ordinance:* The ordinance prohibits the uncontrolled destruction, removal and cutting of trees and takes into consideration the protection of old growth forests, trees of historical and botanical rarity.

**OPPORTUNITIES FOR FUTURE INTEGRATION**

- **Flood Damage Prevention Ordinance:** The Borough will update the Flood Damage Prevention Ordinance to include freeboard (2021-Hopatcong-003).

**9.13.5 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 Borough of Hopatcong'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 9.13-11 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 9.13-11. 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 23 <sup>rd</sup> and 24 <sup>th</sup> .	Although the County was impacted, the Borough did not report damages.





Date(s) of Event	Event Type (disaster declaration if applicable)	Sussex County Designated?	Summary of Event	Summary of Local Damages and Losses
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 Borough was subject to closures and masking and social distancing requirements.
August 4, 2020	Tropical Storm Isaias (Declaration to be determined)	Yes	Tropical Storm Isaias	High winds resulted in falling trees and branches.

Source: FEMA 2020, NOAA NCEI 2020

### 9.13.6 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 Borough of Hopatcong 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 Borough of Hopatcong 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 Borough of Hopatcong has significant exposure.

#### REPETITIVE FLOOD LOSSES

The following summarizes the repetitive and severe repetitive flood losses in the Borough of Hopatcong.

- Number of repetitive loss (RL) properties: 1
- 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

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

**Table 9.13-12. Critical Facilities and Lifelines Flood Exposure**

Name	Type	Exposure	
		1% Event	0.2% Event
22-247 Dallis Pond Dam	Dam	X	X
25-42 Lake Hopatcong	Dam	X	X

Source: Sussex County Planning Partnership 2020

Note: \*Identified lifeline





**IDENTIFIED ISSUES AND PROBLEM AREAS**

The jurisdiction has identified the following vulnerabilities within their community:

- Backup power sources are necessary to maintain critical services for critical facilities. The Borough has entered into a mutual aid agreement with the St. Jude Church Parish to be an emergency shelter. The Parish lacks a backup power source.
- A new chipper is needed to help with storm clean up as most storms cause tree and utilities damage in the Borough.
- Nutrients entering the lake through stormwater contribute to harmful algal blooms. Harmful algal blooms present a health concern and are damaging to the environment.
- The Borough requires an upgraded radio system that can be used by all our emergency services to better coordinate emergency response in the town during storms and other emergencies.
- The Ambulance Squad building is over 40 years old and is deteriorating.
- The Borough has one unmitigated repetitive loss property.
- The Borough would like to enhance existing outreach and develop additional hazard outreach.
- The Borough’s flood damage prevention ordinance lacks the state mandated freeboard requirement.
- The Borough 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 Borough of Hopatcong 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 Borough of Hopatcong. The Borough of Hopatcong 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 Borough of Hopatcong indicated the following reasons why hazard rankings have changed since the 2016 HMP:

- The Borough changed the hazard ranking for drought from medium to low.
- The Borough changed the hazard ranking for flood from medium to low.
- The Borough changed the hazard ranking for hazardous materials from medium to low.
- The Borough changed the hazard ranking for invasive species from medium to high.
- The Borough agreed with the remainder of the calculated hazard rankings.

**Table 9.13-13. Borough of Hopatcong Hazard Ranking**

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





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

### 9.13.7 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 9.13-15 and Table 9.13-16 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 9.13-14. 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	Enter 2021 HMP Action #
Hopatcong-1 (new)	Ensure continuity of operations at critical facilities and municipal buildings: Identified at this time, purchase and install Hopatcong Borough DPW Bldg Generators	DPW, OEM	In Progress. All Borough buildings have generator back up power. A generator is still needed for St. Jude church Parrish center, as the Borough has entered into a mutual aid agreement with them to be an emergency shelter.	X	2021-Hopatcong-001
Hopatcong-2 (new)	Utilize the Hazard Mitigation Plan (HMP) when updating the Comprehensive Master Plan; consider including hazard identification, hazard zones risk assessment information, and hazard mitigation goals as identified in the HMP. Further, the findings and recommendation of the HMP will be considered during any future site plan review processes.	Planning	Ongoing Capability		
Hopatcong-3 (new)	Offer training on best practices for hazard mitigation and hazard identification for Borough employees.	OEM Coordinator	Ongoing Capability		
Hopatcong-4 (old #1)	Retrofit the windows on Hudson Maxim School located on River Styx Road to meet high wind standards.	Borough Administration	No Progress. No longer a concern as the building is being sold.		



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 #
Hopatcong-5 (old #2)	Retrofit roof to meet current snow load standards on Hopatcong Municipal Facility located on River Styx Road.	Borough Administration	Complete. New roof has been installed on the building.		
Hopatcong-6 (revised old #6)	The Borough will work with the NJDEP to alleviate flooding of the small stream that flows through the area of Flora Avenue between Durban and Wills Avenue.	Borough Administration, NJDEP	Complete. DPW worked with the County and the stream bed has been dredged to alleviate flooding concerns.		
Hopatcong-7 (old #8)	Enhance the current all-hazards public education and outreach program by developing, implementing and facilitating a multi-hazard public awareness program. Provide information on all types of hazards, preparedness and mitigation measures via the Borough website and social media.	OEM with support from County OEM	In Progress	X	2021-Hopatcong-008
Hopatcong-8 (new)	Upgrade radio communication and pagers for fire department	Fire Department	In Progress. Fire Department pagers have been purchased, but the radio frequency used by the Fire Department is being phased out for emergency services by the FCC. A project is in the works to bring all the Borough emergency services onto one radio system.	X	2021-Hopatcong-005

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

- HAB innovated project (see above in integration section).

**PROPOSED HAZARD MITIGATION INITIATIVES FOR THE PLAN UPDATE**

The Borough of Hopatcong 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 Borough of Hopatcong 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 9.13-15 summarizes the comprehensive-range of specific mitigation initiatives the Borough of Hopatcong 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 9.13-16 provides a summary of the prioritization of all proposed mitigation initiatives for this HMP update.



Table 9.13-15. 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-Hopatcong-001	St. Jude Parrish Center Backup Power	<b>Problem:</b> Backup power sources are necessary to maintain critical services for critical facilities. The Borough has entered into a mutual aid agreement with the St. Jude Church Parish to be an emergency shelter. The Parish lacks a backup power source.	Existing	Severe Weather, Severe Winter Weather, Hurricane, Nor'Easter	1, 2, 6	Administration, Engineer, St Jude Parish	FEMA HMGP and BRIC, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Municipal Budget	Ensure continuity of operations of sheltering location	\$50,000	3 years	High	SIP	ES
		<b>Solution:</b> The Engineer will research what size generator is needed to power the Parish. The Borough will then assist with the purchase and installation of the selected generator and necessary electrical components to supply backup power to the shelter.											
2021-Hopatcong-002	Woodchipper	<b>Problem:</b> A new chipper is needed to help with storm clean up as most storms cause tree and utilities damage in the Borough.	Existing	Severe Weather, Severe Winter Weather, Hurricane, Nor'Easter	5	Public Works	Borough Budget	Increased capability for storm response and cleanup	\$5,000	1 year	High	SIP	ES
		<b>Solution:</b> The Borough will purchase a new woodchipper and train staff in its use. The Borough											
2021-Hopatcong-003	Filters for Lakeside Storm Drains	<b>Problem:</b> Nutrients entering the lake through stormwater contribute to harmful algal blooms.	Existing	Severe Weather, Infestation and Invasive Species	2	Public Works	HMGP, BRIC, Borough budget	Reduction in harmful algal blooms	Medium	2 years	High	SIP	SP, NR
		<b>Solution:</b> The Borough will purchase and install filters on storm drains. Public Works will be in charge of the installation and maintenance of these filters.											
2021-Hopatcong-004	Harmful Algal Bloom Control	<b>Problem:</b> Harmful algal blooms present a health concern and are damaging to the environment.	N/A	Infestation and Invasive Species	2	Administration	NJ DEP grants, environmental grants	Reduction in harmful algal blooms	Medium	Long	High	NSP	NR
		<b>Solution:</b> The Administration will work with the NJDEP to gain approval to introduce albino carp into the lake to eat plant life that contributes to harmful algae blooms.											





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-Hopatcong-005	Radio System	<b>Problem:</b> The Borough requires an upgraded radio system that can be used by all our emergency services to better coordinate emergency response in the town during storms and other emergencies.	N/A	All Hazards	6	Emergency Management	Emergency Management Performance Grants (EMPG) Program, Borough Budget	Coordinated emergency response	Medium	2 years	High	LPR	ES
		<b>Solution:</b> The Borough will purchase an upgraded radio system that will be able to be used into the future.											
2021-Hopatcong-006	Ambulance Squad Building	<b>Problem:</b> The Ambulance Squad building is over 40 years old and deteriorating.	Existing	All Hazards	1, 2, 6	Administration, Engineer, Ambulance Squad	FEMA HMGP, BRIC, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Borough Budget	Critical facility protected from damages	High	Within 5 years	High	SIP	PR
		<b>Solution:</b> The Borough will construct a new building for the Ambulance Squad with modern standards for construction of critical facilities.											
2021-Hopatcong-007	Repetitive Loss Mitigation	<b>Problem:</b> Frequent flooding events have resulted in damages to residential properties. These properties have been repetitively flooded as documented by paid NFIP claims. The Borough has one repetitive loss property but other properties may be impacted by flooding as well. <b>Solution:</b> Conduct outreach to 5 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	Existing	Flood, Severe Weather	2	NFIP Floodplain Administrator, supported by homeowners	FEMA HMGP and FMA, local cost share by residents	Eliminates flood damage to homes and residents, creates open space for the municipality increasing flood	\$400,000	3 years	High	SIP	PP





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
		residential homes in the flood prone areas that experience frequent flooding (high risk areas).						storage					
2021-Hopatcong-008	Hazard Outreach Enhancement	<p><b>Problem:</b> The Borough would like to enhance existing outreach and develop additional hazard outreach.</p> <p><b>Solution:</b> The Borough will enhance the current all-hazards public education and outreach program by developing, implementing and facilitating a multi-hazard public awareness program. Provide information on all types of hazards, preparedness and mitigation measures via the Borough website and social media.</p>	Existing	All Hazards	3	Administration	Borough budget	Increased public awareness and preparedness	Staff time	1 year	High	EAP	PI
2021-Hopatcong-009	Flood Damage Prevention Ordinance Update	<p><b>Problem:</b> The Borough's Flood Damage Prevention Ordinance lacks the state mandated freeboard requirement.</p> <p><b>Solution:</b> The Borough will update the Flood Damage Prevention Ordinance to include the freeboard requirement.</p>	New	Flood	2	FPA, Administration	Borough budget	Meet state standards, reduce future flood risk	Staff time	6 months	High	LPR	PR
2021-Hopatcong-010	Disaster Debris Management Plan	<p><b>Problem:</b> The Borough lacks a Disaster Debris Management Plan.</p> <p><b>Solution:</b> The Borough will develop and adopt a Disaster Debris Management Plan.</p>	Existing	All Hazards	5	Public Works, Emergency Management	Borough budget	Increased planning and capabilities	Staff time	1 years	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 9.13-16. 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-Hopatcong-001	St. Jude Parrish Center Backup Power	1	1	1	1	1	1	0	1	1	1	1	0	1	1	12	High ⚠
2021-Hopatcong-002	Woodchipper	0	1	1	1	1	1	1	1	1	1	1	1	1	1	13	High
2021-Hopatcong-003	Filters for Lakeside Storm Drains	0	1	1	1	1	1	0	1	1	1	1	1	1	1	12	High
2021-Hopatcong-004	Harmful Algal Bloom Control	0	1	1	1	1	1	0	0	1	1	1	1	1	1	11	High
2021-Hopatcong-005	Radio System	1	1	1	1	1	1	0	1	1	1	1	1	1	1	13	High
2021-Hopatcong-006	Ambulance Squad Building	1	1	1	1	1	1	0	1	1	1	1	0	1	1	12	High
2021-Hopatcong-007	Repetitive Loss Mitigation	1	1	1	1	1	1	0	1	0	0	1	0	1	1	10	High
2021-Hopatcong-008	Hazard Outreach Enhancement	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	High
2021-Hopatcong-009	Flood Damage Prevention Ordinance Update	0	1	1	1	1	1	1	1	1	1	0	1	1	1	12	High
2021-Hopatcong-010	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 9.13-17. 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		X		X			X
Disease Outbreak	X		X		X			X
Drought	X		X		X			X
Earthquake	X		X		X			X
Flood	X	X	X		X			X
Geologic	X		X		X			X
Hazardous Materials	X		X		X			X
Hurricane and Tropical Storm	X		X		X			X
Invasive Species	X		X	X	X			X
Nor'Easter	X		X		X			X
Severe Weather	X	X	X		X			X
Severe Winter Weather	X		X		X			X
Wildfire	X		X		X			X

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

**RED** high ranked hazard

**ORANGE** medium ranked hazard

**YELLOW** low ranked hazard



Figure 9.13-1. Borough of Hopatcong Hazard Area Extent and Location Map 1

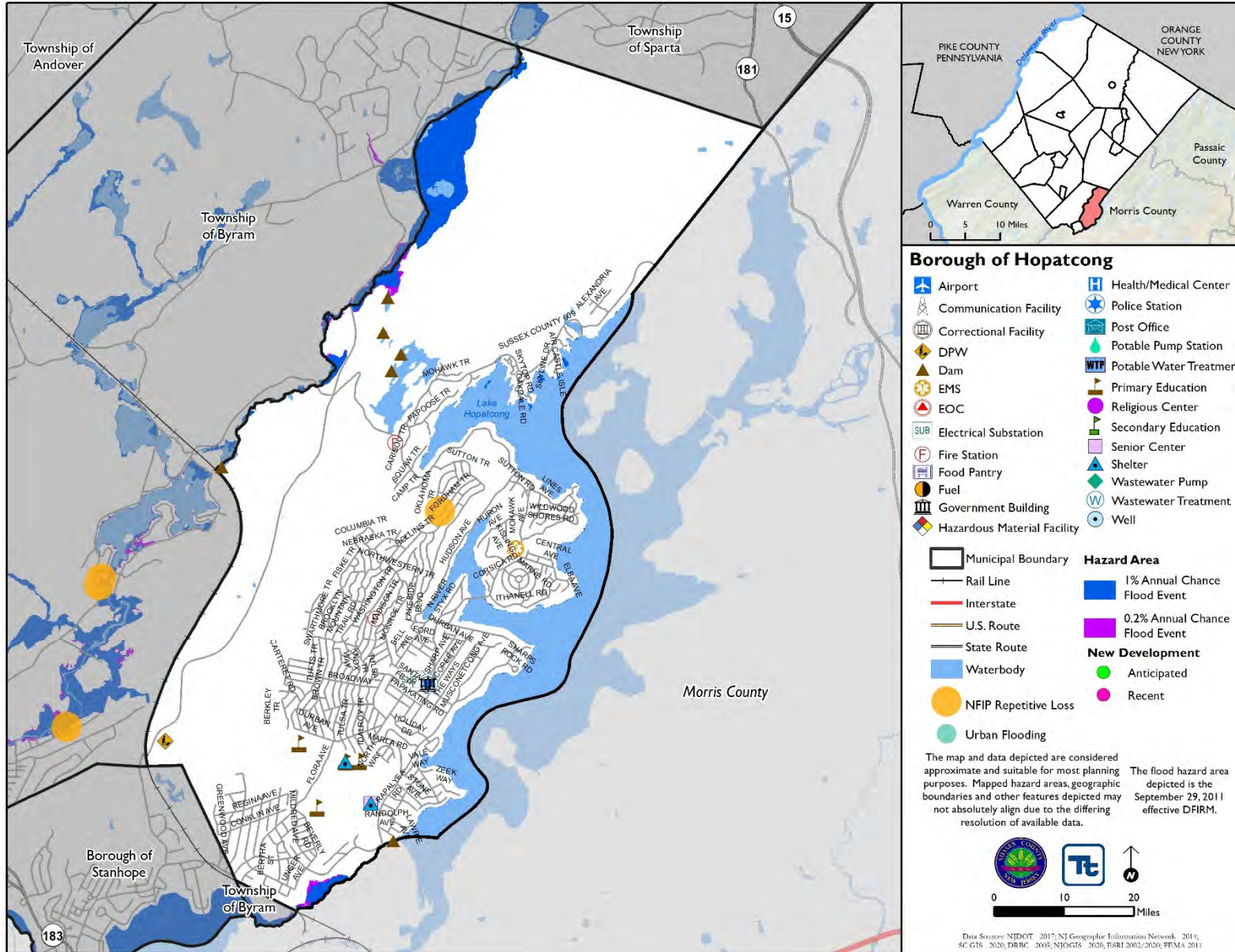




Figure 9.13-2. Borough of Hopatcong Hazard Area Extent and Location Map 2

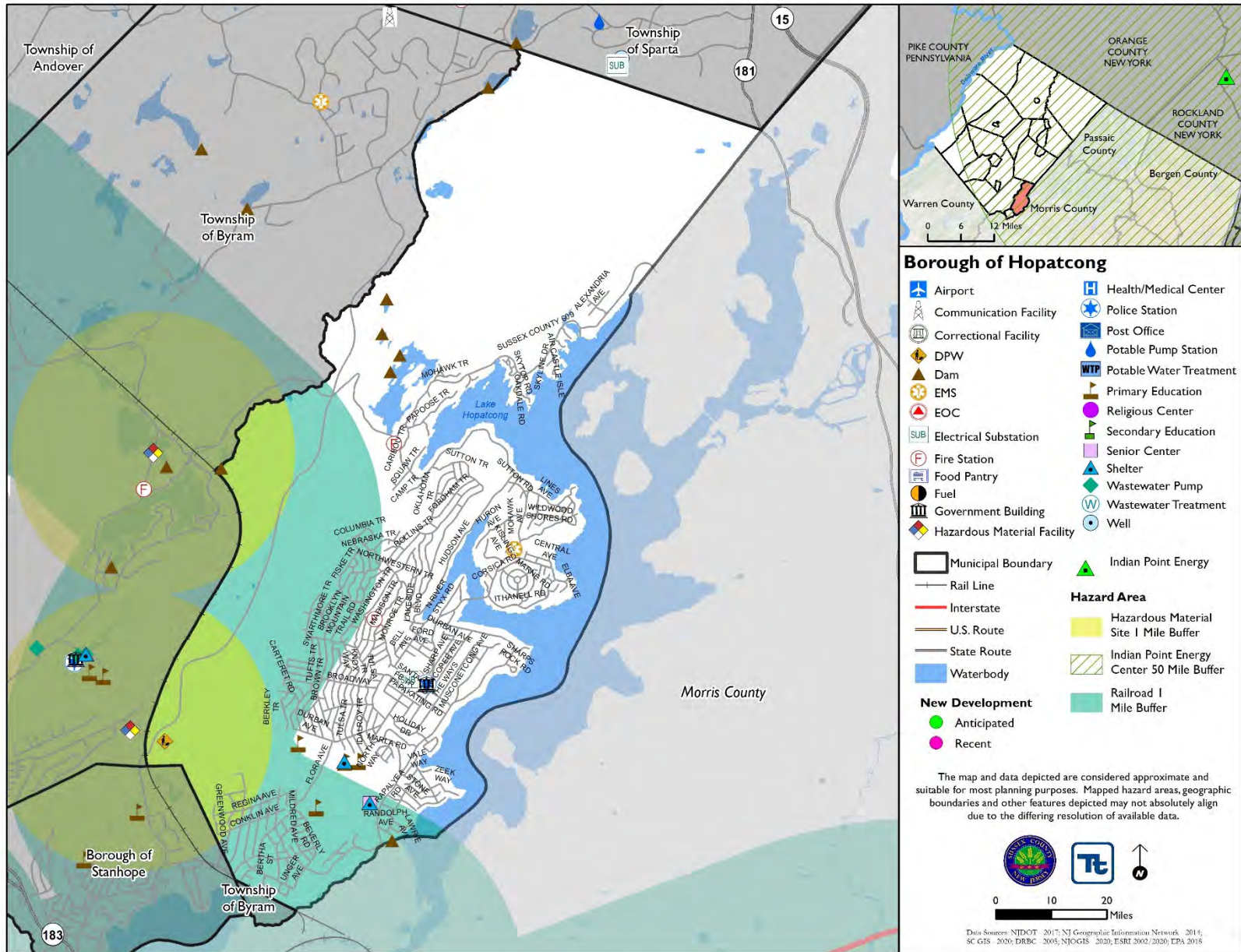
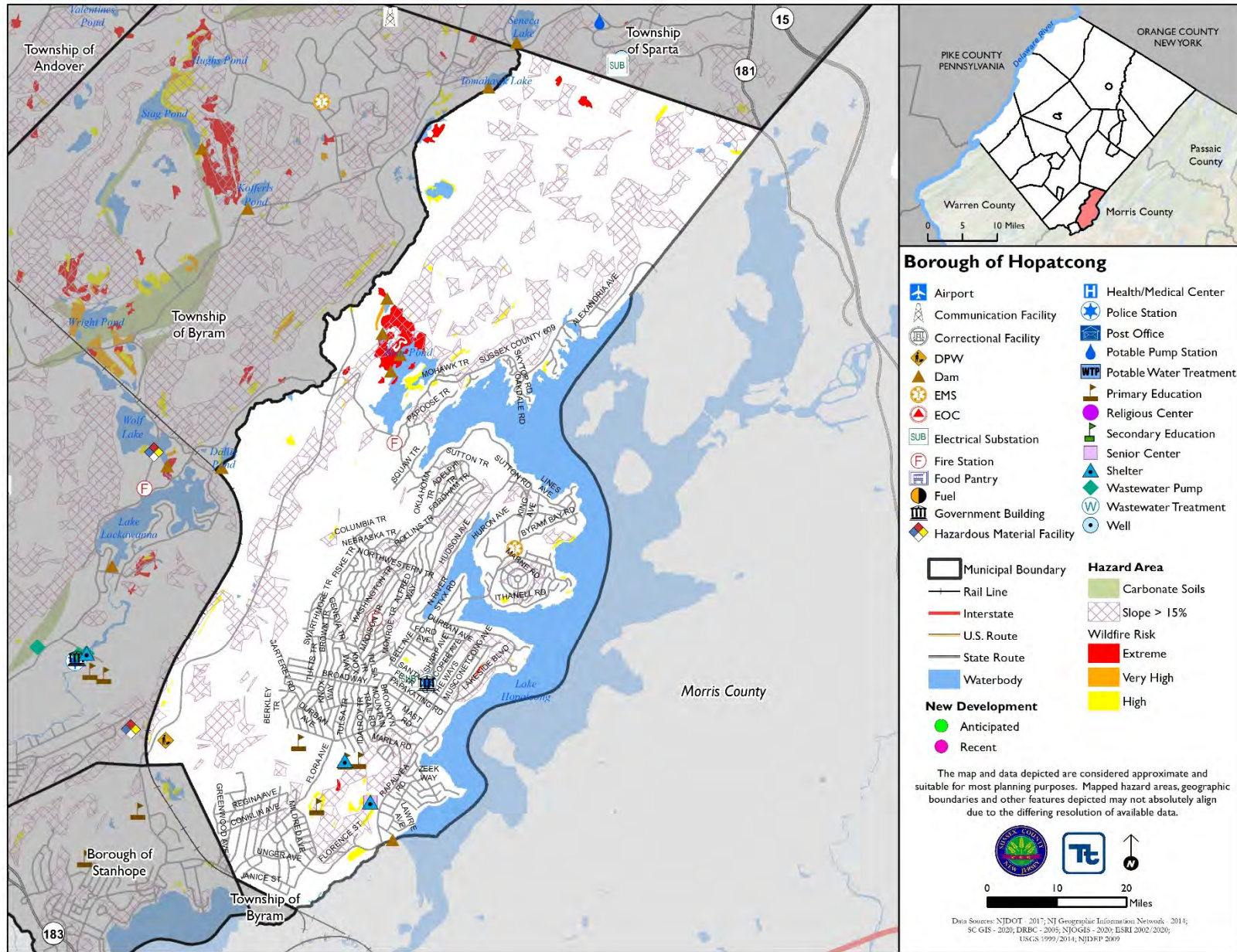




Figure 9.13-4 Borough of Hopatcong Hazard Area Extent and Location Map 3





Action Worksheet			
<b>Project Name:</b>	Public Works Maintenance Building Backup Power		
<b>Project Number:</b>	2021-Hopatcong-001		
<b>Risk / Vulnerability</b>			
<b>Hazard(s) of Concern:</b>	Severe Weather, Severe Winter Weather, Hurricane, Nor'Easter		
<b>Description of the Problem:</b>	Backup power sources are necessary to maintain critical services for critical facilities. The Borough has entered into a mutual aid agreement with the St. Jude Church Parish to be an emergency shelter. The Parish lacks a backup power source.		
<b>Action or Project Intended for Implementation</b>			
<b>Description of the Solution:</b>	The Engineer will research what size generator is needed to power the Parish. The Borough will then assist with the purchase and installation of the selected generator and necessary electrical components to supply backup power to the shelter.		
<b>Is this project related to a Critical Facility?</b>	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
<b>Level of Protection:</b>	N/A	<b>Estimated Benefits (losses avoided):</b>	Ensures continuity of operations of sheltering location
<b>Useful Life:</b>	20 years	<b>Goals Met:</b>	1, 2, 6
<b>Estimated Cost:</b>	\$50,000	<b>Mitigation Action Type:</b>	Structure and Infrastructure Projects (SIP)
<b>Plan for Implementation</b>			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	Within 3 years
<b>Estimated Time Required for Project Implementation:</b>	1 year	<b>Potential Funding Sources:</b>	FEMA HMGP and BRIC, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Municipal Budget
<b>Responsible Organization:</b>	Administration, Engineer, St Jude Parish	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard Mitigation, Emergency Management
<b>Three Alternatives Considered (including No Action)</b>			
<b>Alternatives:</b>	<b>Action</b>	<b>Estimated Cost</b>	<b>Evaluation</b>
	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
<b>Progress Report (for plan maintenance)</b>			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			





Action Worksheet		
<b>Project Name:</b>	Public Works Maintenance Building Backup Power	
<b>Project Number:</b>	2021-Hopatcong-001	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
<b>Life Safety</b>	1	Project will protect critical services of the shelter at the St. Jude Church Parish.
<b>Property Protection</b>	1	Project will protect building from power loss.
<b>Cost-Effectiveness</b>	1	
<b>Technical</b>	1	
<b>Political</b>	1	
<b>Legal</b>	1	The Borough has the legal authority to complete the project.
<b>Fiscal</b>	0	Project requires funding support.
<b>Environmental</b>	1	
<b>Social</b>	1	
<b>Administrative</b>	1	
<b>Multi-Hazard</b>	1	Severe Weather, Severe Winter Weather, Hurricane, Nor'Easter
<b>Timeline</b>	0	Within 3 years
<b>Agency Champion</b>	1	Administration, Engineer, St Jude Parish
<b>Other Community Objectives</b>	1	
<b>Total</b>	12	
<b>Priority (High/Med/Low)</b>	High	



Action Worksheet			
<b>Project Name:</b>	Filters for Lakeside Storm Drains		
<b>Project Number:</b>	2021-Hopatcong-003		
Risk / Vulnerability			
<b>Hazard(s) of Concern:</b>	Severe Weather, Infestation and Invasive Species		
<b>Description of the Problem:</b>	Nutrients entering the lake through stormwater contribute to harmful algal blooms.		
Action or Project Intended for Implementation			
<b>Description of the Solution:</b>	The Borough will purchase and install filters on storm drains. Public Works will be in charge of the installation and maintenance of these filters.		
<b>Is this project related to a Critical Facility?</b>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
<b>Level of Protection:</b>	Reduction in nutrients in stormwater	<b>Estimated Benefits (losses avoided):</b>	Reduction in harmful algal blooms
<b>Useful Life:</b>	5 years	<b>Goals Met:</b>	2
<b>Estimated Cost:</b>	Medium	<b>Mitigation Action Type:</b>	Structure and Infrastructure Project
Plan for Implementation			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	2 years
<b>Estimated Time Required for Project Implementation:</b>	3 months	<b>Potential Funding Sources:</b>	HMGP, BRIC, Borough budget
<b>Responsible Organization:</b>	Public Works	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard mitigation, Stormwater management
Three Alternatives Considered (including No Action)			
<b>Alternatives:</b>	<b>Action</b>	<b>Estimated Cost</b>	<b>Evaluation</b>
	No Action	\$0	Problem continues.
	Build large detention basins to catch all runoff	High	Costly
	Build nutrient filtration systems for all stormwater pipes	High	Costly
Progress Report (for plan maintenance)			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			



Action Worksheet		
<b>Project Name:</b>	Filters for Lakeside Storm Drains	
<b>Project Number:</b>	2021-Hopatcong-003	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	0	
Property Protection	1	Properties protected from flooding
Cost-Effectiveness	1	
Technical	1	The project is technically feasible
Political	1	
Legal	1	The Borough has the legal authority to complete the project
Fiscal	0	Project requires funding support
Environmental	1	
Social	1	
Administrative	1	
Multi-Hazard	1	Severe Weather, Infestation and Invasive Species
Timeline	1	2 years
Agency Champion	1	Public Works
Other Community Objectives	1	
<b>Total</b>	12	
<b>Priority (High/Med/Low)</b>	High	



Action Worksheet			
<b>Project Name:</b>	Ambulance Squad Building		
<b>Project Number:</b>	2021-Hopatcong-006		
<b>Risk / Vulnerability</b>			
<b>Hazard(s) of Concern:</b>	All Hazards		
<b>Description of the Problem:</b>	The Ambulance Squad building is over 40 years old and deteriorating.		
<b>Action or Project Intended for Implementation</b>			
<b>Description of the Solution:</b>	The Borough will construct a new building for the Ambulance Squad with modern standards for construction of critical facilities.		
<b>Is this project related to a Critical Facility?</b>	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
<b>Level of Protection:</b>	500-year storm event	<b>Estimated Benefits (losses avoided):</b>	Critical facility protected from damages
<b>Useful Life:</b>	15 years	<b>Goals Met:</b>	2, 6
<b>Estimated Cost:</b>	High	<b>Mitigation Action Type:</b>	Structure and Infrastructure Projects (SIP)
<b>Plan for Implementation</b>			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	Within 5 years
<b>Estimated Time Required for Project Implementation:</b>	1 year	<b>Potential Funding Sources:</b>	FEMA HMGP, BRIC, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Borough Budget
<b>Responsible Organization:</b>	Administration, Engineer, Ambulance Squad	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard Mitigation, Emergency Management
<b>Three Alternatives Considered (including No Action)</b>			
<b>Alternatives:</b>	<b>Action</b>	<b>Estimated Cost</b>	<b>Evaluation</b>
	No Action	\$0	Problem continues.
	Rebuild facility to new standards	High	Costly and not necessary
	Build secondary facility protected to new standards	High	Costly and not necessary
<b>Progress Report (for plan maintenance)</b>			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			



Action Worksheet		
<b>Project Name:</b>	Ambulance Squad Building	
<b>Project Number:</b>	2021-Hopatcong-006	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
<b>Life Safety</b>	1	Project will protect critical services of Ambulance Squad Building
<b>Property Protection</b>	1	Project will protect Ambulance Squad Building from future damages.
<b>Cost-Effectiveness</b>	1	
<b>Technical</b>	1	The project is technically feasible
<b>Political</b>	1	
<b>Legal</b>	1	The Borough has the legal authority to complete the project.
<b>Fiscal</b>	0	Project requires funding support.
<b>Environmental</b>	1	
<b>Social</b>	1	
<b>Administrative</b>	1	
<b>Multi-Hazard</b>	1	All Hazards
<b>Timeline</b>	0	Within 5 years
<b>Agency Champion</b>	1	Administration, Engineer, Ambulance Squad
<b>Other Community Objectives</b>	1	Protection of critical services
<b>Total</b>	12	
<b>Priority (High/Med/Low)</b>	High	



Action Worksheet			
<b>Project Name:</b>	Repetitive Loss Mitigation		
<b>Project Number:</b>	2021-Hopatcong-007		
Risk / Vulnerability			
<b>Hazard(s) of Concern:</b>	Flood, Severe weather		
<b>Description of the Problem:</b>	Frequent flooding events have resulted in damages to residential properties. These properties have been repetitively flooded as documented by paid NFIP claims. The Borough has one repetitive loss property but other properties may be impacted by flooding as well.		
Action or Project Intended for Implementation			
<b>Description of the Solution:</b>	Conduct outreach to 5 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).		
<b>Is this project related to a Critical Facility or Lifeline?</b>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
<b>Level of Protection:</b>	1% annual chance flood event + freeboard ( <i>in accordance with flood ordinance</i> )	<b>Estimated Benefits (losses avoided):</b>	Eliminates flood damage to homes and residents, creates open space for the municipality increasing flood storage.
<b>Useful Life:</b>	Acquisition: Lifetime Elevation: 30 years (residential)	<b>Goals Met:</b>	2
<b>Estimated Cost:</b>	\$400,000	<b>Mitigation Action Type:</b>	Structure and Infrastructure Project
Plan for Implementation			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	6-12 months
<b>Estimated Time Required for Project Implementation:</b>	Three years	<b>Potential Funding Sources:</b>	FEMA HMGP and FMA, local cost share by residents
<b>Responsible Organization:</b>	NFIP Floodplain Administrator, supported by homeowners	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard Mitigation
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues
	Elevate homes	\$500,000	When this area floods, the entire area is impacted; elevating homes would not eliminate the problem and still lead to road closures and impassable roads
Elevate roads	\$500,000	Elevated roadways would not protect the homes from flood damages	
Progress Report (for plan maintenance)			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			



Action Worksheet		
<b>Project Name:</b>	Repetitive Loss Mitigation	
<b>Project Number:</b>	2021-Hopatcong-007	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
<b>Life Safety</b>	1	Families moved out of high-risk flood areas.
<b>Property Protection</b>	1	Properties removed from high-risk flood areas.
<b>Cost-Effectiveness</b>	1	Cost-effective project
<b>Technical</b>	1	Technically feasible project
<b>Political</b>	1	
<b>Legal</b>	1	The Borough has the legal authority to conduct the project.
<b>Fiscal</b>	0	Project will require grant funding.
<b>Environmental</b>	1	
<b>Social</b>	0	Project would remove families from the flood prone areas of the Borough.
<b>Administrative</b>	0	
<b>Multi-Hazard</b>	1	Flood, Severe weather
<b>Timeline</b>	0	
<b>Agency Champion</b>	1	NFIP Floodplain Administrator, supported by homeowners
<b>Other Community Objectives</b>	1	
<b>Total</b>	10	
<b>Priority (High/Med/Low)</b>	High	



## 9.14 TOWNSHIP OF LAFAYETTE

This section presents the jurisdictional annex for the Township of Lafayette. The annex includes a general overview of the Township of Lafayette; an assessment of the Township of Lafayette’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.

### 9.14.1 Hazard Mitigation Planning Team

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

Table 9.14-1. Hazard Mitigation Planning Team

Primary Point of Contact		Alternate Point of Contact
Name / Title: Richard Hughes, Committeeman/Emergency Management Coordinator Address: 33 Morris Farm Road, Lafayette, NJ 07848 Phone Number: (973) 985-5971 Email: hughesr22@gmail.com		Name / Title: Bill Macko, Road Foreman/Roads Address: 33 Morris Farm Road, Lafayette, NJ 07848 Phone Number: (973) 841-0415 Email: ltrd@ptd.net
NFIP Floodplain Administrator		
Name / Title: Debra Card, Zoning Officer/Zoning Address: 33 Morris Farm Road, Lafayette, NJ 07848 Phone Number: (973) 383-1817 x12 Email: zoning@lafayetteetwp.org		
Name	Title	Method of Participation
Richard Hughes	Committeeman/Emergency Management 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; reviewed annex*
Bill Macko	DPW Forman/Roads/Fire Chief	Alternate point of contact; reviewed annex*
Debra Card	Zoning Officer/Zoning	NFIP Floodplain Administrator
Greg Corcoran	Mayor	Reviewed annex*
Michael Vreeland	Engineer	Reviewed annex*
Toni Grisaffi	CFO	Reviewed annex*
David Banish	Planner	Reviewed annex*

\*Refer to Jurisdictional Annex Review Sign-Off Sheet in Appendix B

### Jurisdiction Profile

Lafayette Township is centrally located in Sussex County. It is bordered to the north by Wantage Township, to the east by Hardyston Township, to the south by Sparta and Andover Townships, and to the west by Frankford and Hampton Townships. The Township covers a total area of approximately 18.0 square miles. The following unincorporated communities are located within the Township: Harmonyville, Hopkins Corner, Warbasse, and Branchville Junction. There are many small ponds located throughout the Township and the Paulins Kill flows through the southwestern corner of the Township.







According to the U.S. Census, the 2010 population for the Township of Lafayette was 2,538. The estimated 2018 population was 2,390, a 5.8 percent increase from the 2010 Census. Data from the 2018 U.S. Census American Community Survey indicate that 5.4 percent of the population is 5 years of age or younger and 18.2 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.

### 9.14.2 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 9.14-2 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 9.14-2. Recent and Expected Future Development**

Type of Development	2015		2016		2017		2018		2019	
<b>Number of Building Permits for New Construction Issued Since the Previous HMP</b>										
	<b>Total</b>	<b>Within SFHA</b>	<b>Total</b>	<b>Within SFHA</b>	<b>Total</b>	<b>Within SFHA</b>	<b>Total</b>	<b>Within SFHA</b>	<b>Total</b>	<b>Within SFHA</b>
Single and Two-Family Units	0	0	0	0	0	0	0	0	0	0
Multi-Family	0	0	0	0	0	0	0	0	0	0
Other (commercial, mixed-use, etc.)	0	0	0	0	0	0	0	0	0	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		
<b>Recent Major Development and Infrastructure from 2015 to Present</b>										
400,000 sq ft industrial building and cogeneration power plant	Industrial	1		144 Route 94 S.		Nuclear Incident Hazard Area, Carbonate Rock Geologic Hazard Area		Approved		
Expansion and relocation of recycling center at the Sussex County solid waste municipal utilities authority	Recycling Center	1		Route 94		Nuclear Incident Hazard Area		Approved		
<b>Known or Anticipated Major Development and Infrastructure in the Next Five (5) Years</b>										
Shoppes of Lafayette Village	Mixed use	150 apartments, waste water treatment facility, recreation		75 Route 15 S		Nuclear Incident Hazard Area		Proposed		

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



### 9.14.3 Capability Assessment

Section 5 (Capability Assessment) describes the components included in the capability assessment and their significance for hazard mitigation planning. The Township of Lafayette 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 Lafayette 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 Lafayette and where hazard mitigation has been integrated.

**Table 9.14-3. 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.
<b>Codes, Ordinances, &amp; Requirements</b>					
<b>Building Code</b>	Yes	State & Local	Yes	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>• 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</li> <li>• The Building Department and Construction Official are responsible for this code in compliance with State Uniform Construction Code Act (N.J.S. 52:27D-119 et seq.) and Chapter 8 – Building and Housing.</li> </ul>					
<b>Zoning Code</b>	Yes	Local	Yes – if municipality has a Planning Board	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>• 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.</li> <li>• The Zoning Officer is responsible for this code in compliance with Chapter 13- Zoning.</li> </ul>					
<b>Subdivisions</b>	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		
<b>Comment:</b> <ul style="list-style-type: none"> <li>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.</li> <li>The Land Use Board is responsible for this ordinance in compliance with Chapter 12 – Land Use; Chapter 14 – Land Use Procedures.</li> </ul>					
<b>Stormwater Management</b>	Yes	Local	Yes	Yes	-
<b>Comment:</b> <ul style="list-style-type: none"> <li>See Title 7 of the NJ Administrative Code, N.J.A.C. 7:8</li> <li>The DPW is responsible for this ordinance in compliance with Chapter 21- Stormwater Control.</li> </ul>					
<b>Post-Disaster Recovery</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Real Estate Disclosure</b>	Yes	State, Division of Consumer Affairs	Yes	No	-
<b>Comment:</b> 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.					
<b>Growth Management</b>	No	-	Yes – if municipality has a Planning Board	No	-
<b>Comment:</b> <ul style="list-style-type: none"> <li>State Mandated on a municipal level. See Zoning Ordinance; Also - Plan Endorsement Process via the State Development &amp; 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.</li> </ul>					
<b>Site Plan Review</b>	Yes	Local	Yes – if municipality has a Planning Board	Yes	-
<b>Comment:</b> <ul style="list-style-type: none"> <li>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 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.</li> <li>The Site Plan Committee is responsible for these requirements in compliance with Chapter 12- Land Use.</li> </ul>					
<b>Environmental Protection</b>	Yes	Local	No	No	-
<b>Comment:</b> <ul style="list-style-type: none"> <li>Chapter 10, Soil and Soil Removal sets the permitting and procedural requirements for soil removal and fill.</li> </ul>					



	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.
<b>Flood Damage Prevention</b>	Yes	Federal, State & Local	Yes	Yes	-
<b>Comment:</b>					
<ul style="list-style-type: none"> <li>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.</li> <li>The Construction Official is responsible for this ordinance in compliance with Chapter 17- Flood Damage Prevention.</li> <li>The ordinance was last updated in August 2020.</li> </ul>					
<b>Wellhead Protection</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Emergency Management</b>	Yes	Local	No	-	-
<b>Comment:</b>					
<ul style="list-style-type: none"> <li>Chapter 3 Police Regulations</li> </ul>					
<b>Climate Change</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Disaster Recovery Ordinance</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Disaster Reconstruction Ordinance</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Other [Special Purpose Ordinances (i.e., sensitive areas, steep slope)]</b>	Yes	Local	No	Yes	-
<b>Comment:</b>					
<ul style="list-style-type: none"> <li>These ordinances follow Ridgeline Preservation.</li> </ul>					
<b>Planning Documents</b>					
<b>Comprehensive / Master Plan</b>	Yes	Local	Yes	Yes	-
<b>Comment:</b>					
<ul style="list-style-type: none"> <li>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.</li> <li>The Planning Board is responsible for this plan, which was adopted in 2012.</li> </ul>					
<b>Capital Improvement Plan</b>	Yes	Local	No	Yes	-
<b>Comment:</b> The Township Committee is responsible for this plan, which is part of the municipal budget- put away funding for these projects; reviewed/ updated annually.					
<b>Disaster Debris Management Plan</b>	No	-	No	-	2020-Lafayette-010
<b>Comment:</b>					
<b>Floodplain or Watershed Plan</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Stormwater Management Plan</b>	Yes	Local	Yes	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.
<b>Comment:</b>					
<ul style="list-style-type: none"> <li>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.</li> <li>The Emergency Management/ Engineering Departing is responsible for this plan, which is reviewed annually.</li> </ul>					
Stormwater Pollution Prevention Plan	-		Yes	-	-
<b>Comment:</b>					
<ul style="list-style-type: none"> <li>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.</li> </ul>					
Urban Water Management Plan	No	-	No	-	-
<b>Comment:</b>					
Habitat Conservation Plan	No	-	No	-	-
<b>Comment:</b>					
Economic Development Plan	Yes	Local	No	Yes	-
<b>Comment:</b> The Economic Development Subcommittee (Township Committee, Planning Board) are responsible for this plan. The subcommittee was created in 2015.					
Shoreline Management Plan	No	-	Yes – if located in a coastal zone	-	-
<b>Comment:</b>					
<ul style="list-style-type: none"> <li>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.</li> </ul>					
Community Wildfire Protection Plan	No	-	No	-	-
<b>Comment:</b>					
Community Forest Management Plan	No	-	No	-	-
<b>Comment:</b>					
Transportation Plan	Yes	Local	No	Yes	-
<b>Comment:</b> This plan is included in the Master Plan.					
Agriculture Plan	No	-	No	-	-
<b>Comment:</b>					
Climate Action Plan	No	-	No	-	-
<b>Comment:</b>					
Tourism 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.
<i>Comment:</i>					
<b>Business Development Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Other: Open Space Plan</b>	Yes	Local	No	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>The Open Space Commission and Township Committee are responsible for this plan, which is reviewed annually.</li> </ul>					
<b>Response/Recovery Planning</b>					
<b>Comprehensive Emergency Management Plan (CEMP) / Emergency Operations Plan (EOP)</b>	Yes	Local	Yes	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>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.</li> <li>The Office of Emergency Management is responsible for this plan, which was reviewed in 2013.</li> </ul>					
<b>Threat &amp; Hazard Identification &amp; Risk Assessment (THIRA)</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Post-Disaster Recovery Plan</b>	No	-	No	-	2020-Lafayette-007
<i>Comment:</i>					
<b>Continuity of Operations Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Public Health Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Other</b>	No	-	No	-	-
<i>Comment:</i>					

**Table 9.14-4. Development and Permitting Capability**

Criterion	Response
Does your jurisdiction issue development permits? - If no, who does? If yes, which department?	Yes, developments are reviewed and approved through municipal Land Use Board. Zoning permits are issued through the municipal Zoning Officer
Does your jurisdiction have the ability to track permits by hazard area?	Yes, permits are tracked by address and Lot/Block which are categorized in zones and hazard areas
Does your jurisdiction have a buildable lands inventory? -If yes, please describe briefly. -If no, please quantitatively describe the level of buildout in the jurisdiction.	Yes, the inventory was prepared in support of the Fair Share Housing Plan prepared for the NJ Affordable Housing / Council on Affordable Housing. The Fair Share Housing Plan identifies the vacant land and buildability or constraints of the available land.

**ADMINISTRATIVE AND TECHNICAL CAPABILITY**

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





**Table 9.14-5. Administrative and Technical Capabilities**

Staff/Personnel Resource	Available?	Department/Agency/Position
<b>Administrative Capability</b>		
Planning Board	Yes	Land Use Board
Mitigation Planning Committee	No	-
Environmental Board / Commission	No	-
Open Space Board / Committee	Yes	Open Space Advisory Committee; Recreation Committee
Economic Development Commission / Committee	Yes	In progress of developing – Economic Development Subcommittee
Warning Systems / Services (reverse 911, outdoor warning signals)	Yes	Available through PSAP, SC Sheriff Communications Center
Maintenance program to reduce risk	Yes	DPW maintains tree trimming, culvert cleaning/repairs
Mutual aid agreements	Yes	Surrounding communities
<b>Technical/Staffing Capability</b>		
Planners or engineers with knowledge of land development and land management practices	Yes	Municipal Engineer and Planner – contracted and appointed each year
Engineers or professionals trained in building or infrastructure construction practices	Yes	Municipal Engineer and Planner – contracted and appointed each year
Planners or engineers with an understanding of natural hazards	Yes	Municipal Engineer and Planner – contracted and appointed each year
Staff with training in benefit/cost analysis	Yes	Contracted
Staff with training in green infrastructure	No	-
Staff with education/knowledge/training in low impact development	No	-
Surveyor	Yes	Contracted when needed
Stormwater engineer	Yes	Contracted when needed
Personnel skilled or trained in GIS applications	Yes	Contracted through Engineering firm responsible for maintaining Tax and Zoning Maps- annual updates-
Local or state water quality professional	Yes	Contracted when needed
Scientist familiar with natural hazards in local area	No	-
Emergency manager	Yes	Richard Hughes, Committeeman/Emergency Management Coordinator
Watershed planner	No	-
Environmental specialist	Yes	Yes, annual contract with NJ Conservancy
Grant writers	Yes	Contracted
Resilience Officer	No	-
Other: NFIP Floodplain Administrator	Yes	Construction Official
Other: Professionals trained in conducting damage assessments	Yes	Part of emergency management

**FISCAL CAPABILITY**

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

**Table 9.14-6. Fiscal Capabilities**

Financial Resource	Accessible or Eligible to Use?
Community Development Block Grants (CDBG, CDBG-DR)	No
Capital Improvements Project Funding	Yes





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

**EDUCATION AND OUTREACH CAPABILITY**

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

**Table 9.14-7. Education and Outreach Capabilities**

Criterion	Response
Do you have a public information officer or communications office?	No
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.	Yes – link to Sussex County’s Emergency Management page
Do you have any citizen boards or commissions that address issues related to hazard mitigation? -If yes, briefly describe.	No
Do you have any other programs already in place that could be used to communicate hazard-related information? If yes, briefly describe.	No

**COMMUNITY CLASSIFICATIONS**

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

**Table 9.14-8. Community Classifications**

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

**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 9.14-9. 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.*

**NATIONAL FLOOD INSURANCE PROGRAM**

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

**Table 9.14-10. National Flood Insurance Program Compliance**

Criterion	Response
What local department is responsible for floodplain management?	Engineering
Who is your floodplain administrator? (name, department/position)	Nevitt Duveneck, Municipal Engineer
Are any certified floodplain managers on staff in your jurisdiction?	No
What is the date that your flood damage prevention ordinance was last amended?	August 2020
Does your floodplain management program meet or exceed minimum requirements? -If exceeds, in what ways?	The program meets minimum requirements set by FEMA and the State.
When was the most recent Community Assistance Visit or Community Assistance Contact?	January 27, 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.	No





Criterion	Response
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 consider attending continuing education and/or certification training on floodplain management if it were offered in the County.
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 community has not considered joining the program.
How many flood insurance policies are in force in your jurisdiction?*	3 policies
-What is the insurance in force?	\$770,000 insurance in force
-What is the premium in force?	\$1,544 premium in force
How many total loss claims have been filed in your jurisdiction?*	7 claims
-How many claims are still open or were closed without payment?	\$24,566
-What were the total payments for losses?	
Do you maintain a list of properties that have been damaged by flooding?	Yes
Do you maintain a list of property owners interested in flood mitigation?	No

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

**ADDITIONAL AREAS OF EXISTING INTEGRATION**

- There are no additional areas of existing integration identified at this time.

**OPPORTUNITIES FOR FUTURE INTEGRATION**

- There are no opportunities for further integration identified at this time.

**9.14.4 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 Lafayette’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 9.14-11 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 9.14-11. 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 23 <sup>rd</sup> and 24 <sup>th</sup> .	No impacts reported in this plan
January 20, 2020 and continuing	EM-3451, DR-4488: COVID-19 Pandemic	Yes	The coronavirus pandemic resulted in the need for	Lafayette’s Municipal Building was closed to the public.





Date(s) of Event	Event Type (disaster declaration if applicable)	Sussex County Designated?	Summary of Event	Summary of Local Damages and Losses
			shutdowns and social distancing and mask requirements.	

Source: FEMA 2020, NOAA NCEI 2020

Note:

### 9.14.5 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 Lafayette 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 Lafayette 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 Lafayette has significant exposure.

#### REPETITIVE FLOOD LOSSES

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

- Number of repetitive loss (RL) properties: 1
- 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 9.14-12. Critical Facilities and Lifelines Flood Exposure**

Name	Type	Exposure	
		1% Event	0.2% Event
22-15 Old Culvers Dam	Dam	X	X

Source: Sussex County Planning Partnership 2020

#### IDENTIFIED ISSUES AND PROBLEM AREAS

The jurisdiction has identified the following vulnerabilities within their community:

- Loss of Power which regularly impacts the Municipal Town Hall and the Fire department buildings during severe weather. Budgets and unavailability of natural gas have been obstacles.



- The Township has budgetary constraints with hiring additional staff, procuring new equipment, or contracting 3rd party consultants to mitigate, monitor, or correct a hazard.
- The Township has budgetary constraints with design and installation of infrastructure improvements to mitigate a hazard.
- The Township does not have subject matter expertise in house within municipality for mitigating a hazard or more detailed planning for the hazard.
- The Township does not have the emergency response resources (as all volunteer) to be trained and available at all times. Reliance on mutual aid, for profit, and county emergency response resources.
- Flooding and lack of suitably sized equipment for more effective water removal from public areas, businesses, and resident homes increases flood risk.
- Traffic diversion is caused by flooding and debris results in increased traffic on local roads, closed businesses, and displaced residents from homes.
- Timely cleanup and removal of debris following a storm over a period of several days can overwhelm internal DPW resources, both manpower and equipment.
- The DPW facility requires eventual upgrades to protect continuity of operations and critical services.
- The Township has one repetitive loss property which is the municipal park. There are improvements which can be implemented to the Paulinskill Brook to prevent the magnitude of water backing up at the Rt 15 bridge and backflowing into the park and recreation area.
- 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 Lafayette 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 Lafayette. The Township of Lafayette 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 Lafayette indicated the following reasons why hazard rankings have changed since the 2016 HMP:

- The Township changed the hazard ranking for hazardous materials from medium to high. Two major highways traverse Lafayette, county roads also – major routes for hazardous materials carriers, Lafayette has limited response capabilities. If the state highway or county road is shutdown (as has happened in the past) then detours go on local roads.
- The Township agreed with the remainder of the calculated hazard rankings.

**Table 9.14-13. Township of Lafayette Hazard Ranking**

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





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

### 9.14.6 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 9.14-15 and Table 9.14-16 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 9.14-14. 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	Enter 2021 HMP Action #
Lafayette-1 (new)	Support the mitigation of vulnerable structures via retrofit (e.g. elevation, flood-proofing) or acquisition/relocation to protect structures from future damage, with repetitive loss and severe repetitive loss properties as a priority when applicable. Phase 1: Identify appropriate candidates and determine most cost-effective mitigation option. Phase 2: Work with the property owners to implement selected action based on available funding and local match availability.	Engineering via NFIP FPA with NJOEM, FEMA support	In Progress	X	2021-Lafayette-003
Lafayette-2 (new)	Purchase and install generators at the following locations: • Township municipal building Township elementary school	OEM, Township Committee	In Progress	X	2021-Lafayette-001
Lafayette-3 (new)	Work with the State of New Jersey to alleviate the flooding of Route 15 from the Paulinskill River.	Township, State of New Jersey	In Progress	X	2021-Lafayette-003
Lafayette-4 (new)	Perform regular drainage system maintenance throughout Township.	DPW	No Progress	X	2021-Lafayette-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 #
	Purchase Vac-All to assist with this maintenance program.				
Lafayette-5 (new)	Portable generators and submersible pumps to assist homeowners during periods of flooding; allows fire department to respond to more critical events	OEM, Fire Department	No Progress	X	2021-Lafayette-004
Lafayette-6 (new)	Install, reroute and increase the capability of storm drainage systems throughout the Township.	DPW	Ongoing Capability		
Lafayette-7 (old #2)	When it comes time to replacing the roof of the Township DPW facility, current snow load standards will be incorporated into the design of the roof.	DPW	In Progress	X	2021-Lafayette-009
Lafayette-8 (old #8)	Work with the County to upgrade culverts along Decker and Snover Roads. Due to the size of culverts, the County needs to do the work.	DPW, County Roads	Ongoing Capability		
Lafayette-9 (old #12)	Continue to enhance and develop the all-hazards public education and outreach program for hazard mitigation and preparedness for the Township.	Township	Ongoing Capability		

The Township of Lafayette did not identify additional mitigation projects completed since 2016.

**PROPOSED HAZARD MITIGATION INITIATIVES FOR THE PLAN UPDATE**

The Township of Lafayette 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 Lafayette 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 9.14-15 summarizes the comprehensive-range of specific mitigation initiatives the Township of Lafayette 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 9.14-16 provides a summary of the prioritization of all proposed mitigation initiatives for this HMP update.



Table 9.14-15. 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-Lafayette-001	Municipal Building Backup Generator	<p><b>Problem:</b> Backup power sources are necessary to maintain critical services for critical facilities. Municipal Building does not have a generator and this area has been without power for over seven days in the past. The Township has researched and have proposals for 65kW generator with sized auto transfer switch. Natural gas was extended to the municipal building in October 2019 but the size of loads and location requires larger generator and more complicated installation resulting in higher costs</p>	Existing	Severe Weather, Severe Winter Weather, Hurricane, Nor' Easter	1, 6	Engineer, Public Works	FEMA HMGP and BRIC, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Municipal Budget	Ensure continuity of operations of Municipal Building	\$35,000	Within 1 year	High	SIP	ES
		<p><b>Solution:</b> The Township will purchase and install a 65kW natural gas generator with transfer switch.</p>											
2021-Lafayette-002	Fire Department Backup Generator	<p><b>Problem:</b> Backup power sources are necessary to maintain critical services for critical facilities. The Fire Department does not have a reliable and adequately sized emergency power generator. This section of town has been without power for more than 7 days. The Township has researched and have proposals for a 40kW generator with 400amp auto transfer switch, initial propane fueled with new tanks installed until natural gas is extended to Fire House building.</p>	Existing	Severe Weather, Severe Winter Weather, Hurricane, Nor' Easter	1, 6	Engineer, Public Works, Fire Department	FEMA HMGP and BRIC, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Municipal Budget	Ensure continuity of operations of Fire Department	\$26,000	Within 1 year	High	SIP	ES
		<p><b>Solution:</b> The Township will purchase and install a 40kW generator with 400amp auto transfer switch, initial propane fueled with new tanks installed until natural gas is extended to Fire House building. When natural gas is extended to the Fire House building, the Township will modify the generator to allow for natural gas use.</p>											
2021-Lafayette-003	Paulinskill Brook Flood Study	<p><b>Problem:</b> Paulinskill Brook causes flooding when water backs up at the Rt 15 bridge and backflows into the park and recreation area. This has led to repetitive losses. This also results in</p>	Existing	Flood, Severe Storm	1, 2, 3, 4	Engineer	HMGP, BRIC, Township budget	Reduction in flooding, address	TBD by flood study	Within 5	High	SIP, NSP	SP, NR







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
		<p>blocking the major state highway and shutting down travel for days, resulting in traffic diversion onto local roads. This shuts down access to businesses located in the center of town.</p> <p><b>Solution:</b> The Township will conduct a flood study of the area. It is assumed that the slope and drainage in this area needs significant improvements, but this is significantly impacted by the blockage at the Rt 15 bridge which results in backflow of rising water into the park. Once the flood study is complete and has identified cost effective improvements, the Township will carry out the identified mitigation measures.</p>						ing repetitive losses		years			
2021-Lafayette-004	Portable Generators and Water Pumps	<p><b>Problem:</b> Flooding of public areas, businesses, and resident homes requires Township assistance for response.</p> <p><b>Solution:</b> The Township will procure additional smaller generators and water transfer pumps which can be located strategically to remove flood waters and allow for homes to remain occupied and roads to remain open.</p>	Existing	Flood, Severe Storm	2, 5	OEM, Public Works	Township budget	Increased capability of	\$10,000	Within 2 years	High	SIP	ES
2021-Lafayette-005	Vacuum Truck for Stormwater Cleaning	<p><b>Problem:</b> Traffic diversion caused by flooding and debris results in increased traffic on local roads, closed businesses, and displaced residents from homes</p> <p><b>Solution:</b> The Township will purchase a vacuum truck and train staff to more efficiently and proactively clean out stormwater and catch basins throughout the year and prior to storm seasons.</p>	Existing	Flood, Severe Storm	2, 5	Public Works	Township budget	Storm water system kept functional	\$100,000	Within 5 years	High	SIP	SP
2021-Lafayette-006	Equipment for Storm Debris Response	<p><b>Problem:</b> Timely cleanup and removal of debris following a storm over a period of several days can overwhelm internal DPW resources, both manpower and equipment. When the single piece of equipment fails during a storm event, the Township does not have the resources or equipment to respond.</p>	N/A	Severe Weather, Severe Winter Weather, Hurricane, Nor’Easter	5	Public Works	Township budget	Increased storm response capabilities	\$100,000	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
		<b>Solution:</b> The Township will purchase the appropriately sized equipment to allow for cleanup of multiple locations such as large chippers to remove large sized branches and loaders to cleanup more areas simultaneously.											
2021-Lafayette-007	Expanding Township Capabilities	<p><b>Problem:</b> Budgetary constraints with hiring additional staff, procuring new equipment, or contracting 3rd party consultants to mitigate, monitor, or correct a hazard. The Township does not have subject matter expertise in house within municipality for mitigating a hazard or more detailed planning for the hazard.</p> <p><b>Solution:</b> The Township will ensure prevent plans are in place which rely on mutual aid agreements with municipal and county agencies / departments. The Township will also work with stakeholders who have the subject matter expertise or equipment to assess, plan for, monitor, conduct training, and as needed respond.</p>	Both	All Hazards	5	Administration, OEM	Township budget	Increased capabilities for hazard response	Staff time	Within 2 years	High	LPR	PR
2021-Lafayette-008	Expanding Township Disease Outbreak Capabilities	<p><b>Problem:</b> The Township has limited capability to respond to disease outbreak events.</p> <p><b>Solution:</b> The Township will ensure shared service agreements are in place for the resources needed to plan for the hazard, and the equipment, monitoring, PPE, etc. needed for the hazard.</p>	N/A	Disease Outbreak	5	Administration, OEM	Township budget	Increased capabilities for disease outbreak response	Staff time	Within 6 months	High	LPR	PR
2021-Lafayette-009	DPW Upgrades	<p><b>Problem:</b> The DPW facility requires eventual upgrades to protect continuity of operations and critical services.</p> <p><b>Solution:</b> When it comes time to replace the roof of the Township DPW facility, current snow load standards will be incorporated into the design of the roof. Additional improvements include accessory building equipment building structural improvements, and sand/grit</p>	Existing	Hurricane, Nor’Easter, Severe Weather, Severe Winter Weather	2, 6	DPW	Township budget	Protection of critical services	High	Within 5 years	High	SIP	PP





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
		storage building structural improvements.											
2021-Lafayette-010	Disaster Debris Management Plan	<p><b>Problem:</b> The Township lacks a Disaster Debris Management Plan.</p> <p><b>Solution:</b> The Township will develop and adopt a Disaster Debris Management Plan.</p>	N/A	All Hazards	5	DPW, OEM, Administration	Township budget	Increased capability following disaster events	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

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 9.14-16. 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-Lafayette-001	Municipal Building Backup Generator	1	1	1	1	1	1	0	1	1	1	1	1	1	1	13	High ⚠
2021-Lafayette-002	Fire Department Backup Generator	1	1	1	1	1	1	0	1	1	1	1	1	1	1	13	High
2021-Lafayette-003	Paulinskill Brook Flood Study	0	1	1	1	1	0	0	1	1	0	1	0	1	1	9	High
2021-Lafayette-004	Portable Generators and Water Pumps	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	High
2021-Lafayette-005	Vacuum Truck for Stormwater Cleaning	0	1	1	1	1	1	1	1	1	1	1	0	1	1	12	High
2021-Lafayette-006	Equipment for Storm Debris Response	1	1	1	1	1	1	1	1	1	1	1	0	1	1	13	High
2021-Lafayette-007	Expanding Township Capabilities	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	High
2021-Lafayette-008	Expanding Township Disease Outbreak Capabilities	1	0	1	1	1	1	1	0	1	1	0	1	1	1	11	High
2021-Lafayette-009	DPW Upgrades	1	1	1	1	1	1	1	1	1	1	1	0	1	1	13	High
2021-Lafayette-010	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 9.14-17. 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				X			X
Disease Outbreak	X				X			X
Drought	X				X			X
Earthquake	X				X			X
Flood	X			X	X	X	X	X
Geologic	X				X			X
Hazardous Materials	X				X			X
Hurricane and Tropical Storm	X	X			X			X
Invasive Species	X				X			X
Nor'Easter	X	X			X			X
Severe Weather	X	X		X	X	X	X	X
Severe Winter Weather	X	X			X			X
Wildfire	X				X			X

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

- RED** high ranked hazard
- ORANGE** medium ranked hazard
- YELLOW** low ranked hazard



Figure 9.14-1. Township of Lafayette Hazard Area Extent and Location Map 1

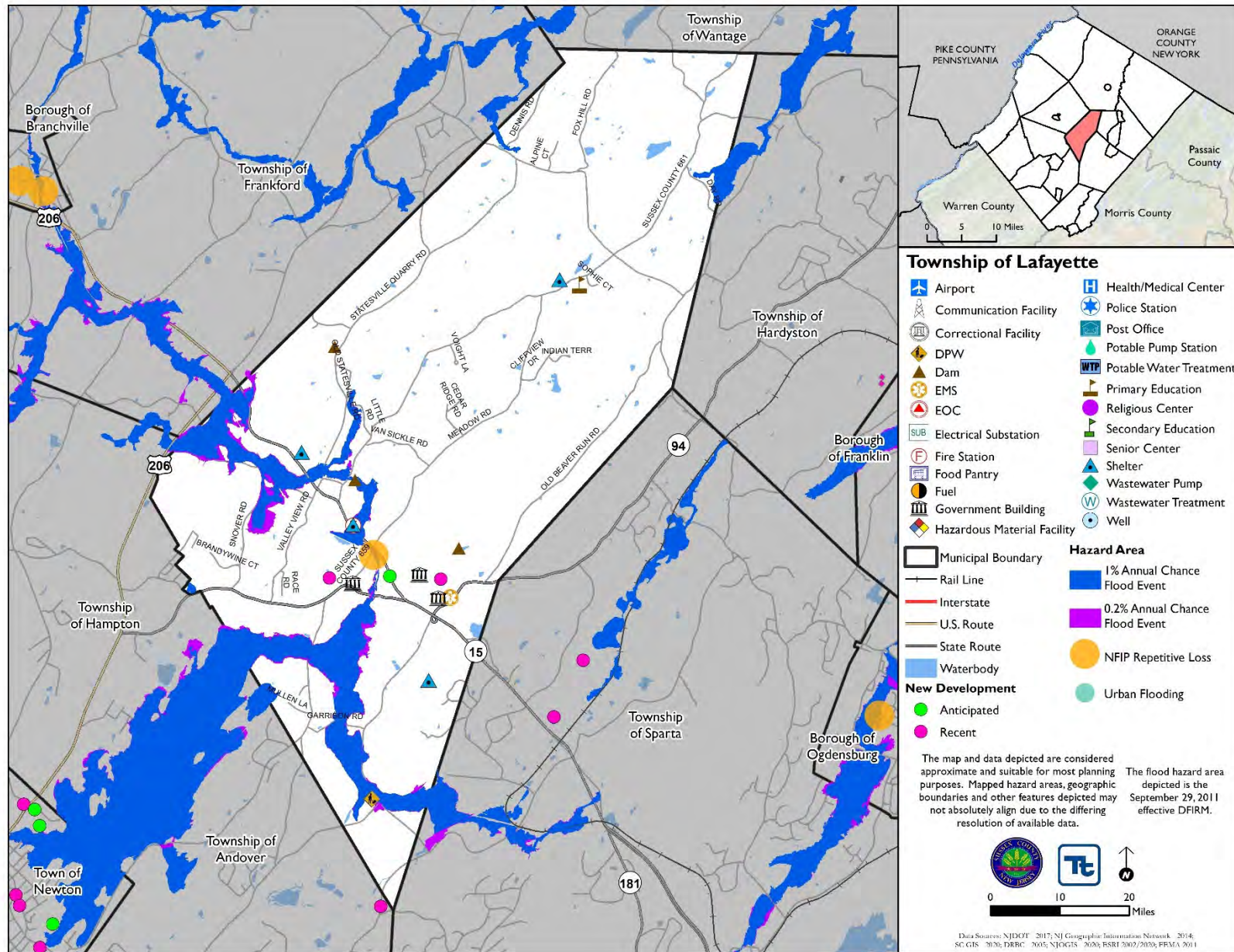




Figure 9.14-2. Township of Lafayette Hazard Area Extent and Location Map 2

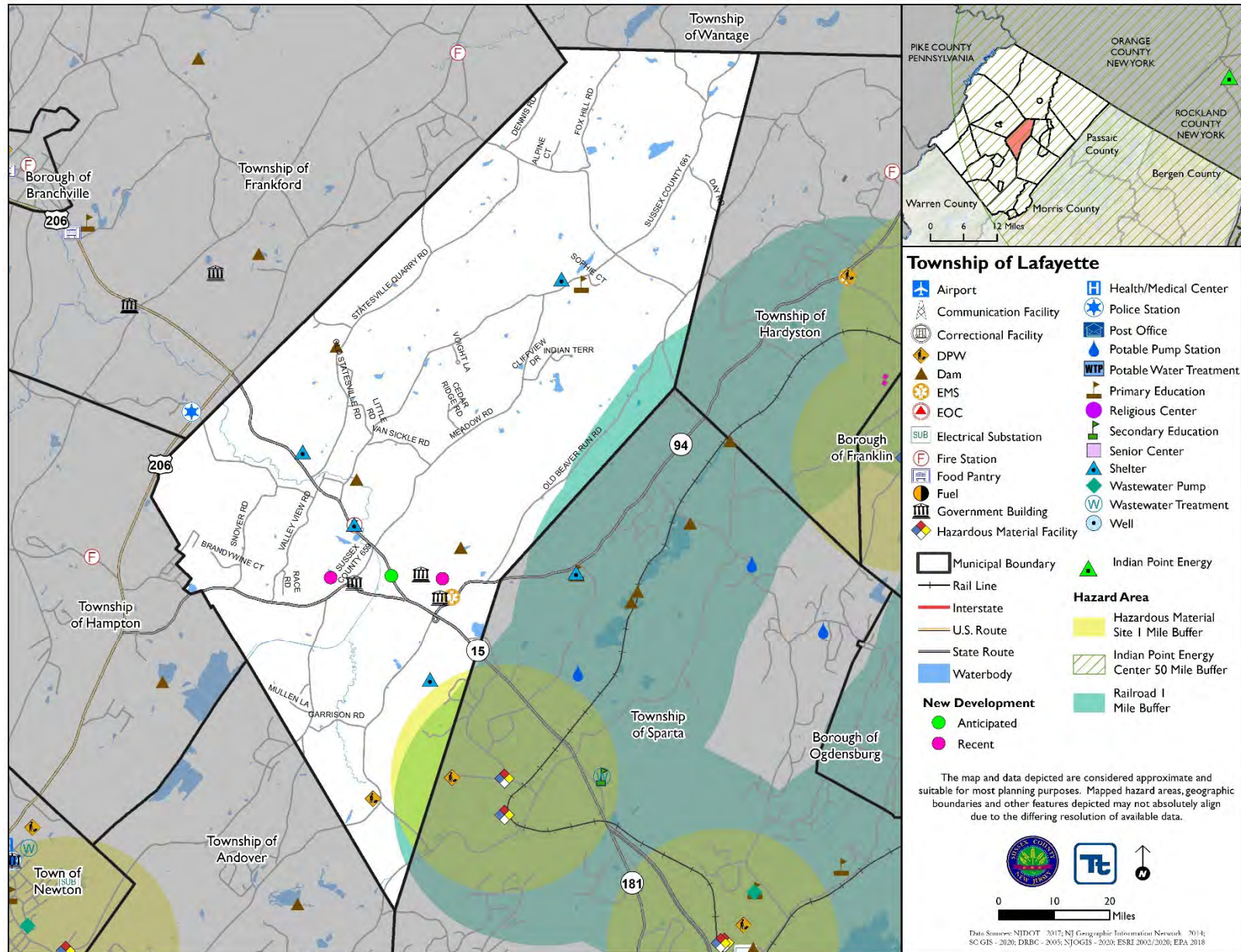
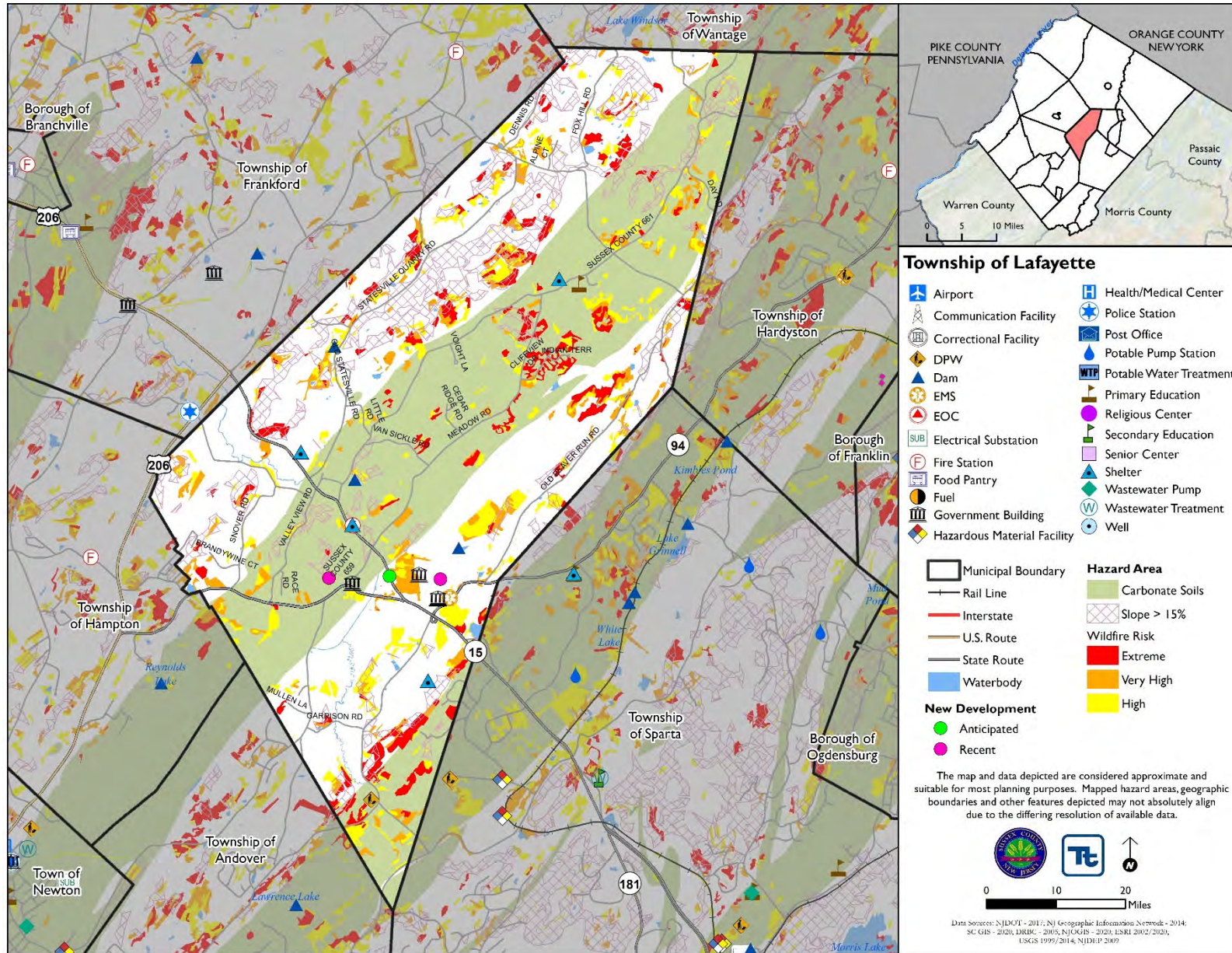






Figure 9.14-3 Township of Lafayette Hazard Area Extent and Location Map 3





Action Worksheet			
<b>Project Name:</b>	Municipal Building Backup Generator		
<b>Project Number:</b>	2020-Lafayette-001		
<b>Risk / Vulnerability</b>			
<b>Hazard(s) of Concern:</b>	Severe Weather, Severe Winter Weather, Hurricane, Nor'Easter		
<b>Description of the Problem:</b>	Backup power sources are necessary to maintain critical services for critical facilities. Municipal Building does not have a generator and this area has been without power for over seven days in the past. The Township has researched and have proposals for 65kW generator with sized auto transfer switch. Natural gas was extended to the municipal building in October 2019 but the size of loads and location requires larger generator and more complicated installation resulting in higher costs		
<b>Action or Project Intended for Implementation</b>			
<b>Description of the Solution:</b>	The Township will purchase and install a 65kW natural gas generator with transfer switch.		
<b>Is this project related to a Critical Facility?</b>	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
<b>Level of Protection:</b>	65kW	<b>Estimated Benefits (losses avoided):</b>	Ensures continuity of operations of Municipal Building
<b>Useful Life:</b>	20 years	<b>Goals Met:</b>	1, 3
<b>Estimated Cost:</b>	\$35,000	<b>Mitigation Action Type:</b>	Structure and Infrastructure Projects (SIP)
<b>Plan for Implementation</b>			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	Within 1 year
<b>Estimated Time Required for Project Implementation:</b>	1 year	<b>Potential Funding Sources:</b>	FEMA HMGP and BRIC, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Municipal Budget
<b>Responsible Organization:</b>	Engineer, Public Works	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard Mitigation, Emergency Management
<b>Three Alternatives Considered (including No Action)</b>			
<b>Alternatives:</b>	<b>Action</b>	<b>Estimated Cost</b>	<b>Evaluation</b>
	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
<b>Progress Report (for plan maintenance)</b>			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			



Action Worksheet		
<b>Project Name:</b>	Municipal Building Backup Generator	
<b>Project Number:</b>	2020-Lafayette-001	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Project will protect critical services of Municipal 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	Severe Storm, Severe Winter Weather, Hurricane, Nor'Easter
Timeline	1	Within 1 year
Agency Champion	1	Engineer, Public Works
Other Community Objectives	1	
<b>Total</b>	13	
<b>Priority (High/Med/Low)</b>	High	



Action Worksheet			
<b>Project Name:</b>	Fire Department Backup Generator		
<b>Project Number:</b>	2020-Lafayette-002		
<b>Risk / Vulnerability</b>			
<b>Hazard(s) of Concern:</b>	Severe Weather, Severe Winter Weather, Hurricane, Nor'Easter		
<b>Description of the Problem:</b>	Backup power sources are necessary to maintain critical services for critical facilities. The Fire Department does not have a reliable and adequately sized emergency power generator. This section of town has been without power for more than 7 days. The Township has researched and have proposals for a 40kW generator with 400amp auto transfer switch, initial propane fueled with new tanks installed until natural gas is extended to Fire House building.		
<b>Action or Project Intended for Implementation</b>			
<b>Description of the Solution:</b>	The Township will purchase and install a 40kW generator with 400amp auto transfer switch, initial propane fueled with new tanks installed until natural gas is extended to Fire House building. When natural gas is extended to the Fire House building, the Township will modify the generator to allow for natural gas use.		
<b>Is this project related to a Critical Facility?</b>	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
<b>Level of Protection:</b>	40kW	<b>Estimated Benefits (losses avoided):</b>	Ensures continuity of operations of Fire Department
<b>Useful Life:</b>	20 years	<b>Goals Met:</b>	
<b>Estimated Cost:</b>	\$26,000	<b>Mitigation Action Type:</b>	Structure and Infrastructure Projects (SIP)
<b>Plan for Implementation</b>			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	Within 1 year
<b>Estimated Time Required for Project Implementation:</b>	1 year	<b>Potential Funding Sources:</b>	FEMA HMGP and BRIC, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Municipal Budget
<b>Responsible Organization:</b>	Engineer, Public Works, Fire Department	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard Mitigation, Emergency Management
<b>Three Alternatives Considered (including No Action)</b>			
<b>Alternatives:</b>	<b>Action</b>	<b>Estimated Cost</b>	<b>Evaluation</b>
	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
<b>Progress Report (for plan maintenance)</b>			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			



Action Worksheet		
<b>Project Name:</b>	Fire Department Backup Generator	
<b>Project Number:</b>	2020-Lafayette-002	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Project will protect critical services of Fire Department
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	Severe Storm, Severe Winter Weather, Hurricane, Nor'Easter
Timeline	1	Within 1 year
Agency Champion	1	Engineer, Public Works, Fire Department
Other Community Objectives	1	
<b>Total</b>	13	
<b>Priority (High/Med/Low)</b>	High	



Action Worksheet			
<b>Project Name:</b>	Paulinskill Brook Flood Study		
<b>Project Number:</b>	2020-Lafayette-003		
Risk / Vulnerability			
<b>Hazard(s) of Concern:</b>	Flood, Severe Storm		
<b>Description of the Problem:</b>	Paulinskill Brook causes flooding when water backs up at the Rt 15 bridge and backflows into the park and recreation area. This has led to repetitive losses. This also results in blocking the major state highway and shutting down travel for days, resulting in traffic diversion onto local roads. This shuts down access to businesses located in the center of town.		
Action or Project Intended for Implementation			
<b>Description of the Solution:</b>	The Township will conduct a flood study of the area. It is assumed that the slope and drainage in this area needs significant improvements but this is significantly impacted by the blockage at the Rt 15 bridge which results in backflow of rising water into the park. Once the flood study is complete and has identified cost effective improvements, the Township will carry out the identified mitigation measures.		
<b>Is this project related to a Critical Facility or Lifeline?</b>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
<b>Level of Protection:</b>	TBD by flood study	<b>Estimated Benefits (losses avoided):</b>	Reduction in flooding, addressing repetitive losses
<b>Useful Life:</b>	TBD by flood study	<b>Goals Met:</b>	
<b>Estimated Cost:</b>	TBD by flood study	<b>Mitigation Action Type:</b>	Structure and Infrastructure Projects, Natural Systems Protection
Plan for Implementation			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	Within 5 years
<b>Estimated Time Required for Project Implementation:</b>	5 years	<b>Potential Funding Sources:</b>	HMGP, BRIC, Township budget
<b>Responsible Organization:</b>	Engineer	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard mitigation planning, stormwater planning
Three Alternatives Considered (including No Action)			
<b>Alternatives:</b>	<b>Action</b>	<b>Estimated Cost</b>	<b>Evaluation</b>
	No Action	\$0	Current problem continues
	Deepen Paulinskill Brook	\$500,000	Costly and unlikely to solve problem
	Remove Rt. 15 bridge	N/A	Not possible
Progress Report (for plan maintenance)			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			



Action Worksheet		
<b>Project Name:</b>	Paulinskill Brook Flood Study	
<b>Project Number:</b>	2020-Lafayette-003	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	0	.
Property Protection	1	Reduction in flooding risk
Cost-Effectiveness	1	
Technical	1	Technically feasible project
Political	1	
Legal	0	The project may require permitting.
Fiscal	0	Project will require funding assistance.
Environmental	1	Project will restore Paulinskill Brook
Social	1	Reduction in flooding, addressing repetitive losses
Administrative	0	
Multi-Hazard	1	Flood, Severe Storm
Timeline	0	
Agency Champion	1	Engineer
Other Community Objectives	1	Address repetitive loss
<b>Total</b>	9	
<b>Priority (High/Med/Low)</b>	High	



## 9.15 TOWNSHIP OF MONTAGUE

This section presents the jurisdictional annex for the Township of Montague. The annex includes a general overview of the Township of Montague; an assessment of the Township of Montague’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.

### 9.15.1 Hazard Mitigation Planning Team

The Township of Montague 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 9.15-1. Hazard Mitigation Planning Team**

Primary Point of Contact		Alternate Point of Contact
Name / Title: David Coss, OEM Coordinator , Public Works Director Address: 277 Clove Road, Montague, NJ 07827 Phone Number: (908) 319-1811 Email: coss1101@yahoo.com		Name / Title: Eileen DeFabiis, Clerk Address: 277 Clove Road, Montague, NJ 07827 Phone Number: (973) 293-7300 Email: clerk@montaguenj.org
NFIP Floodplain Administrator		
Name / Title: Robert Huber, Construction Official/Plumbing Sub-Code Official Address: 277 Clove Road Montague NJ 07827 Phone Number: (973) 293-3366 Email: construction@montaguenj.org		
Name	Title	Method of Participation
David Coss	OEM Coordinator, Public Works Director	Primary point of contact, reviewed annex*
Eileen DeFabiis	Clerk	Alternate point of contact; attended the annex trainings
Robert Huber	Construction Official/Plumbing Sub-Code Official	NFIP floodplain administrator; attended the kickoff meeting, reviewed annex*
Jesse Brace-Revak	Deputy Emergency Management Coordinator	Attended the annex training, risk assessment meeting and mitigation strategy workshop; provided data and information for the annex update, reviewed annex*
Mayor Richard E. Innella	Mayor	Reviewed annex*
Harold E. Pellow	Engineer, Land Use Planner	Reviewed annex*
Sharon Yarosz	Fiscal/CFO	Reviewed annex*
Ryan Riegel	Fire Department	Reviewed annex*

\*Refer to Jurisdictional Annex Review Sign-Off Sheet in Appendix B.





### 9.15.2 Jurisdiction Profile

Montague Township is located in the northwest corner of Sussex County. It is bordered to the north by New York State, to the south by Frankford and Sandyston Townships, to the east by Wantage Township and to the west by Pennsylvania. The Township covers a total area of 43.9 square miles. The following unincorporated communities are located within the Township: Four Corners, Montague, Millville, and Duttonville. The Delaware River makes up the northern and western border between the Township and Pennsylvania. Big Flat Brook is a stream located in the southern end of the Township. There are many ponds and lakes located throughout the Township as well.

According to the U.S. Census, the 2010 population for the Township of Montague was 3,847. The estimated 2018 population was 3,716, a 3.4 percent decrease from the 2010 Census. Data from the 2018 U.S. Census American Community Survey indicate that 3.7 percent of the population is 5 years of age or younger and 17.3 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.

### 9.15.3 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 9.14-2 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 9.15-2. Recent and Expected Future Development**

Type of Development	2015		2016		2017		2018		2019	
<b>Number of Building Permits for New Construction Issued Since the Previous HMP</b>										
	<b>Total</b>	<b>Within SFHA</b>	<b>Total</b>	<b>Within SFHA</b>	<b>Total</b>	<b>Within SFHA</b>	<b>Total</b>	<b>Within SFHA</b>	<b>Total</b>	<b>Within SFHA</b>
Single and Two-Family Units	0	0	0	0	0	0	0	0	0	0
Multi-Family	0	0	0	0	0	0	0	0	0	0
Other (commercial, mixed-use, etc.)	0	0	0	0	0	0	0	0	0	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		
<b>Recent Major Development and Infrastructure from 2015 to Present</b>										
Emergency Services Radio Repeater Site	Commercial	1		79 Deckertown Turnpike		Nuclear Incident Hazard Area		Recent		

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

### 9.15.4 Capability Assessment

Section 5 (Capability Assessment) describes the components included in the capability assessment and their significance for hazard mitigation planning. The Township of Montague 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 Montague 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 Montague and where hazard mitigation has been integrated.

**Table 9.15-3. 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.
<b>Codes, Ordinances, &amp; Requirements</b>					
<b>Building Code</b>	Yes	State & Local	Yes	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>• 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</li> <li>• This code follows State Uniform Construction Code Act (N.J.S. 52:27D-119 et seq.).</li> </ul>					
<b>Zoning Code</b>	Yes	Local	Yes – if municipality has a Planning Board	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>• 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.</li> <li>• The Land Use Department is responsible for this code in compliance with Chapter 76.</li> </ul>					
<b>Subdivisions</b>	Yes	Local	Yes – if municipality has a Planning Board	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>• 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</li> </ul>					



	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.
<p><i>or two dwelling-unit buildings shall be exempt from such site plan review and approval; provided that the resolution of the board of adjustment shall substitute for that of the planning board whenever the board of adjustment has jurisdiction over a subdivision or site plan pursuant to subsection 63b. of this act . Dictated by the Municipal Land Use Law. NJ Statute 40:27-6.2 - the board of commissioners of any county having a county planning board shall provide for the review of all subdivisions of land within the county by said county planning board and for the approval of those subdivisions affecting county road or drainage facilities as set forth and limited hereinafter in this section.</i></p> <ul style="list-style-type: none"> <li>The Land Use Department is responsible for this ordinance in compliance with Chapter 60.</li> </ul>					
<b>Stormwater Management</b>	Yes	Local	Yes	Yes	-
<p><b>Comment:</b></p> <ul style="list-style-type: none"> <li>See Title 7 of the NJ Administrative Code, N.J.A.C. 7:8</li> <li>The Township Committee is responsible for this ordinance in compliance with Chapter 56.</li> </ul>					
<b>Post-Disaster Recovery</b>	No	-	No	-	-
<p><b>Comment:</b></p>					
<b>Real Estate Disclosure</b>	Yes	State, Division of Consumer Affairs	Yes	Yes	-
<p><b>Comment:</b> 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.</p>					
<b>Growth Management</b>	No	-	Yes – if municipality has a Planning Board	-	-
<p><b>Comment:</b></p> <ul style="list-style-type: none"> <li>State Mandated on a municipal level. See Zoning Ordinance ; Also - Plan Endorsement Process via the State Development &amp; 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.</li> </ul>					
<b>Site Plan Review</b>	Yes	Local	Yes – if municipality has a Planning Board	Yes	-
<p><b>Comment:</b></p> <ul style="list-style-type: none"> <li>Dictated by the Municipal Land Use Law which sets forth minimum requirements for plans, etc., timeframes for development reviewed. 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. 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.</li> <li>The Land Use Department is responsible for these requirements in compliance with Chapter 60.</li> </ul>					
<b>Environmental Protection</b>	No	-	No	-	-
<p><b>Comment:</b></p>					
<b>Flood Damage Prevention</b>	Yes	State & Local	Yes	Yes	2021-Montague-005
<p><b>Comment:</b></p> <ul style="list-style-type: none"> <li>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.</li> </ul>					



	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.
<ul style="list-style-type: none"> <li>Chapter 38 Flood Damage Prevention is administered by the NFIP Floodplain Administrator, designated as the Township Engineer.</li> <li>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:               <ul style="list-style-type: none"> <li>A. Protect human life and health;</li> <li>B. Minimize expenditure of public money for costly flood control projects;</li> <li>C. Minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;</li> <li>D. Minimize prolonged business interruptions;</li> <li>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;</li> <li>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;</li> <li>G. Ensure that potential buyers are notified that property is in an area of special flood hazard; and</li> <li>H. Ensure that those who occupy the areas of special flood hazard assume responsibility for their actions.</li> </ul> </li> <li>The ordinance does not include discussion of freeboard.</li> </ul>					
<b>Wellhead Protection</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Emergency Management</b>	Yes	Local and County	No	No	No
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>Chapter 37 Fire Prevention</li> </ul>					
<b>Climate Change</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Disaster Recovery Ordinance</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Disaster Reconstruction Ordinance</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Other:</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Planning Documents</b>					
<b>Comprehensive / Master Plan</b>	Yes	Local	Yes	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>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.</li> <li>The Land Use Department is responsible for this plan. The plan was adopted after re-examination on December 8, 2011.</li> </ul>					
<b>Capital Improvement Plan</b>	Yes	Local	No	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>The Township Committee is responsible for this plan. Adopted Budget 4/14/2015.</li> </ul>					
<b>Disaster Debris Management Plan</b>	No	-	No	-	2021-Montague-004





	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.
<i>Comment:</i>					
<b>Floodplain or Watershed Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Stormwater Management Plan</b>	No	State & Local	Yes	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>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.</li> </ul>					
<b>Stormwater Pollution Prevention Plan</b>	No	-	Yes	-	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>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.</li> </ul>					
<b>Urban Water Management Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Habitat Conservation Plan</b>	Yes	Local	No	Yes	-
<i>Comment:</i>					
<b>Economic Development Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Shoreline Management Plan</b>	No	-	Yes – if located in a coastal zone	-	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>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.</li> </ul>					
<b>Community Wildfire Protection Plan</b>	Yes	State	No	No	-
<i>Comment:</i>					
<b>Community Forest Management Plan</b>	Yes	Local	No	Yes	-
<i>Comment:</i>					
<b>Transportation Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Agriculture Plan</b>	Yes	Local	No	Yes	-
<i>Comment:</i>					



	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.
<b>Climate Action Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Tourism Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Business Development Plan</b>	Yes	Local	No	Yes	-
<i>Comment:</i>					
<b>Other</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Response/Recovery Planning</b>					
<b>Comprehensive Emergency Management Plan (CEMP) / Emergency Operations Plan (EOP)</b>	Yes	County & Local	Yes	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>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.</li> <li>The Township OEM is responsible for this plan in compliance with the Emergency Operations Plan.</li> </ul>					
<b>Threat &amp; Hazard Identification &amp; Risk Assessment (THIRA)</b>	Yes	Local	No	Yes	-
<i>Comment:</i>					
<b>Post-Disaster Recovery Plan</b>	Yes	Local	No	Yes	-
<i>Comment:</i>					
<b>Continuity of Operations Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Public Health Plan</b>	Yes	County and Local	No	Yes	-
<i>Comment:</i>					
<b>Other</b>	No	-	No	-	-
<i>Comment:</i>					

**Table 9.15-4. Development and Permitting Capability**

Criterion	Response
Does your jurisdiction issue development permits? - If no, who does? If yes, which department?	Yes, Construction 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 Montague.





**Table 9.15-5. Administrative and Technical Capabilities**

Staff/Personnel Resource	Available?	Department/Agency/Position
<b>Administrative Capability</b>		
Planning Board	Yes	Land Use Board
Mitigation Planning Committee	No	-
Environmental Board / Commission	No	-
Open Space Board / Committee	No	-
Economic Development Commission / Committee	Yes	Economic Development Committee
Warning Systems / Services (mass notification system, outdoor warning signals)	Yes	Fire/OEM
Maintenance program to reduce risk	No	-
Mutual aid agreements	Yes	Fire/DPW
<b>Technical/Staffing Capability</b>		
Planners or engineers with knowledge of land development and land management practices	Yes	Harold E. Pellow & Associates
Engineers or professionals trained in building or infrastructure construction practices	No	-
Planners or engineers with an understanding of natural hazards	No	-
Staff with training in benefit/cost analysis	No	-
Staff with training in green infrastructure	No	-
Staff with education/knowledge/training in low impact development	No	-
Surveyor	No	-
Stormwater engineer	Yes	Engineer
Personnel skilled or trained in GIS applications	No	-
Local or state water quality professional	Yes	-
Scientist familiar with natural hazards in local area	No	-
Emergency manager	Yes	OEM
Watershed planner	No	-
Environmental specialist	No	-
Grant writers	No	-
Resilience Officer	No	-

**FISCAL CAPABILITY**

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

**Table 9.15-6. Fiscal Capabilities**

Financial Resource	Accessible or Eligible to Use?
Community Development Block Grants (CDBG, CDBG-DR)	No
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	No
User Fees for Water, Sewer, Gas or Electric Service	No
Incur Debt through General Obligation Bonds	Yes
Incur Debt through Special Tax Bonds	No
Incur Debt through Private Activity Bonds	No





Financial Resource	Accessible or Eligible to Use?
Withhold Public Expenditures in Hazard-Prone Areas	No
State-Sponsored Grant Programs	No
Development Impact Fees for Homebuyers or Developers	No
Clean Water Act 319 Grants (Nonpoint Source Pollution)	Yes
Other	No

**EDUCATION AND OUTREACH CAPABILITY**

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

**Table 9.15-7. 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?	No
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.	No
Do you have any other programs already in place that could be used to communicate hazard-related information? If yes, briefly describe.	No

**COMMUNITY CLASSIFICATIONS**

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

**Table 9.15-8. Community Classifications**

Program	Participating?	Classification	Date Classified
Community Rating System	No	-	-
Building Code Effectiveness Grading Schedule (BCEGS)	Yes	Unavailable	Unavailable
Public Protection (Fire ISO Protection Class)	Yes	6/9	Being Reviewed
Storm Ready Certification	No	-	-
Firewise Community Classification	No	-	-
Sustainable Jersey	No	-	-

**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 9.15-9. 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.

**NATIONAL FLOOD INSURANCE PROGRAM**

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

**Table 9.15-10. National Flood Insurance Program Compliance**

Criterion	Response
What local department is responsible for floodplain management?	Construction
Who is your floodplain administrator? (name, department/position)	Robert Huber, 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?	September 13, 2011
Does your floodplain management program meet or exceed minimum requirements? -If exceeds, in what ways?	The program meets minimum requirements.
When was the most recent Community Assistance Visit or Community Assistance Contact?	None
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.	No
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?	No
Does your jurisdiction participate in the Community Rating System (CRS)?	No





Criterion	Response
-If yes, is your jurisdiction interested in improving its CRS Classification? -If no, is your jurisdiction interested in joining the CRS program?	
How many flood insurance policies are in force in your jurisdiction?*	19 policies
-What is the insurance in force?	\$4,859,000 insurance in force
-What is the premium in force?	\$21,759 premium in force
How many total loss claims have been filed in your jurisdiction?*	17 claims
-How many claims are still open or were closed without payment?	\$178,248 in payments
-What were the total payments for losses?	
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

Reference: FEMA 2020

### 9.15.5 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 Montague’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 9.14-11 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 9.15-11. 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 23 <sup>rd</sup> and 24 <sup>th</sup> .	Although the County was impacted, the Township did not report damages.
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 was impacted by closures and mask/social distancing requirements and reported \$2,211.84 in losses.

Source: FEMA 2020, NOAA NCEI 2020

### 9.15.6 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 Montague 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 Montague 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 Montague has significant exposure.

**REPETITIVE FLOOD LOSSES**

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

- Number of repetitive loss (RL) properties: 2
- 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 9.15-12. Critical Facilities and Lifelines Flood Exposure**

Name	Type	Exposure	
		1% Event	0.2% Event
21-56 Clove Lake Dam	Dam	X	X
21-65 Hainesville WMA Dam	Dam	X	X
22-170 Biccum Dam	Dam	X	X
22-198 No Name #62 Dam	Dam	X	X

Source: Sussex County Planning Partnership 2020

**IDENTIFIED ISSUES AND PROBLEM AREAS**

The jurisdiction has identified the following vulnerabilities within their community:

- The new fire house/community center/shelter, located at 274 Clover Road, is a lifeline for the Township and provides essential services to the municipality and its residents. It currently does not have a backup generator to provide continuity of operations during a power outage and serve as a shelter to the community.
- The Montague Township Elementary School at 475 Route 206 lacks a backup power source.
- 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 2 repetitive loss properties but other properties may be impacted by flooding as well.
- The Township currently does not have an adopted debris management plan. 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 Township’s current flood damage prevention ordinance was last adopted in 2011. It currently does not have a freeboard requirement and does not meeting New Jersey’s minimum requirement.
- It is unknown if the windows of the town hall building located at 277 Clover Road are impact resistant.
- Montague Township is located within the northwest corner of the State and sits along the Delaware River. Several state and national parks are located within the Township, providing acres of forested land. This creates an increased risk of wildfires to residents who border the forested areas.



- Montague Township is located within the northwest corner of the State and sits along the Delaware River. Properties located along the river are susceptible to flooding and damages.

**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 Montague 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 Montague. The Township of Montague 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 Montague agreed with the calculated hazard rankings.

**Table 9.15-13. Township of Montague Hazard Ranking**

<b>Dam Failure</b>	<b>Disease Outbreak</b>	<b>Drought</b>	<b>Earthquake</b>	<b>Flood</b>	<b>Geologic</b>	
Medium	Medium	Medium	Low	Medium	Low	
<b>Hazardous Materials</b>	<b>Hurricane and Tropical Storm</b>	<b>Invasive Species</b>	<b>Nor’Easter</b>	<b>Severe Weather</b>	<b>Severe Winter Weather</b>	<b>Wildfire</b>
Medium	High	Low	High	High	High	Medium

**9.15.7 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 9.14-15 and Table 9.14-16 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 9.15-14. 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	Enter 2021 HMP Action #
Montague-1 (old #2)	Retrofit roof to current standards for snow load on Montague Fire Department	Station Commander	Completed – new building		





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 #
	building located on Clove Road.				
Montague-2 (old #3)	Retrofit roof to current standards for high winds on Montague Fire Department building located on Clove Road.	Station Commander	Completed – new building		
Montague-3 (old #4)	Retrofit roof to current standards for high winds on Montague Elementary School (shelter) located on Route 206.	School Board Administrator	Completed		
Montague-4 (old #6)	Ensure continuity of operations at critical facilities. Identified at this time: Backup generator for Montague Elementary School (shelter) located on Route 206.	OEM Coordinator	No Progress	X	2021-Montague-002
Montague-5 (old #9)	Retrofit municipal building with impact resistant windows and shutters located on Clove Road.	Municipal Engineer	No Progress	X	2021-Montague-006
Montague-6 (old #10)	Work with the New Jersey Forest Fire Service to implement the FireWise program for the Township	OEM Coordinator	No Progress	X	2021-Montague-007
Montague-7 (old #11)	The Township will add three warning systems along flood areas on River Road. This will help better warn the Township in the event of flooding.	OEM Coordinator	Ongoing Capability		
Montague-8 (old #12)	Conduct a study along the river banks of the Delaware and Benekill Rivers to identify areas that need to be elevated to reduce flooding impacts.	Township Engineer	No Progress	X	2021-Montague-008
Montague-9 (old #13)	Conduct all-hazards public education and outreach program for hazard mitigation and preparedness.	OEM Coordinator, in coordination with SCDEM	Ongoing Capability		
Montague-10 (new)	Review the current hazard mitigation plan prior to updating land use, zoning changes, or development permitting.	Township	Ongoing Capability		
Montague-11 (new)	Support the mitigation of vulnerable structures via retrofit (e.g. elevation, flood-proofing) or acquisition/relocation to protect structures from future damage, with repetitive loss and severe repetitive loss	Engineering via NFIP FPA with NJOEM, FEMA support	No Progress	X	2021-Montague-003



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 #
	properties as a priority when applicable. Phase 1: Identify appropriate candidates and determine most cost-effective mitigation option. Phase 2: Work with the property owners to implement selected action based on available funding and local match availability.				

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

- The Township is in the process of building a new fire house, Community center with an emergency shelter

**PROPOSED HAZARD MITIGATION INITIATIVES FOR THE PLAN UPDATE**

The Township of Montague 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 Montague 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 9.14-15 summarizes the comprehensive-range of specific mitigation initiatives the Township of Montague 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 9.14-16 provides a summary of the prioritization of all proposed mitigation initiatives for this HMP update.





Table 9.15-15. 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-Montague-001	Backup Generator for Fire House/Community Center / Shelter	<p><b>Problem:</b> The new fire house/community center/shelter, located at 274 Clover Road, is a lifeline for the Township and provides essential services to the municipality and its residents. It currently does not have a backup generator to provide continuity of operations during a power outage and serve as a shelter to the community.</p> <p><b>Solution:</b> Working with the Township Engineer, determine the proper type and size of generator for the facility. Once determined, obtain funding and purchase generator. Once purchased, install generator.</p>	Existing	Severe Weather, Severe Winter Weather, Hurricane, Nor' Easter	1, 2, 6	Engineer, Township OEM, Administration	FEMA HMGP and BRIC, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Municipal Budget	Continuity of operations; shelter for residents during an emergency	\$100,000 +	Within 2 years	High	SIP	ES
2021-Montague-002	Backup Generator for Elementary School	<p><b>Problem:</b> The Montague Township Elementary School at 475 Route 206 lacks a backup power source.</p> <p><b>Solution:</b> The Engineer will research what size generator is needed to power the Montague Township Elementary School. The Township will then purchase and install the selected generator and necessary electrical components to supply backup power to the Montague Township Elementary School.</p>	Existing	Severe Weather, Severe Winter Weather, Hurricane, Nor' Easter	1, 2, 6	Engineer, Township OEM, Administration, School Board	FEMA HMGP and BRIC, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Municipal Budget	Ensures continuity of operations of Montague Township Elementary School	\$75,000	Within 5 years	High	SIP	ES
2021-Montague-003	Repetitive Loss Properties	<p><b>Problem:</b> 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 2 repetitive loss properties but other</p>	Existing	Flood, Severe Weather	1, 2, 3	FPA, Homeowners	FEMA HMGP and FMA, local cost share by residents	Eliminates flood damage to homes and residents, creates open space	\$500,000	3 years	High	SIP	PP



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
		properties may be impacted by flooding as well. <b>Solution:</b> Conduct outreach to 10 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).						for the municipality increasing flood storage.					
2021-Montague-e-004	Develop Debris Management Plan	<b>Problem:</b> The Township currently does not have an adopted debris management plan. 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. <b>Solution:</b> The Township will develop a debris management plan that will assist the municipality when they need to facilitate response and recovery after a debris-causing incident. The plan will provide direction to facilitate and coordinate the management of debris following a disaster.	Existing	All hazards	3, 5, 6	OEM, Public Works	Township budget	Increased disaster capability and preparedness	Staff time	1 year	High	LPR	ES
2021-Montague-e-005	Update Flood Damage Prevention Ordinance	<b>Problem:</b> The Township's current flood damage prevention ordinance was last adopted in 2011. It currently does not have a freeboard requirement and does not meet New Jersey's minimum requirement. <b>Solution:</b> The Township will update its flood damage prevention ordinance to meet the New Jersey	New and Existing	Flood	1, 2	Township Administration, Engineer	Township budget, FEMA BRIC	Meet state standards, reduce future flood risk	Staff time	6 months	High	LPR	PR







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
		requirement of one foot of freeboard.											
2021-Montague-006	Impact Resistant Windows and Shutters for Town Hall	<p><b>Problem:</b> It is unknown if the windows of the Town Hall building located at 277 Clover Road are impact resistant.</p> <p><b>Solution:</b> The Township will conduct a study to determine whether or not the windows of town hall are impact resistant. If not, the Township will retrofit municipal building with impact resistant windows and shutters.</p>	Existing	Hurricane, Nor' Easter, Severe Weather, Severe Winter Weather	2, 6	OEM, Public Works	HMGP, BRIC, USDA Community Facilities Grant Program, Township budget	Reduction in risk of roof failure and protection of critical services	High	3 years	High	SIP	PP
2021-Montague-007	Firewise	<p><b>Problem:</b> Montague Township is located within the northwest corner of the State and sits along the Delaware River. Several state and national parks are located within the Township, providing acres of forested land. This creates an increased risk of wildfires to residents who border the forested areas.</p> <p><b>Solution:</b> 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.</p>	New and Existing	Wildfire	1, 2, 3	Township Administration, Fire Department	Township budget	Increase wildfire awareness, provide grant opportunities for Township	<\$20,000	Within 4 years	Medium	LPR, EAP	PI, ES
2021-Montague-008	Delaware River Study	<p><b>Problem:</b> Montague Township is located within the northwest corner of the State and sits along the Delaware River. Properties located along the river are susceptible to flooding and damages.</p> <p><b>Solution:</b> Conduct a study along the riverbanks of the Delaware</p>	Existing	Flood	1, 2, 4	Engineer	HMGP, BRIC, municipal budget	Reduction in flood risk in selected areas	TBD by flood study	Within 5 years	High	LPR, SIP	PP





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
		River to identify areas that need to be elevated to reduce flooding impacts. Once identified, cost-effective actions will be carried out.											

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 9.15-16. 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-Montague-001	Backup Generator for Fire House/ Community Center / Shelter	1	1	1	1	1	1	0	1	1	1	1	1	1	1	13	High ⚠
2021-Montague-002	Backup Generator for Elementary School	1	1	1	1	1	1	0	1	1	1	1	0	1	1	12	High
2021-Montague-003	Repetitive Loss Properties	1	1	1	1	1	1	0	1	0	0	1	0	1	1	10	High
2021-Montague-004	Develop Debris Management Plan	0	1	1	1	1	1	1	1	1	1	1	1	1	1	13	High
2021-Montague-005	Update Flood Damage Prevention Ordinance	0	1	1	1	1	1	1	1	1	1	0	1	1	1	12	High
2021-Montague-006	Impact Resistant Windows and Shutters for Town Hall	1	1	1	1	1	1	0	1	1	1	1	0	1	1	12	High
2021-Montague-007	Firewise	1	1	1	1	1	1	1	1	1	1	0	1	1	1	13	High
2021-Montague-008	Delaware River Study	0	1	0	1	1	1	0	1	1	0	1	0	1	1	9	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 9.15-17. 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	
Geologic					X			
Hazardous Materials					X			
Hurricane and Tropical Storm		X			X			
Invasive Species					X			
Nor'Easter		X			X			
Severe Weather		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 9.15-1. Township of Montague Hazard Area Extent and Location Map 1

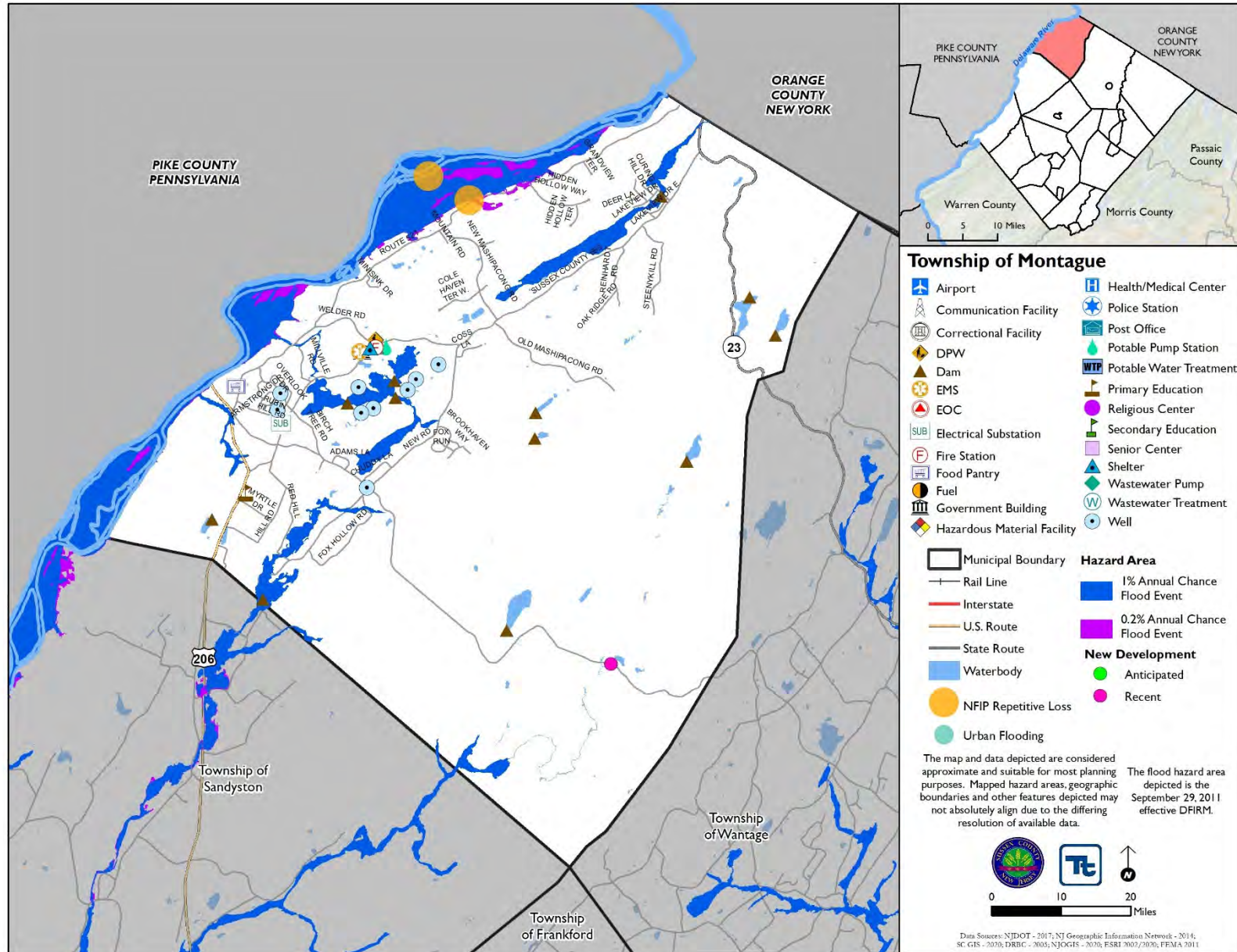




Figure 9.15-2. Township of Montague Hazard Area Extent and Location Map 2

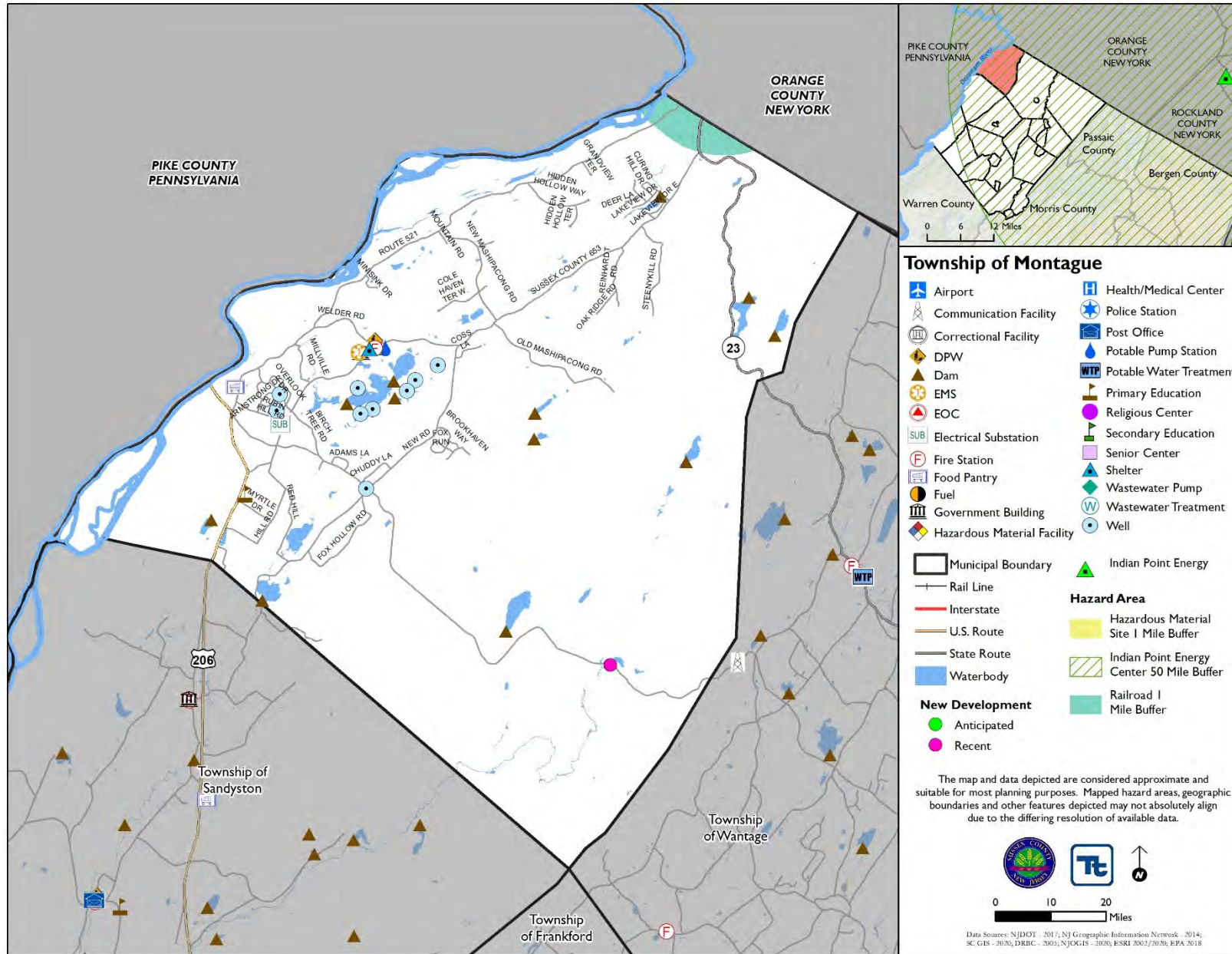
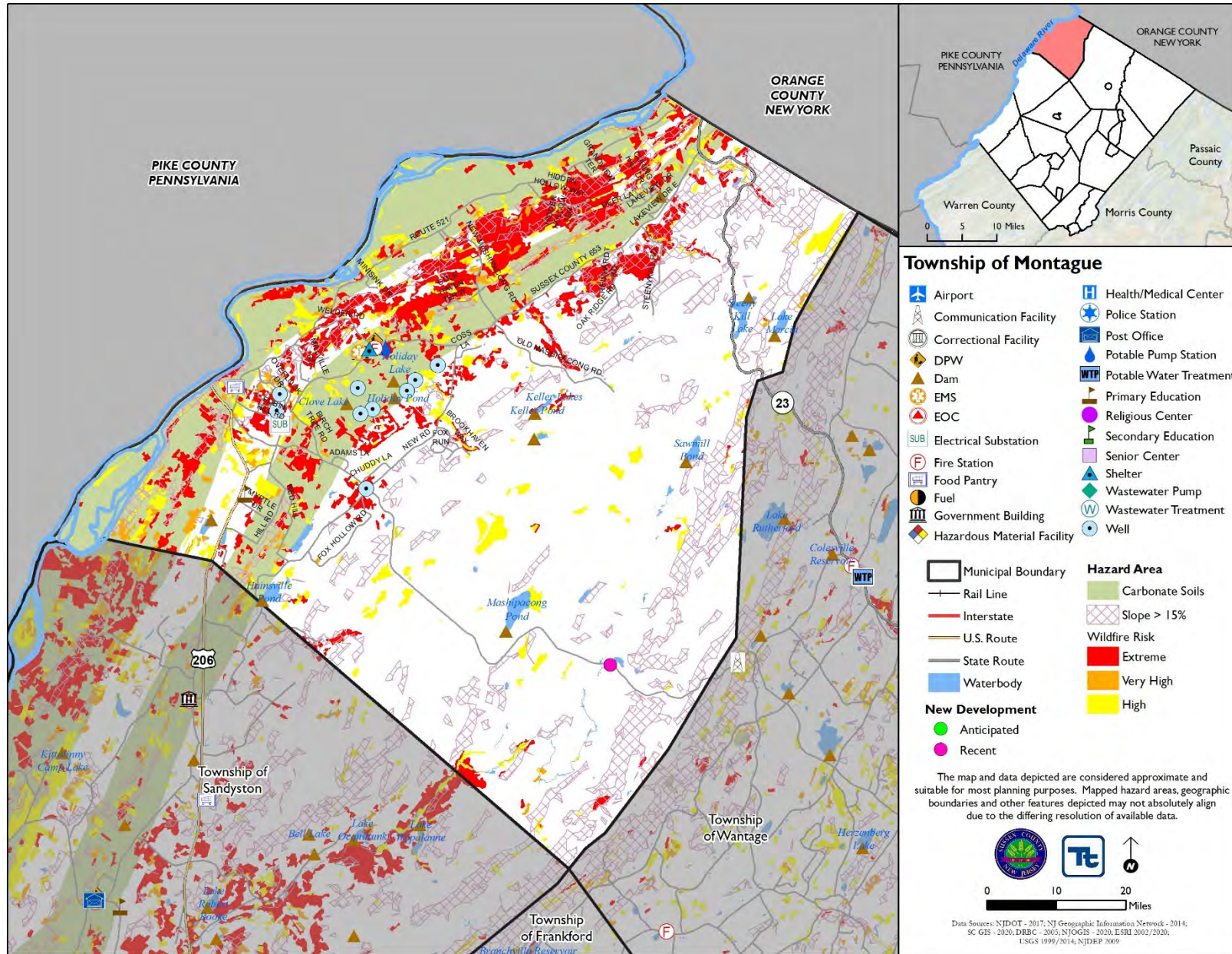




Figure 9.14-3 Township of Montague Hazard Area Extent and Location Map 3





Action Worksheet			
<b>Project Name:</b>	Backup Generator for Fire House/ Community Center / Shelter		
<b>Project Number:</b>	2021-Montague-001		
<b>Risk / Vulnerability</b>			
<b>Hazard(s) of Concern:</b>	Severe Weather, Severe Winter Weather, Hurricane, Nor'Easter		
<b>Description of the Problem:</b>	The new fire house/community center/shelter, located at 274 Clover Road, is a lifeline for the Township and provides essential services to the municipality and its residents. It currently does not have a backup generator to provide continuity of operations during a power outage and serve as a shelter to the community.		
<b>Action or Project Intended for Implementation</b>			
<b>Description of the Solution:</b>	Working with the Township Engineer, determine the proper type and size of generator for the facility. Once determined, obtain funding and purchase generator. Once purchased, install generator.		
<b>Is this project related to a Critical Facility?</b>	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
<b>Level of Protection:</b>	N/A	<b>Estimated Benefits (losses avoided):</b>	Continuity of operations; shelter for residents during an emergency
<b>Useful Life:</b>	20 years	<b>Goals Met:</b>	1, 2, 6
<b>Estimated Cost:</b>	\$100,000+	<b>Mitigation Action Type:</b>	Structure and Infrastructure Projects (SIP)
<b>Plan for Implementation</b>			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	Within 5 years
<b>Estimated Time Required for Project Implementation:</b>	1 year	<b>Potential Funding Sources:</b>	FEMA HMGP and BRIC, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Municipal Budget
<b>Responsible Organization:</b>	Engineer, Township OEM, Administration	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard Mitigation, Emergency Management
<b>Three Alternatives Considered (including No Action)</b>			
<b>Alternatives:</b>	<b>Action</b>	<b>Estimated Cost</b>	<b>Evaluation</b>
	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
<b>Progress Report (for plan maintenance)</b>			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			





Action Worksheet		
<b>Project Name:</b>	Backup Generator for Fire House/ Community Center / Shelter	
<b>Project Number:</b>	2021-Montague-001	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Project will protect critical services of Montague Township Elementary School
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	Severe Weather, Severe Winter Weather, Hurricane, Nor'Easter
Timeline	0	Within 5 years
Agency Champion	1	Engineer, Township OEM, Administration
Other Community Objectives	1	
<b>Total</b>	12	
<b>Priority (High/Med/Low)</b>	High	



Action Worksheet			
<b>Project Name:</b>	Backup Generator for Elementary School		
<b>Project Number:</b>	2021-Montague-002		
<b>Risk / Vulnerability</b>			
<b>Hazard(s) of Concern:</b>	Severe Weather, Severe Winter Weather, Hurricane, Nor'Easter		
<b>Description of the Problem:</b>	Backup power sources are necessary to maintain critical services for critical facilities. The Montague Township Elementary School at 475 Route 206 lacks a backup power source.		
<b>Action or Project Intended for Implementation</b>			
<b>Description of the Solution:</b>	The Engineer will research what size generator is needed to power the Montague Township Elementary School. The Township will then purchase and install the selected generator and necessary electrical components to supply backup power to the Montague Township Elementary School.		
<b>Is this project related to a Critical Facility?</b>	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
<b>Level of Protection:</b>	N/A	<b>Estimated Benefits (losses avoided):</b>	Ensures continuity of operations of Montague Township Elementary School
<b>Useful Life:</b>	20 years	<b>Goals Met:</b>	1, 3
<b>Estimated Cost:</b>	\$75,000	<b>Mitigation Action Type:</b>	Structure and Infrastructure Projects (SIP)
<b>Plan for Implementation</b>			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	Within 5 years
<b>Estimated Time Required for Project Implementation:</b>	1 year	<b>Potential Funding Sources:</b>	FEMA HMGP and BRIC, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Municipal Budget
<b>Responsible Organization:</b>	Engineer, Township OEM, Administration, School Board	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard Mitigation, Emergency Management
<b>Three Alternatives Considered (including No Action)</b>			
<b>Alternatives:</b>	<b>Action</b>	<b>Estimated Cost</b>	<b>Evaluation</b>
	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
<b>Progress Report (for plan maintenance)</b>			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			



Action Worksheet		
<b>Project Name:</b>	Backup Generator for Elementary School	
<b>Project Number:</b>	2021-Montague-002	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Project will protect critical services of Montague Township Elementary School
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	Severe Weather, Severe Winter Weather, Hurricane, Nor'Easter
Timeline	0	Within 5 years
Agency Champion	1	Engineer, Township OEM, Administration, School Board
Other Community Objectives	1	
<b>Total</b>	12	
<b>Priority (High/Med/Low)</b>	High	



Action Worksheet			
<b>Project Name:</b>	2021-Montague-003		
<b>Project Number:</b>	2020-Sheldon-008		
Risk / Vulnerability			
<b>Hazard(s) of Concern:</b>	Flood, Severe Weather		
<b>Description of the Problem:</b>	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 2 repetitive loss properties but other properties may be impacted by flooding as well.		
Action or Project Intended for Implementation			
<b>Description of the Solution:</b>	Conduct outreach to 10 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).		
<b>Is this project related to a Critical Facility or Lifeline?</b>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
<b>Level of Protection:</b>	1% annual chance flood event + freeboard ( <i>in accordance with flood ordinance</i> )	<b>Estimated Benefits (losses avoided):</b>	Eliminates flood damage to homes and residents, creates open space for the municipality increasing flood storage.
<b>Useful Life:</b>	Acquisition: Lifetime Elevation: 30 years (residential)	<b>Goals Met:</b>	1, 2, 3
<b>Estimated Cost:</b>	\$500,000	<b>Mitigation Action Type:</b>	Structure and Infrastructure Project
Plan for Implementation			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	6-12 months
<b>Estimated Time Required for Project Implementation:</b>	Three years	<b>Potential Funding Sources:</b>	FEMA HMGP and FMA, local cost share by residents
<b>Responsible Organization:</b>	NFIP Floodplain Administrator, supported by homeowners	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard Mitigation
Three Alternatives Considered (including No Action)			
<b>Alternatives:</b>	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues
	Elevate homes	\$500,000	When this area floods, the entire area is impacted; elevating homes would not eliminate the problem and still lead to road closures and impassable roads
	Elevate roads	\$500,000	Elevated roadways would not protect the homes from flood damages
Progress Report (for plan maintenance)			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			



Action Worksheet		
<b>Project Name:</b>	Repetitive Loss Properties	
<b>Project Number:</b>	2021-Montague-003	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Families moved out of high-risk flood areas.
Property Protection	1	Properties removed from high-risk flood areas.
Cost-Effectiveness	1	Cost-effective project
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 remove families from the flood prone areas of the Township
Administrative	0	
Multi-Hazard	1	Flood, Severe Weather
Timeline	0	
Agency Champion	1	NFIP Floodplain Administrator, supported by homeowners
Other Community Objectives	1	
<b>Total</b>	10	
<b>Priority (High/Med/Low)</b>	High	



Action Worksheet			
<b>Project Name:</b>	Impact Resistant Windows and Shutters for Town Hall		
<b>Project Number:</b>	2021-Montague-006		
Risk / Vulnerability			
<b>Hazard(s) of Concern:</b>	Hurricane, Nor'Easter, Severe Weather, Severe Winter Weather		
<b>Description of the Problem:</b>	It is unknown if the windows of the town hall building located at 277 Clover Road are impact resistant.		
Action or Project Intended for Implementation			
<b>Description of the Solution:</b>	The Township will conduct a study to determine whether or not the windows of town hall are impact resistant. If not, the Township will retrofit municipal building with impact resistant windows and shutters.		
<b>Is this project related to a Critical Facility or Lifeline?</b>	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
<b>Level of Protection:</b>	500-year wind event	<b>Estimated Benefits (losses avoided):</b>	Reduction in risk of roof failure and protection of critical services
<b>Useful Life:</b>	25 years	<b>Goals Met:</b>	2, 6
<b>Estimated Cost:</b>	High	<b>Mitigation Action Type:</b>	Structure and Infrastructure Project
Plan for Implementation			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	3 years
<b>Estimated Time Required for Project Implementation:</b>	1 year	<b>Potential Funding Sources:</b>	HMGP, BRIC, USDA Community Facilities Grant Program, Township budget
<b>Responsible Organization:</b>	OEM, Public Works	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard mitigation, Emergency management
Three Alternatives Considered (including No Action)			
<b>Alternatives:</b>	<b>Action</b>	<b>Estimated Cost</b>	<b>Evaluation</b>
	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)			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			



Action Worksheet		
<b>Project Name:</b>	Impact Resistant Windows and Shutters for Town Hall	
<b>Project Number:</b>	2021-Montague-006	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Protects critical services of Town Hall
Property Protection	1	Protects Town Hall 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	
<b>Total</b>	12	
<b>Priority (High/Med/Low)</b>	High	



Action Worksheet			
<b>Project Name:</b>	Delaware River Study		
<b>Project Number:</b>	2021-Montague-008		
Risk / Vulnerability			
<b>Hazard(s) of Concern:</b>	Flood		
<b>Description of the Problem:</b>	Montague Township is located within the northwest corner of the State and sits along the Delaware River. Properties located along the river are susceptible to flooding and damages.		
Action or Project Intended for Implementation			
<b>Description of the Solution:</b>	Conduct a study along the river banks of the Delaware River to identify areas that need to be elevated to reduce flooding impacts. Once identified, cost-effective actions will be carried out.		
<b>Is this project related to a Critical Facility or Lifeline?</b>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
<b>Level of Protection:</b>	TBD by flood study	<b>Estimated Benefits (losses avoided):</b>	Reduction in flood risk in selected areas
<b>Useful Life:</b>	TBD by flood study	<b>Goals Met:</b>	1, 2, 4
<b>Estimated Cost:</b>	TBD by flood study	<b>Mitigation Action Type:</b>	Local Plans and Regulations, Structure and Infrastructure Projects
Plan for Implementation			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	Within 5 years
<b>Estimated Time Required for Project Implementation:</b>	5 years	<b>Potential Funding Sources:</b>	HMGP, BRIC, municipal budget
<b>Responsible Organization:</b>	Engineer	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard mitigation planning, stormwater planning
Three Alternatives Considered (including No Action)			
<b>Alternatives:</b>	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues
	Elevate roadways	\$500,000	Costly and may not solve problem
	Buyout homes	High	Costly, negative social impacts
Progress Report (for plan maintenance)			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			





Action Worksheet		
<b>Project Name:</b>	Delaware River Study	
<b>Project Number:</b>	2021-Montague-008	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	0	
Property Protection	1	Reduction in flooding risk
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	1	Project would reduce flooding impacts.
Administrative	0	
Multi-Hazard	1	Flood
Timeline	0	
Agency Champion	1	Engineer
Other Community Objectives	1	
<b>Total</b>	9	
<b>Priority (High/Med/Low)</b>	High	



## 9.16 TOWN OF NEWTON

This section presents the jurisdictional annex for the Town of Newton. The annex includes a general overview of the Town of Newton; an assessment of the Town of Newton’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.

### 9.16.1 Hazard Mitigation Planning Team

The Town of Newton 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 9.16-1. Hazard Mitigation Planning Team**

Primary Point of Contact		Alternate Point of Contact
Name / Title: Dan Finkle, Deputy OEM Coordinator Address: 39 Trinity Street, Newton, NJ 07860 Phone Number: (973) 383-3521 x267 Email: dfinkle@newtonoem.org		Name / Title: Ken Teets, OEM Coordinator Address: 39 Trinity Street, Newton, NJ 07860 Phone Number: (973) 383-3521, x362 Email: kteets@newtonoem.org
NFIP Floodplain Administrator		
Name / Title: Cory Stoner, Town Engineer Address: 17 Plains Road, Augusta, NJ 07822 Phone Number: 973-948-6463 Email: cstoner@hpellow.com		
Name	Title	Method of Participation
Dan Finkle	Deputy OEM Coordinator	Primary point of contact, provided data and information, contributed to mitigation strategy; attended the kickoff meeting, annex training and mitigation strategy workshop; posted mitigation plan update on the Town website and on social media (Facebook and Twitter)
Ken Teets	OEM Coordinator	Alternate point of contact
Cory Stoner	Town Engineer	NFIP floodplain administrator
Katherine Citterbart	Zoning Officer, Land Use Secretary, Historic Preservation Advisory Commission Secretary	Provided recent and anticipated development
Jessica Caldwell	Planner	Attended the annex training
Terry Oswin	Deputy Town Manager/ Deputy Municipal Clerk	Attended the kickoff meeting and annex training
Thomas Russo	Town Manager	Reviewed the annex*
Harold Pellow	Consultant Engineer	Reviewed the annex*
Monica Mieback	Fiscal/CFO	Reviewed the annex*
Joseph Butto	Building Code Official	Reviewed the annex*



Name	Title	Method of Participation
Adam Vough	Public Works Director	Reviewed the annex*
Robert Osborn	Police Department	Reviewed the annex*
Anthony Razzano	Fire Department	Reviewed the annex*

\*Refer to Jurisdictional Annex Review Sign-Off Sheet in Appendix B

### 9.16.2 Jurisdiction Profile

The Town of Newton is located centrally in Sussex County and is the county seat of the County. It is bordered to the north by Hampton Township, to the south and east by Andover Township and to the west by Fredon Township. The Town covers an area of approximately 3.2 square miles. The Paulins Kill Tributary flows through the Town and the Pequest River is found in the southern end of the Town.

According to the U.S. Census, the 2010 population for the Town of Newton was 7,997. The estimated 2018 population was 7,895, a 1.3 percent decrease from the 2010 Census. Data from the 2018 U.S. Census American Community Survey indicate that 4.0 percent of the population is 5 years of age or younger and 17.9 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.

### 9.16.3 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 9.15-2 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 9.16-2. 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	0	0	7	0	0	0	12	0	22	0
Multi-Family	0	0	2	0	0	0	0	0	0	0
Other (commercial, mixed-use, etc.)	0	0	2	0	0	0	5	0	0	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										
AutoZone	Commercial	1		124 Water Street		Nuclear Incident Hazard Area		Complete		
RPM Development Group – Newton Town Centre	Residential	65 Units		225 Spring Street		Nuclear Incident Hazard Area, Hazardous Material		Complete		



				Incident Area, Carbonate Soil	
Thor Labs – Natural Selections	Commercial	1	Block 18.02 Lots 2, 3, 19-23,31 & 32	Nuclear Incident Hazard Area, Hazardous Material Incident Area, Carbonate Soil	Construction in Progress
Martorana/Grand Villaggio	Residential	54 Townhomes and 6 Low/Moderate Income Apartments	Block 22.05, Lot 13 – 104 Sparta Ave	Nuclear Incident Hazard Area, Hazardous Material Incident Area, Carbonate Soil	Approved May 15, 2013. Nearing completion
<b>Known or Anticipated Major Development and Infrastructure in the Next Five (5) Years</b>					
Thorlabs – Quantum Realm	Commercial	2	Block 20.02, Lot 1 and Block 22.04, Lots 3 & 4, 1 Brooks Plaza	Nuclear Incident Hazard Area, Hazardous Material Incident Area, Carbonate Soil	Approved February 17, 2021-Construction of a 153,000 warehousing/distribution facility. No anticipated start date.
121 Water Street	Mixed Use	5 Structures	121 Water Street	Nuclear Incident Hazard Area	Anticipated, no approval to date
Weis Markets #143 - Gas-N-Go	Commercial	1	119-121 Water Street	Nuclear Incident Hazard Area, Carbonate Soil	Construction of a gas station with a kiosk and six fueling stations. Approved July 15, 2020

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

### 9.16.4 Capability Assessment

Section 5 (Capability Assessment) describes the components included in the capability assessment and their significance for hazard mitigation planning. The Town of Newton 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 Town of Newton 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 Town of Newton and where hazard mitigation has been integrated.

**Table 9.16-3. 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.
<b>Codes, Ordinances, &amp; Requirements</b>					
<b>Building Code</b>	Yes	State & Local	Yes	Yes	-
<b>Comment:</b> <ul style="list-style-type: none"> <li>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</li> <li>The Construction Department is responsible for this code in compliance with State Uniform Construction Code Act (N.J.S. 52:27D-119 et seq.).</li> </ul>					
<b>Zoning Code</b>	Yes	Local	Yes – if municipality has a Planning Board	Yes	-
<b>Comment:</b> <ul style="list-style-type: none"> <li>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.</li> <li>The Code Enforcement is responsible for this code in compliance with Chapter 320 – Zoning (2011).</li> </ul>					
<b>Subdivisions</b>	Yes	Local	Yes – if municipality has a Planning Board	Yes	-
<b>Comment:</b> <ul style="list-style-type: none"> <li>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.</li> <li>The Planning Board is responsible for this ordinance in compliance with Chapter 240 – Land Subdivision and Site Plan Review (2011).</li> </ul>					
<b>Stormwater Management</b>	Yes	State & Local	Yes	Yes	-
<b>Comment:</b> <ul style="list-style-type: none"> <li>See Title 7 of the NJ Administrative Code, N.J.A.C. 7:8</li> <li>All application which come before the Planning Board are subject to the Stormwater Management Ordinance - Chapter 258 of the Municipal Code.</li> </ul>					
<b>Post-Disaster Recovery</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Real Estate Disclosure</b>	Yes	State, Division of Consumer Affairs	Yes	Yes	-
<b>Comment:</b> 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.					
<b>Growth Management</b>	Yes	Local	Yes – if municipality	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.
			has a Planning Board		
<b>Comment:</b>					
<ul style="list-style-type: none"> <li>State Mandated on a municipal level. See Zoning Ordinance; Also - Plan Endorsement Process via the State Development &amp; 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.</li> <li>The Code Enforcement is responsible for these ordinances in compliance with Chapter 320 – Zoning (2011 of the Municipal Code).</li> </ul>					
Site Plan Review	Yes	Local	Yes – if municipality has a Planning Board	Yes	-
<b>Comment:</b>					
<ul style="list-style-type: none"> <li>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 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.</li> <li>The Planning Board is responsible for these requirements in compliance with Chapter 240 – Land Subdivision and Site Plan Review.</li> </ul>					
Environmental Protection	No	-	No	-	-
<b>Comment:</b>					
Flood Damage Prevention	Yes	Federal, State & Local	Yes	Yes	2021-Newton-015
<b>Comment:</b>					
<ul style="list-style-type: none"> <li>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.</li> <li>The Construction Official is responsible for this ordinance in compliance with Chapter 120 – Flood Damage Prevention (2011).</li> <li>The ordinance lacks discussion of the state mandated 1-foot freeboard requirement. The ordinance requires update.</li> </ul>					
Wellhead Protection	Yes	State & Local	No	Yes	-
<b>Comment:</b>					
<ul style="list-style-type: none"> <li>Underground Storage Tank Regulations (N.J.A.C. 7:14B) establishes regulations and requires permitting for storage tanks in wellhead protection areas through the New Jersey Department of Environmental Protection.</li> <li>The Planning Board and the Board of Health are responsible for compliance per Section 240-10 – Wellhead Protection of the Municipal Code.</li> </ul>					
Emergency Management	No	-	No	-	-
<b>Comment:</b>					
Climate Change	No	-	No	-	-
<b>Comment:</b>					
Disaster Recovery Ordinance	No	-	No	-	-
<b>Comment:</b>					
Disaster Reconstruction Ordinance	No	-	No	-	-
<b>Comment:</b>					



	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.
<b>Other: Municipal Separate Storm Sewer System (MS4)</b>	Yes	Local	Yes	Yes	-
<b>Comment:</b>					
<ul style="list-style-type: none"> <li>The Town is responsible for this ordinance in compliance with Chapter 228, Article 7 – Sewer and Water; Municipal Separate Storm Sewer.</li> </ul>					
<b>Other: Natural Hazard Ordinance</b>	Yes	Local	No	Yes	-
<b>Comment:</b>					
<ul style="list-style-type: none"> <li>The Code Enforcement is responsible for this ordinance in compliance with Chapter 320 – Zoning (2011) – Steep Slopes.</li> </ul>					
<b>Other [Special Purpose Ordinances (i.e., sensitive areas, steep slope)]</b>	Yes	Local	No	Yes	-
<b>Comment:</b>					
<ul style="list-style-type: none"> <li>The Town is responsible for these ordinances in compliance with Chapter 166 – Land Use Procedures, Chapter 262 – Stream Obstruction, Chapter 297 – Tree Bank, and Chapter 299 – Trees.</li> </ul>					
<b>Planning Documents</b>					
<b>Comprehensive / Master Plan</b>	Yes	Local	Yes	Yes	-
<b>Comment:</b>					
<ul style="list-style-type: none"> <li>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.</li> <li>The Planning Board is responsible for this plan in compliance with Town of Newton master Plan, August 2008 (2009/2010).</li> </ul>					
<b>Capital Improvement Plan</b>	Yes	Local	No	Yes	-
<b>Comment:</b>					
<ul style="list-style-type: none"> <li>The Town Manager is responsible for this plan. The plan is updated annually and is a part of the municipal budget with 5-year projection.</li> </ul>					
<b>Disaster Debris Management Plan</b>	No	-	No	-	2021-Newton-010
<b>Comment:</b>					
<b>Floodplain or Watershed Plan</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Stormwater Management Plan</b>	Yes	Local	Yes	Yes	-
<b>Comment:</b>					
<ul style="list-style-type: none"> <li>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.</li> <li>The DPW and Town Engineer are responsible for this plan.</li> </ul>					
<b>Stormwater Pollution Prevention Plan</b>	Yes	Local	Yes	Yes	-
<b>Comment:</b>					
<ul style="list-style-type: none"> <li>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</li> </ul>					



	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.
<p><i>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.</i></p>					
<b>Urban Water Management Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Habitat Conservation Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Economic Development Plan</b>	Yes	Local	No	Yes	-
<i>Comment: The Planning Board is responsible for this plan in compliance with Town of Newton Master Plan, August 2008.</i>					
<b>Shoreline Management Plan</b>	No	-	Yes – if located in a coastal zone	-	-
<p><i>Comment:</i></p> <ul style="list-style-type: none"> <li><i>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. 7:27E-1 et seq.</i></li> </ul>					
<b>Community Wildfire Protection Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Community Forest Management Plan</b>	Yes	Local	No	Yes	-
<p><i>Comment:</i></p> <ul style="list-style-type: none"> <li><i>The Community Forestry Management Plan 2018-2022 establishes the programs and procedure through which public tree resources under the jurisdiction of the Town of Newton will continue to be managed through 2022.</i></li> </ul>					
<b>Transportation Plan</b>	Yes	Local	No	Yes	-
<p><i>Comment:</i></p> <ul style="list-style-type: none"> <li><i>2012 Adopted Circulation Plan Element</i></li> </ul>					
<b>Agriculture Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Climate Action Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Tourism Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Business Development Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Other: Open Space Plan</b>	Yes	Local	No	No	-
<p><i>Comment:</i></p> <ul style="list-style-type: none"> <li><i>The Planning Board is responsible for this plan in compliance with Town of Newton Master Plan, August 2008.</i></li> </ul>					
<b>Other: Watershed Management or Protection Plan</b>	Yes	Local	No	Yes	-
<i>Comment: The Licensed Operator is responsible for this plan, and it is a part of the Forestry Plan.</i>					
<b>Response/Recovery Planning</b>					





	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.
<b>Comprehensive Emergency Management Plan (CEMP) / Emergency Operations Plan (EOP)</b>	Yes	Local	Yes	Yes	-
<b>Comment:</b> <ul style="list-style-type: none"> <li>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.</li> <li>The Office of Emergency Management is responsible for this plan, which is incorporated into the EOP. The plan is currently being updated.</li> </ul>					
<b>Threat &amp; Hazard Identification &amp; Risk Assessment (THIRA)</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Post-Disaster Recovery Plan</b>	Yes	Local	No	Yes	-
<b>Comment:</b> The OEM is responsible for this plan, which is incorporated into the EOP. The plan is currently being updated.					
<b>Continuity of Operations Plan</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Public Health Plan</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Other Plans</b>	No	-	No	-	-
<b>Comment:</b>					

**Table 9.16-4. Development and Permitting Capability**

Criterion	Response
Does your jurisdiction issue development permits? - If no, who does? If yes, which department?	Yes, the Construction Official grants these permits per Section 120-12 of the Municipal Code.
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, the 2008 Master Plan projects that a total of 1,920 units could be built increasing the population by 4,589.

**ADMINISTRATIVE AND TECHNICAL CAPABILITY**

The table below summarizes potential staff and personnel resources available to the Town of Newton.

**Table 9.16-5. Administrative and Technical Capabilities**

Staff/Personnel Resource	Available?	Department/Agency/Position
<b>Administrative Capability</b>		
Planning Board	Yes	Planning and Zoning Boards
Mitigation Planning Committee	No	-
Environmental Board / Commission	Yes	Shade Tree Commission
Open Space Board / Committee	Yes	Recreation Committee; Shade Tree Commission
Economic Development Commission / Committee	Yes	Economic Development Commission
Warning Systems / Services (reverse 911, outdoor warning signals)	Yes	Nixle





Staff/Personnel Resource	Available?	Department/Agency/Position
Maintenance program to reduce risk	No	The Town plans to implement municipal programs to prevent trees from threatening lives and impacting power availability/interruption (2021-Newton-014).
Mutual aid agreements	Yes	Agreements are in place with neighboring communities but require strengthening (2021-Newton-012).
<b>Technical/Staffing Capability</b>		
Planners or engineers with knowledge of land development and land management practices	Yes	Professional Engineer - consultant
Engineers or professionals trained in building or infrastructure construction practices	Yes	Professional Engineer - consultant
Planners or engineers with an understanding of natural hazards	Yes	Professional Engineer and Planners- consultant
Staff with training in benefit/cost analysis	No	-
Staff with training in green infrastructure	Yes	Professional Engineer and Planners- consultant
Staff with education/knowledge/training in low impact development	No	-
Surveyor	Yes	Professional Engineer - consultant
Stormwater engineer	Yes	Professional Engineer - consultant
Personnel skilled or trained in GIS applications	Yes	Professional Engineer - consultant
Local or state water quality professional	Yes	Professional Engineer - consultant
Scientist familiar with natural hazards in local area	No	-
Emergency manager	Yes	Kenneth Teets, OEM Coordinator
Watershed planner	No	-
Environmental specialist	No	-
Grant writers	Yes	Deputy Town Manager
Resilience Officer	No	-
Other: NFIP Floodplain Administrator	Yes	Construction Official
Other: Professionals trained in conducting damage assessments	Yes	Building/Construction Department

**FISCAL CAPABILITY**

The table below summarizes financial resources available to the Town of Newton.

**Table 9.16-6. Fiscal Capabilities**

Financial Resource	Accessible or Eligible to Use?
Community Development Block Grants (CDBG, CDBG-DR)	Yes – housing rehab program that is a revolving fund
Capital Improvements Project Funding	Yes – part of annual budget
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service	Yes
Incur Debt through General Obligation Bonds	Yes
Incur Debt through Special Tax Bonds	No
Incur Debt through Private Activity Bonds	No
Withhold Public Expenditures in Hazard-Prone Areas	No
State-Sponsored Grant Programs	Yes – USDA rural development
Development Impact Fees for Homebuyers or Developers	No – pilots for some of the redevelopment plans
Clean Water Act 319 Grants (Nonpoint Source Pollution)	Yes





Financial Resource	Accessible or Eligible to Use?
Other	No

**EDUCATION AND OUTREACH CAPABILITY**

The table below summarizes the education and outreach resources available to the Town of Newton.

**Table 9.16-7. Education and Outreach Capabilities**

Criterion	Response
Do you have a public information officer or communications office?	Yes, Chief of Police and Administrator
Do you have personnel skilled or trained in website development?	Yes, Contractor builds and updated the website
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.	Yes, Social media is used for emergency management including Fire department, police department, First Aid Squad and Department of Public Works.
Do you have any citizen boards or commissions that address issues related to hazard mitigation? -If yes, briefly describe.	No
Do you have any other programs already in place that could be used to communicate hazard-related information? If yes, briefly describe.	Yes, municipal website, mailings, social media, Nixle, staff on foot (police and fire).

**COMMUNITY CLASSIFICATIONS**

The table below summarizes the classifications for community programs available to the Town of Newton.

**Table 9.16-8. Community Classifications**

Program	Participating?	Classification	Date Classified
Community Rating System	No	-	-
Building Code Effectiveness Grading Schedule (BCEGS)	No	-	-
Public Protection (Fire ISO Protection Class)	No	-	-
Storm Ready Certification	No	-	-
Firewise Community Classification	No	-	-
Sustainable Jersey	Yes	None	4/13/2009

**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 9.16-9. Adaptive Capacity**

Hazard	Adaptive Capacity (Capabilities) - Strong/Moderate/Weak
Dam Failure	Moderate





Hazard	Adaptive Capacity (Capabilities) - Strong/Moderate/Weak
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 Town does not have access to resources to determine the possible impacts of climate change upon the municipality. Although climate change is not currently being integrated into current policies/actions, the administration realizes that addressing climate change is important to the environment, public health, and the economy and would be supportive of future integration efforts.

**NATIONAL FLOOD INSURANCE PROGRAM**

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

**Table 9.16-10. National Flood Insurance Program Compliance**

Criterion	Response
What local department is responsible for floodplain management?	Construction
Who is your floodplain administrator? (name, department/position)	Joseph Butto, 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?	Adopted by the Town Council on August 22, 2011
Does your floodplain management program meet or exceed minimum requirements? -If exceeds, in what ways?	Meets
When was the most recent Community Assistance Visit or Community Assistance Contact?	July 31, 2006
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.	No
Do your flood hazard maps adequately address the flood risk within your jurisdiction? -If no, state why.	Yes



Criterion	Response
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 consider attending 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
How many flood insurance policies are in force in your jurisdiction?*	24 policies
-What is the insurance in force?	\$8,360,600 insurance in force
-What is the premium in force?	\$62,264 premium in force
How many total loss claims have been filed in your jurisdiction?*	8 claims
-How many claims are still open or were closed without payment?	\$295,505 in payments
-What were the total payments for losses?	
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

**ADDITIONAL AREAS OF EXISTING INTEGRATION**

- **Walkill River Group:** The Walkill River Group conducts plantings in the floodplain.

**OPPORTUNITIES FOR FUTURE INTEGRATION**

- **Disaster Debris Management Plan:** The Town plans to develop and implement a Disaster Debris Management Plan (2021-Newton-010).
- **Hazard Archival Process:** The Town will develop programs/ procedures to capture and archive loss data from events including the location and length of roadway closures; high water marks, amount of municipal and residential damage (2021-Newton-011).
- **Mutual Aid Agreements:** The Town will create, enhance, and maintain Mutual Aid agreements with neighboring communities for continuity of operations (2021-Newton-012).
- **Damage Assessment Procedures:** The Town will identify and develop agreements with entities that can provide support with FEMA/NJOEM paperwork after disasters; qualified damage assessment personnel – Improve post-disaster capabilities – damage assessment; FEMA/NJOEM paperwork compilation, submissions, record-keeping (2021-Newton-013).
- **Vegetation Management:** The Town will implement, review, and enforce municipal policies and programs to prevent trees from threatening lives and impacting power availability/interruption (2021-Newton-014).
- **Flood Damage Prevention Ordinance:** The Town will update the flood damage prevention ordinance to include a one-foot freeboard requirement (2021-Newton-015).

**9.16.5 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 Town of Newton’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 9.15-11 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 9.16-11. 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 Weather and Snowstorm	Yes	A major nor'easter, produced record snowfall and blizzard conditions in parts of New Jersey on January 23 <sup>rd</sup> and 24 <sup>th</sup> .	Although the County was impacted, the Town did not report damages.
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 Town was subject to closures of businesses and schools and mask and social distancing requirements.

Source: FEMA 2020, NOAA NCEI 2020

### 9.16.6 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 Town of Newton 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 Town of Newton 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 Town of Newton has significant exposure.

#### REPETITIVE FLOOD LOSSES

The following summarizes the repetitive and severe repetitive flood losses in the Town of Newton.

- 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 9.16-12. Critical Facilities and Lifelines Flood Exposure**

Name	Type	Exposure	
		1% Event	0.2% Event
22-104 Don Bosco Dam	Dam	X	X

Source: Sussex County Planning Partnership 2020

Note: \*Identified lifeline





## IDENTIFIED ISSUES AND PROBLEM AREAS

The jurisdiction has identified the following vulnerabilities within their community:

- The Merriam Avenue School stormwater pump facility is undersized. This results in increased risk of flooding in the surrounding area that is serviced by the pump facility.
- The stormwater management system requires upgrade at the DPW Garage located on Moran Street. The Garage also requires improved access.
- The Emergency Operations Plan lacks a dam failure component.
- The roof of the Newton Municipal Building located on Trinity Street is not designed to withstand high wind.
- Fire House #2’s roof is not designed with modern snow load standards. Failure of the roof could threaten the critical services of the Fire House.
- Two buildings at the Sussex County Community College are not designed with windows to withstand wind damages.
- Two buildings at the Sussex County Community College are not designed with modern snow load standards.
- Increased outreach is needed in the Town to increase public awareness.
- The Newton First Aid Squad EMS Station and three pumping stations require automatic standby generators.
- The Town seeks to strengthen sheltering capabilities.
- The Town wants to add additional support for the “Tree Watch” program to proactively manage problem areas through selective removal of hazardous trees and tree replacement.
- The Newton First Aid Squad EMS Station and three pumping stations require automatic standby generators.
- The Town lacks a Disaster Debris Management Plan.
- The Town lacks procedures to capture loss and damage data from hazard events. This limits the knowledge of hazard events and lessens the ability to apply for grant funding support.
- Large scale disaster events require the assistance of outside municipal departments.
- The Town lacks procedures to complete post disaster damage assessments.
- Falling trees cause damage property, reduce continuity of operations, and can cause injuries or death.
- The Town will update the flood damage prevention ordinance to include a one-foot freeboard requirement.

## 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 Town of Newton 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 Town of Newton. The Town of Newton 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 Town of Newton agreed with the calculated hazard rankings.

**Table 9.16-13. Town of Newton Hazard Ranking**

<b>Dam Failure</b>	<b>Disease Outbreak</b>	<b>Drought</b>	<b>Earthquake</b>	<b>Flood</b>	<b>Geologic</b>	
Medium	Medium	Medium	Low	Medium	Low	
<b>Hazardous Materials</b>	<b>Hurricane and Tropical Storm</b>	<b>Invasive Species</b>	<b>Nor'Easter</b>	<b>Severe Weather</b>	<b>Severe Winter Weather</b>	<b>Wildfire</b>
Medium	High	Medium	High	High	High	Low

### 9.16.7 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 9.15-15 and Table 9.15-16 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 9.16-14. 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	Enter 2021 HMP Action #
Newton-1 (new)	Support the mitigation of vulnerable structures via retrofit (e.g. elevation, flood-proofing) or acquisition/relocation to protect structures from future damage, with repetitive loss and severe repetitive loss properties as a priority when applicable. Phase 1: Identify appropriate candidates and determine most cost-effective mitigation option. Phase 2: Work with the property owners to implement selected action based on available funding and local match availability.	Engineering via NFIP FPA with NJOEM, FEMA support	Complete, the Town has no remaining RL/SRL properties		
Newton-2 (new)	Utilize the Hazard Mitigation Plan (HMP) when updating the Comprehensive Master Plan; consider including hazard identification, hazard zones risk	Planning	Ongoing Capability		





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 #
	assessment information, and hazard mitigation goals as identified in the HMP. Further, the findings and recommendation of the HMP will be considered during any future site plan review processes.				
Newton-3 (new)	Fire House #2 is in need of updating/renovating. This will include the incorporation of the Town EOC.	Town Administration, Fire Department, OEM	Complete. The Town used budget funding and bonding. The final cost of construction was approximately \$2 million. The Town Architect Thomas Kosten and the Town Engineer Harold E. Pellow & Associates overall the project design and construction. The project scope was modified from renovating the existing fire house to a project that would demolish the existing fire house building and replace with a new fire house structure. The project was fully completed in 2019.		
Newton-4 (revised old #9)	Dam Site #2 - the Town is in the process of working with the NJDEP to raise the area to the 100-year flood level	Town DPW and Engineering, NJDEP	Complete. The Town of Newton used their available funds and bonding. The final project construction cost was \$85,412. The Town of Newton contracted for the dam work. The contractor was T.R. Weniger Inc. Harold E. Pellow & Assoc., Newton Town Engineers, oversaw the dam improvement work for the Town. No substantial change to the original scope. The crest of the dam was raised as required by NJDEP Dam Safety Section, the underground reinforced concrete structural sill was constructed in the emergency spillway area,		



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 #
			and the disturbed portions of the dam were re-topsoiled, seeded, and stabilized upon completion of the improvements.		
Newton-5 (new)	Work with the County and NJDOT to identify and address the drainage issues along Woodside Avenue.	Town DPW, County, and NJDOT	No Progress		
Newton-6 (new)	Ensure continuity of operations at critical locations: Backup generators for the municipal schools – used for shelters for the Town	School Board, Town Administration	In Progress	X	2021-Newton-009
Newton-7 (new)	Ensure continuity of operations at critical locations: Backup power for the nursing homes and dialysis center located in the Town	Building Operators with support from the Town	In Progress	X	2021-Newton-009
Newton-8 (old #11)	Upgrade capacity of Merriam Avenue School stormwater pump facility.	Town DPW and Engineer	No Progress		
Newton-9 (old #12)	Retrofit roof to meet current standards for high winds on Newton Municipal Building located on Trinity Street.	Town Administration	No Progress	X	2021-Newton-004
Newton-10 (old #14)	Retrofit roof to meet current standards for snow load of Fire House #2 located on Woodside Avenue.	Town Engineer and Fire Department	No Progress	X	2021-Newton-005
Newton-11 (old #15)	Stormwater management system upgrade and improvement access way to DPW Garage located on Moran Street.	Town DPW and Engineer	No Progress	X	2021-Newton-002
Newton-12 (old #17)	Retrofit two buildings with impact resistant windows and shutters at the Sussex County Community College	Engineering and School Administration	No Progress	X	2021-Newton-006
Newton-13 (old #18)	Retrofit two buildings to meet current snow load standards at the Sussex County Community College	Engineering and School Administration	No Progress	X	2021-Newton-007
Newton-14 (old #19)	Conduct all-hazards public education and outreach program for hazard mitigation and preparedness.	Town Administration, OEM	No Progress	X	2021-Newton-008

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





- Improvements and dam hardenings were recently completed.

**PROPOSED HAZARD MITIGATION INITIATIVES FOR THE PLAN UPDATE**

The Town of Newton 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 Town of Newton 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 9.15-15 summarizes the comprehensive-range of specific mitigation initiatives the Town of Newton 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 9.15-16 provides a summary of the prioritization of all proposed mitigation initiatives for this HMP update.



Table 9.16-15. 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-Newton-001	Merriam Avenue School Pump Facility	<b>Problem:</b> The Merriam Avenue School stormwater pump facility is undersized. This results in increased risk of flooding in the surrounding area that is serviced by the pump facility.	Existing	Flood, Severe Weather	2	Town DPW and Engineer	HMGP, BRIC, Municipal budget	Storm water system improved	High	5 years	High	SIP	SP
		<b>Solution:</b> The Town will upgrade the capacity of Merriam Avenue School stormwater pump facility. The Engineer will design the improvements and the DPW will carry out the upgrades.											
2021-Newton-002	DPW Garage Stormwater and Access Upgrades	<b>Problem:</b> The stormwater management system requires upgrade at the DPW Garage located on Moran Street. The Garage also requires improved access.	Existing	Flood, Severe Weather	2, 3, 6	Town DPW and Engineer	HMGP, BRIC, Town budget	Access to DPW maintained	High	Within 5 years	High	SIP	SP
		<b>Solution:</b> The Engineer will design upgrades to the stormwater management system and access way improvements. The DPW will carry out the work.											
2021-Newton-003	Dam Failure Emergency Planning	<b>Problem:</b> The Emergency Operations Plan lacks a dam failure component. <b>Solution:</b> The Town will complete dam failure inundation mapping and include in updates to the Emergency Operations Plan for Town dams.	New and Existing	Dam Failure	3, 7	OEM	Town budget	Increased emergency planning and preparedness	Low		High	LPR	ES
2021-Newton-004	Municipal Building Wind Designs	<b>Problem:</b> The roof of the Newton Municipal Building located on Trinity Street is not designed to withstand high wind. <b>Solution:</b> The Engineer will design a new roof to meet current standards for high winds on Newton Municipal Building located on Trinity Street. The Town will then replace the roof.	Existing	Severe Weather, Hurricane, Nor’Easter	2, 6	Town Engineer and Administration	FEMA HMGP, BRIC, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program,	Municipal building protected from high winds	Medium	Within 5 years	High	SIP	PP



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
							Town Budget						
2021-Newton-005	Snow Load Improvements at Fire House #2	<p><b>Problem:</b> Fire House #2's roof is not designed with modern snow load standards. Failure of the roof could threaten the critical services of the Fire House.</p> <p><b>Solution:</b> The Engineer will design a new roof to meet current standards for snow load of Fire House #2 located on Woodside Avenue. The Fire Department will then replace the roof.</p>	Existing	Severe Winter Weather, Nor'Easter	1, 2, 6	Town Engineer and Fire Department	FEMA HMGP, BRIC, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Town Budget	Fire House designed to withstand snow load	High	Within 5 years	High	SIP	PP
2021-Newton-006	Wind Resistance Improvements at Community College	<p><b>Problem:</b> Two buildings at the Sussex County Community College are not designed with windows to withstand wind damages.</p> <p><b>Solution:</b> The Town Engineer will provide guidance on the retrofit two buildings with impact resistant windows and shutters at the Sussex County Community College.</p>	Existing	Severe Weather, Hurricane, Nor'Easter	2	Engineering and School Administration	Town budget	College official aware of proper design standards	Low	2 years	High	EAP	PI
2021-Newton-007	Snow Load Improvements at Community College	<p><b>Problem:</b> Two buildings at the Sussex County Community College are not designed with modern snow load standards.</p> <p><b>Solution:</b> The Town Engineer will provide guidance on the retrofit of two buildings to meet current snow load standards at the Sussex County Community College.</p>	Existing	Severe Winter Weather, Nor'Easter	2	Engineering and School Administration	Town budget	College official aware of proper design standards	Low	2 years	High	EAP	PI
2021-Newton-008	Hazard Outreach	<p><b>Problem:</b> Increased outreach is needed in the Town to increase public awareness.</p> <p><b>Solution:</b> The Town will design and conduct all-hazards public education and</p>	N/A	All Hazards	3	Town Administration, OEM	Town budget	Increased public awareness	Low	1 year	High	EAP	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
		outreach program for hazard mitigation and preparedness.											
2021-Newton-009	Automatic Standby Generators at Critical Facilities	<p><b>Problem:</b> The Newton First Aid Squad EMS Station and three pumping stations require automatic standby generators.</p> <p><b>Solution:</b> The Engineer will research what size generators are needed to power each facility. The Town will then purchase and install the selected generators and necessary electrical components to supply backup power to the facilities.</p>	Existing	Severe Weather, Severe Winter Weather, Hurricane, Nor'Easter	1, 2, 6	Engineer, OEM	FEMA HMGP and BRIC, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Municipal Budget	Ensure continuity of operations of critical facilities	\$50,000 per generator	Within 5 years	High	SIP	ES
2021-Newton-010	Disaster Debris Management Plan	<p><b>Problem:</b> The Town lacks a Disaster Debris Management Plan.</p> <p><b>Solution:</b> The Town will develop and implement a Disaster Debris Management Plan.</p>	Existing	All Hazards	3	DPW, OEM	Town budget	Plan established for disaster debris	Low	1 year	High	LPR	ES
2021-Newton-011	Hazard Event Archival Process	<p><b>Problem:</b> The Town lacks procedures to capture loss and damage data from hazard events. This limits the knowledge of hazard events and lessens the ability to apply for grant funding support.</p> <p><b>Solution:</b> The Town will develop programs/ procedures to capture and archive loss data from events including the location and length of roadway closures; high water marks, amount of municipal and residential damage.</p>	New & Existing	All Hazards	3, 4, 5	OEM, DPW, Administration	Town budget	Increased record keeping for hazard knowledge and data for grant applications.	Staff time	Within 6 months	High	LPR	ES
2021-Newton-012	Mutual Aid Agreements	<p><b>Problem:</b> Large scale disaster events require the assistance of outside municipal departments.</p>	New & Existing	All Hazards	3, 5, 6	OEM, Administration	Town budget	Increased resource	Staff time	1 year	High	LPR	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
		<b>Solution:</b> The Town will create, enhance, and maintain Mutual Aid agreements with neighboring communities for continuity of operations.						es and ability to respond to disaster events.					
2021-Newton-013	Damage Assessment Procedures	<b>Problem:</b> The Town lacks procedures to complete post disaster damage assessments. <b>Solution:</b> The Town will identify and develop agreements with entities that can provide support with FEMA/NJOEM paperwork after disasters; qualified damage assessment personnel – Improve post-disaster capabilities – damage assessment; FEMA/NJOEM paperwork compilation, submissions, record-keeping.	New & Existing	All Hazards	3, 4, 5	Administration, DPW, OEM	Town budget	Damage assessment procedures developed.	Staff time	Within 6 months	High	LPR	ES
2021-Newton-014	Vegetation Management	<b>Problem:</b> Falling trees cause damage property, reduce continuity of operations, and can cause injuries or death. <b>Solution:</b> The Town will implement, review, and enforce municipal policies and programs to prevent trees from threatening lives and impacting power availability/interruption.	Existing	Severe Weather, Severe Winter Weather, Hurricane, Nor’Easter, Invasive Species	1, 2	Administration, DPW	Town budget	Reduced impacts from falling trees.	Staff time	Within 6 months	High	LPR, NSP	NR
2021-Newton-015	Flood Damage Prevention Ordinance Update	<b>Problem:</b> The Town’s flood damage prevention ordinance lacks discussion of the state’s freeboard requirement. <b>Solution:</b> The Town will update the ordinance to include the 1-foot freeboard requirement for new construction in the SFHA.	New	Flood	2	FPA, Administration	Town budget	Meet state standards, flood protection	Staff time	Within 6 months	High	LPR	PR

Notes:

Acronyms and Abbreviations:

CAV Community Assistance Visit  
 CRS Community Rating System  
 DPW Department of Public Works

Potential FEMA HMA Funding Sources:

FMA Flood Mitigation Assistance Grant Program  
 HMGP Hazard Mitigation Grant Program

Timeline:

The time required for completion of the project upon implementation

Cost:





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

BRIC Building Resilient Infrastructure and Communities Program

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 9.16-16. 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-Newton-001	Merriam Avenue School Pump Facility	0	1	1	1	1	1	0	1	1	1	1	0	1	0	10	High ⚠
2021-Newton-002	DPW Garage Stormwater and Access Upgrades	1	1	1	1	1	1	0	1	1	1	1	0	1	1	12	High
2021-Newton-003	Dam Failure Emergency Planning	1	1	1	1	1	1	1	1	1	1	0	0	1	1	12	High
2021-Newton-004	Municipal Building Wind Designs	1	1	1	1	1	1	0	1	1	1	1	0	1	1	12	High
2021-Newton-005	Snow Load Improvements at Fire House #2	1	1	1	1	1	1	0	1	1	1	1	0	1	1	12	High
2021-Newton-006	Wind Resistance Improvements at Community College	0	1	1	1	1	1	1	1	1	1	1	1	1	1	13	High
2021-Newton-007	Snow Load Improvements at Community College	0	1	1	1	1	1	1	1	1	1	1	1	1	1	13	High
2021-Newton-008	Hazard Outreach	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	High
2021-Newton-009	Automatic Standby Generators at Critical Facilities	1	1	1	1	1	1	0	1	1	1	1	0	1	1	12	High
2021-Newton-010	Disaster Debris Management Plan	0	1	1	1	1	1	1	1	1	1	1	1	1	1	13	High
2021-Newton-011	Hazard Event Archival Process	0	0	1	1	1	1	1	1	1	1	1	1	1	1	12	High
2021-Newton-012	Mutual Aid Agreements	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	High
2021-Newton-013	Damage Assessment Procedures	0	0	1	1	1	1	1	1	1	1	1	1	1	1	12	High





Initiative Number	Mitigation Initiative Name	Life Safety	Property Protection	Cost Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community	Total	High / Medium / Low
2021-Newton-014	Vegetation Management	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	High
2021-Newton-015	Flood Damage Prevention Ordinance Update	0	1	1	1	1	1	1	1	1	1	0	1	1	1	12	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 9.16-17. Analysis of Mitigation Actions by Hazard and 1 Category

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

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

- RED** high ranked hazard
- ORANGE** medium ranked hazard
- YELLOW** low ranked hazard



Figure 9.16-1. Town of Newton Hazard Area Extent and Location Map 1

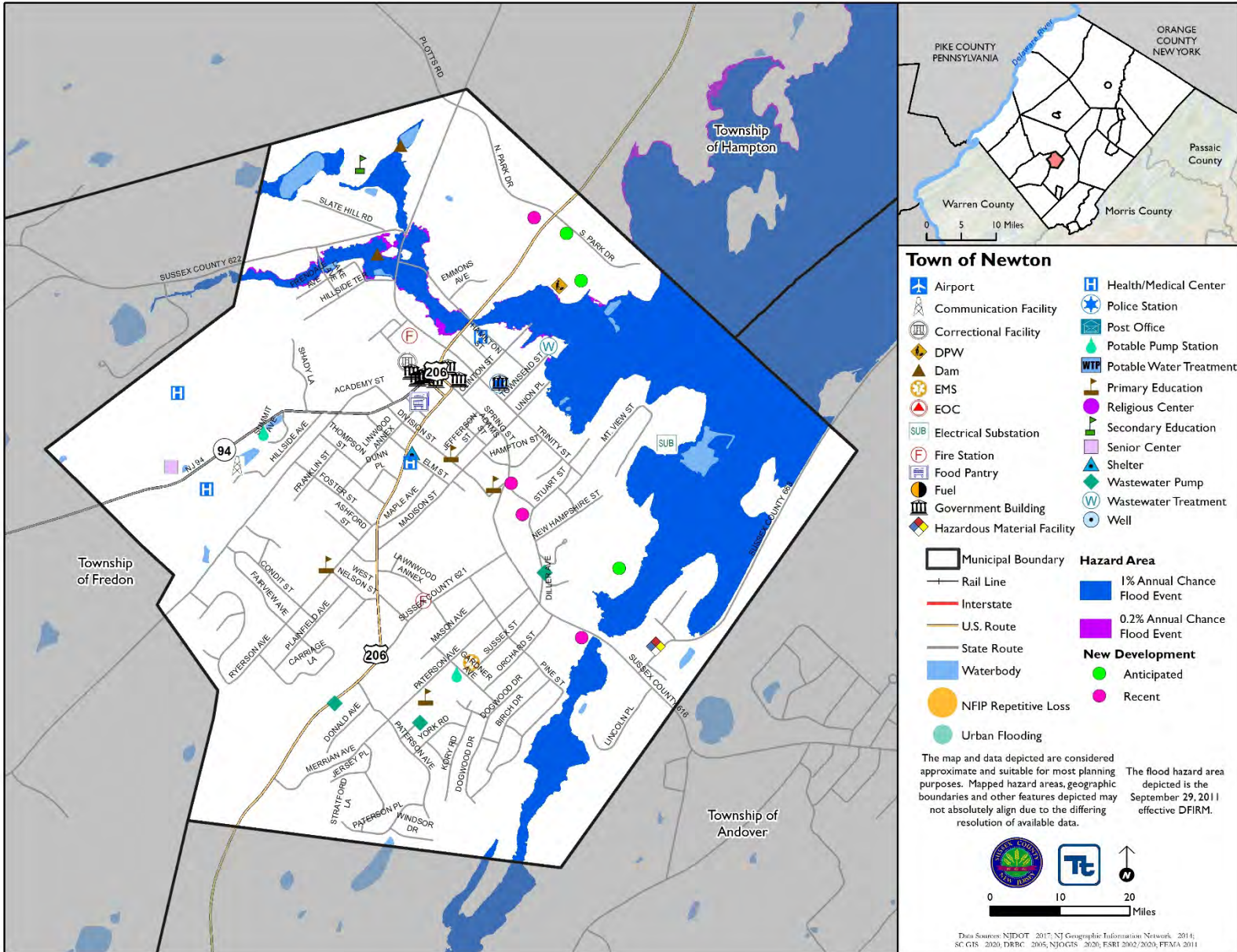




Figure 9.16-2. Town of Newton Hazard Area Extent and Location Map 2

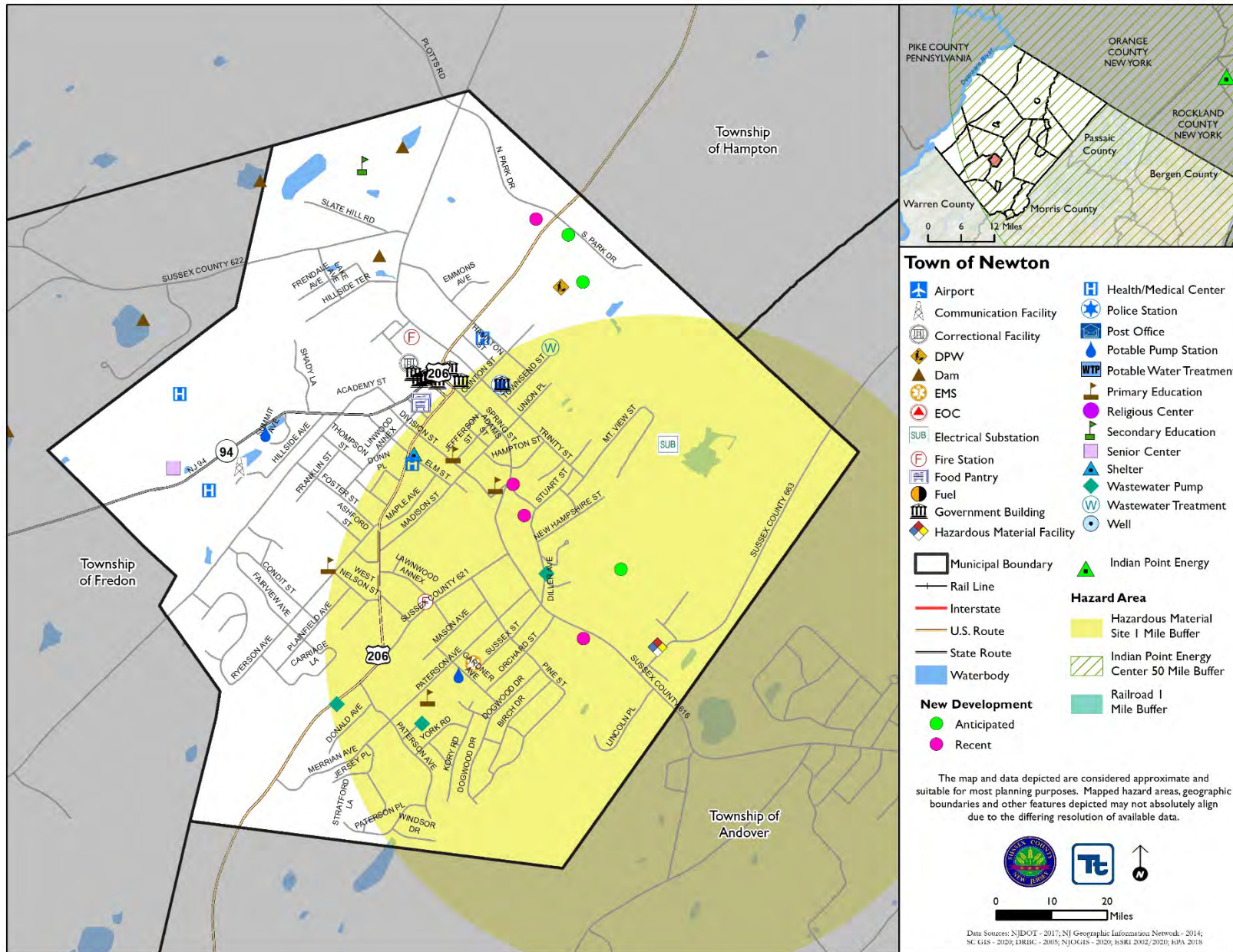
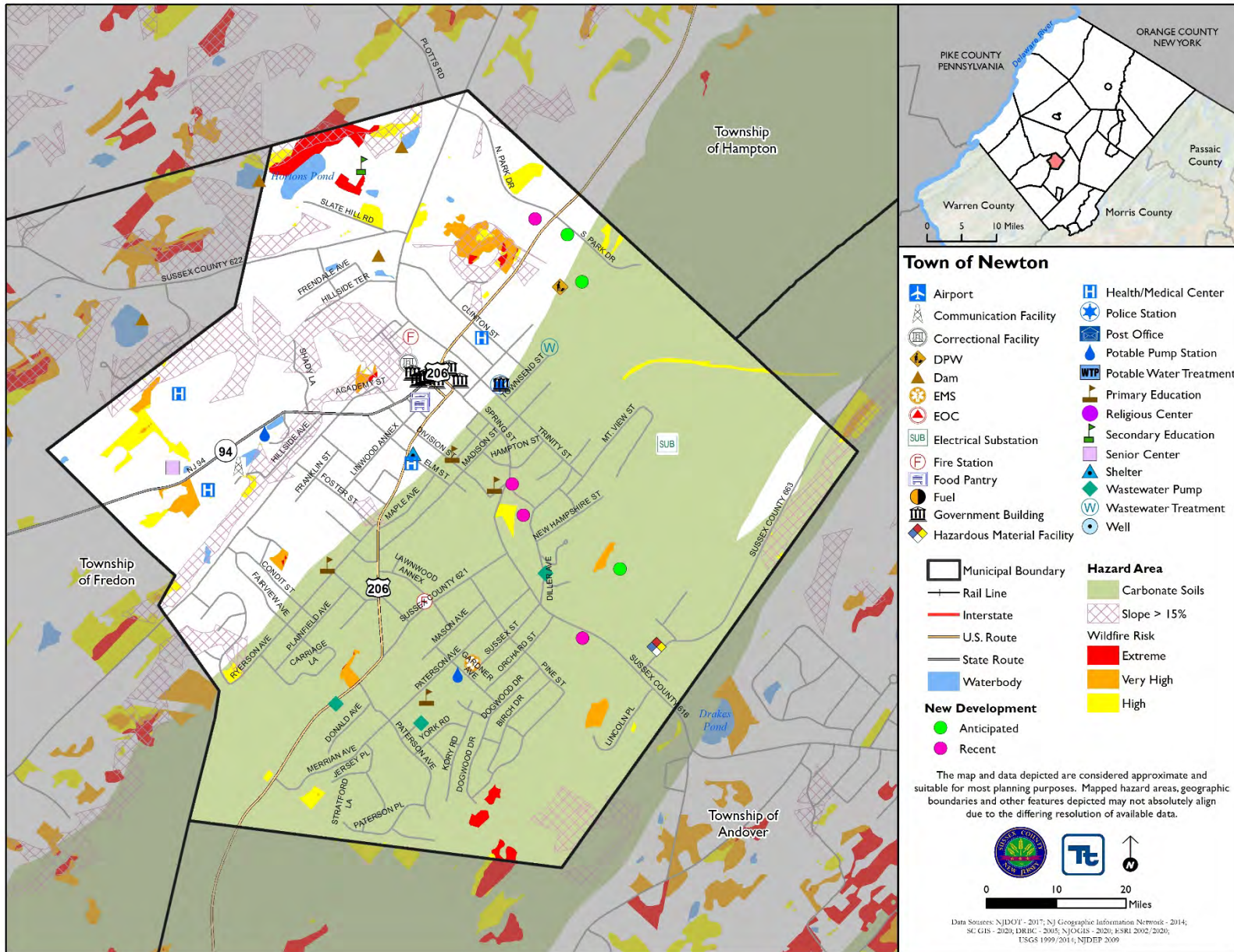




Figure 9.16-3 Town of Newton Hazard Area Extent and Location Map 3





Action Worksheet			
<b>Project Name:</b>	Merriam Avenue School Pump Facility		
<b>Project Number:</b>	2021-Newton-001		
Risk / Vulnerability			
<b>Hazard(s) of Concern:</b>	Flood, Severe Weather		
<b>Description of the Problem:</b>	The Merriam Avenue School stormwater pump facility is undersized. This results in increased risk of flooding in the surrounding area that is serviced by the pump facility.		
Action or Project Intended for Implementation			
<b>Description of the Solution:</b>	The Town will upgrade the capacity of Merriam Avenue School stormwater pump facility. The Engineer will design the improvements and the DPW will carry out the upgrades.		
<b>Is this project related to a Critical Facility or Lifeline?</b>	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
<b>Level of Protection:</b>	TBD by design	<b>Estimated Benefits (losses avoided):</b>	Stormwater system improved
<b>Useful Life:</b>	50 years	<b>Goals Met:</b>	2
<b>Estimated Cost:</b>	High	<b>Mitigation Action Type:</b>	Structure and Infrastructure Project (SIP)
Plan for Implementation			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	5 years
<b>Estimated Time Required for Project Implementation:</b>	1 year	<b>Potential Funding Sources:</b>	HMGP, BRIC, Municipal budget
<b>Responsible Organization:</b>	Town DPW and Engineer	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard mitigation, Stormwater management
Three Alternatives Considered (including No Action)			
<b>Alternatives:</b>	<b>Action</b>	<b>Estimated Cost</b>	<b>Evaluation</b>
	No Action	\$0	Current problem continues
	Replace with new pump station	\$500,000	Too expensive
	Build secondary pump station	\$500,000	Expensive, space limited
Progress Report (for plan maintenance)			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			



Action Worksheet		
<b>Project Name:</b>	Merriam Avenue School Pump Facility	
<b>Project Number:</b>	2021-Newton-001	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	0	
Property Protection	1	Reduces stormwater flood risk
Cost-Effectiveness	1	
Technical	1	The project is technically feasible
Political	1	
Legal	1	The Town has the legal authority to complete the project
Fiscal	0	Project requires funding support
Environmental	1	
Social	1	
Administrative	1	
Multi-Hazard	1	Flood, Severe Weather
Timeline	0	5 years
Agency Champion	1	Town DPW and Engineer
Other Community Objectives	0	
<b>Total</b>	10	
<b>Priority (High/Med/Low)</b>	High	





Action Worksheet			
<b>Project Name:</b>	DPW Garage Stormwater and Access Upgrades		
<b>Project Number:</b>	2021-Newton-002		
Risk / Vulnerability			
<b>Hazard(s) of Concern:</b>	Flood, Severe Weather		
<b>Description of the Problem:</b>	The stormwater management system requires upgrade at the DPW Garage located on Moran Street. The Garage also requires improved access.		
Action or Project Intended for Implementation			
<b>Description of the Solution:</b>	The Engineer will design upgrades to the stormwater management system and access way improvements. The DPW will carry out the work.		
<b>Is this project related to a Critical Facility?</b>	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
<b>Level of Protection:</b>	TBD by engineering study	<b>Estimated Benefits (losses avoided):</b>	Access to DPW maintained
<b>Useful Life:</b>	20 years	<b>Goals Met:</b>	2, 3, 6
<b>Estimated Cost:</b>	High	<b>Mitigation Action Type:</b>	Structure and Infrastructure Project (SIP)
Plan for Implementation			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	Within 5 years
<b>Estimated Time Required for Project Implementation:</b>	1 year	<b>Potential Funding Sources:</b>	HMGP, BRIC, Town budget
<b>Responsible Organization:</b>	Town Engineer, DPW	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard mitigation, Stormwater management
Three Alternatives Considered (including No Action)			
<b>Alternatives:</b>	<b>Action</b>	<b>Estimated Cost</b>	<b>Evaluation</b>
	No Action	\$0	Problem continues.
	Relocate DPW	High	Costly
	Close DPW and relocated staff and equipment when flooding is anticipated	Low	Relocation/staging of staff and equipment takes too much time
Progress Report (for plan maintenance)			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			



Action Worksheet		
<b>Project Name:</b>	DPW Garage Stormwater and Access Upgrades	
<b>Project Number:</b>	2021-Newton-002	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Maintains critical services of DPW
Property Protection	1	DPW protected from flooding
Cost-Effectiveness	1	
Technical	1	The project is technically feasible
Political	1	
Legal	1	The Town has the legal authority to complete the project
Fiscal	0	Project requires funding support
Environmental	1	
Social	1	
Administrative	1	
Multi-Hazard	1	Flood, Severe Weather
Timeline	0	Within 5 years
Agency Champion	1	Engineer, DPW
Other Community Objectives	1	
<b>Total</b>	12	
<b>Priority (High/Med/Low)</b>	High	



Action Worksheet			
<b>Project Name:</b>	Municipal Building Wind Designs		
<b>Project Number:</b>	2021-Newton-004		
<b>Risk / Vulnerability</b>			
<b>Hazard(s) of Concern:</b>	Severe Weather, Hurricane, Nor'Easter		
<b>Description of the Problem:</b>	The roof of the Newton Municipal Building located on Trinity Street is not designed to withstand high wind.		
<b>Action or Project Intended for Implementation</b>			
<b>Description of the Solution:</b>	The Engineer will design a new roof to meet current standards for high winds on Newton Municipal Building located on Trinity Street. The Town will then replace the roof.		
<b>Is this project related to a Critical Facility?</b>	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
<b>Level of Protection:</b>	500-year storm event	<b>Estimated Benefits (losses avoided):</b>	Municipal building protected from high winds
<b>Useful Life:</b>	15 years	<b>Goals Met:</b>	2, 6
<b>Estimated Cost:</b>	Medium	<b>Mitigation Action Type:</b>	Structure and Infrastructure Projects (SIP)
<b>Plan for Implementation</b>			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	Within 5 years
<b>Estimated Time Required for Project Implementation:</b>	1 year	<b>Potential Funding Sources:</b>	FEMA HMGP, BRIC, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Town Budget
<b>Responsible Organization:</b>	Town Engineer and Administration	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard Mitigation, Emergency Management
<b>Three Alternatives Considered (including No Action)</b>			
<b>Alternatives:</b>	<b>Action</b>	<b>Estimated Cost</b>	<b>Evaluation</b>
	No Action	\$0	Problem continues.
	Rebuild facility to new standards	High	Costly and not necessary
	Build secondary facility protected to new standards	High	Costly and not necessary
<b>Progress Report (for plan maintenance)</b>			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			



Action Worksheet		
<b>Project Name:</b>	Municipal Building Wind Designs	
<b>Project Number:</b>	2021-Newton-004	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
<b>Life Safety</b>	1	Project will protect critical services of Municipal Building
<b>Property Protection</b>	1	Project will protect Municipal Building from storm damage.
<b>Cost-Effectiveness</b>	1	
<b>Technical</b>	1	The project is technically feasible
<b>Political</b>	1	
<b>Legal</b>	1	The Town has the legal authority to complete the project.
<b>Fiscal</b>	0	Project requires funding support.
<b>Environmental</b>	1	
<b>Social</b>	1	
<b>Administrative</b>	1	
<b>Multi-Hazard</b>	1	Severe Weather, Hurricane, Nor'Easter
<b>Timeline</b>	0	Within 5 years
<b>Agency Champion</b>	1	Town Engineer and Administration
<b>Other Community Objectives</b>	1	Protection of critical services
<b>Total</b>	12	
<b>Priority (High/Med/Low)</b>	High	



Action Worksheet			
<b>Project Name:</b>	Snow Load Improvements at Fire House #2		
<b>Project Number:</b>	2021-Newton-005		
<b>Risk / Vulnerability</b>			
<b>Hazard(s) of Concern:</b>	Severe Winter Weather, Nor'Easter		
<b>Description of the Problem:</b>	Fire House #2's roof is not designed with modern snow load standards. Failure of the roof could threaten the critical services of the Fire House.		
<b>Action or Project Intended for Implementation</b>			
<b>Description of the Solution:</b>	The Engineer will design a new roof to meet current standards for snow load of Fire House #2 located on Woodside Avenue. The Fire Department will then replace the roof.		
<b>Is this project related to a Critical Facility?</b>	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
<b>Level of Protection:</b>	500-year storm event	<b>Estimated Benefits (losses avoided):</b>	Fire House designed to withstand snow load
<b>Useful Life:</b>	15 years	<b>Goals Met:</b>	1, 2, 6
<b>Estimated Cost:</b>	Medium	<b>Mitigation Action Type:</b>	Structure and Infrastructure Projects (SIP)
<b>Plan for Implementation</b>			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	Within 5 years
<b>Estimated Time Required for Project Implementation:</b>	1 year	<b>Potential Funding Sources:</b>	FEMA HMGP, BRIC, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Town Budget
<b>Responsible Organization:</b>	Town Engineer and Fire Department	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard Mitigation, Emergency Management
<b>Three Alternatives Considered (including No Action)</b>			
<b>Alternatives:</b>	<b>Action</b>	<b>Estimated Cost</b>	<b>Evaluation</b>
	No Action	\$0	Problem continues.
	Rebuild facility to new standards	High	Costly and not necessary
	Build secondary facility protected to new standards	High	Costly and not necessary
<b>Progress Report (for plan maintenance)</b>			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			



Action Worksheet		
<b>Project Name:</b>	Snow Load Improvements at Fire House #2	
<b>Project Number:</b>	2021-Newton-004	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
<b>Life Safety</b>	1	Failure of the roof could threaten the critical services of the Fire House.
<b>Property Protection</b>	1	Project will protect Fire House #2 from storm damage.
<b>Cost-Effectiveness</b>	1	
<b>Technical</b>	1	The project is technically feasible
<b>Political</b>	1	
<b>Legal</b>	1	The Town has the legal authority to complete the project.
<b>Fiscal</b>	0	Project requires funding support.
<b>Environmental</b>	1	
<b>Social</b>	1	
<b>Administrative</b>	1	
<b>Multi-Hazard</b>	1	Severe Winter Weather, Nor'Easter
<b>Timeline</b>	0	Within 5 years
<b>Agency Champion</b>	1	Town Engineer and Fire Department
<b>Other Community Objectives</b>	1	Protection of critical services
<b>Total</b>	12	
<b>Priority (High/Med/Low)</b>	High	



Action Worksheet			
<b>Project Name:</b>	Automatic Standby Generators at Critical Facilities		
<b>Project Number:</b>	2021-Newton-009		
<b>Risk / Vulnerability</b>			
<b>Hazard(s) of Concern:</b>	Severe Weather, Severe Winter Weather, Hurricane, Nor'Easter		
<b>Description of the Problem:</b>	Backup power sources are necessary to maintain critical services for critical facilities. The Public Works Maintenance Building lacks a backup power source.		
<b>Action or Project Intended for Implementation</b>			
<b>Description of the Solution:</b>	The Engineer will research what size generators are needed to power each facility. The Town will then purchase and install the selected generators and necessary electrical components to supply backup power to the facilities.		
<b>Is this project related to a Critical Facility?</b>	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
<b>Level of Protection:</b>	N/A	<b>Estimated Benefits (losses avoided):</b>	Ensures continuity of operations of critical facilities
<b>Useful Life:</b>	20 years	<b>Goals Met:</b>	1, 2, 6
<b>Estimated Cost:</b>	\$50,000 per generator	<b>Mitigation Action Type:</b>	Structure and Infrastructure Projects (SIP)
<b>Plan for Implementation</b>			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	Within 5 years
<b>Estimated Time Required for Project Implementation:</b>	1 year	<b>Potential Funding Sources:</b>	FEMA HMGP and BRIC, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Municipal Budget
<b>Responsible Organization:</b>	Engineer, OEM	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard Mitigation, Emergency Management
<b>Three Alternatives Considered (including No Action)</b>			
<b>Alternatives:</b>	<b>Action</b>	<b>Estimated Cost</b>	<b>Evaluation</b>
	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 turbines	\$100,000	Weather dependent; poses a threat to wildlife; expensive repairs if needed
<b>Progress Report (for plan maintenance)</b>			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			



Action Worksheet		
<b>Project Name:</b>	Automatic Standby Generators at Critical Facilities	
<b>Project Number:</b>	2021-Newton-009	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Project will protect critical services of critical facilities.
Property Protection	1	Project will protect facilities from power loss.
Cost-Effectiveness	1	
Technical	1	
Political	1	
Legal	1	The Town has the legal authority to complete the project.
Fiscal	0	Project requires funding support.
Environmental	1	
Social	1	
Administrative	1	
Multi-Hazard	1	Severe Weather, Severe Winter Weather, Hurricane, Nor'Easter
Timeline	0	Within 5 years
Agency Champion	1	Engineer, OEM
Other Community Objectives	1	
<b>Total</b>	12	
<b>Priority (High/Med/Low)</b>	High	





## 9.17 BOROUGH OF OGDENSBURG

This section presents the jurisdictional annex for the Borough of Ogdensburg. The annex includes a general overview of the Borough of Ogdensburg; an assessment of the Borough of Ogdensburg’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.

### 9.17.1 Hazard Mitigation Planning Team

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

*Table 9.17-1. Hazard Mitigation Planning Team*

Primary Point of Contact		Alternate Point of Contact
Name / Title: Richard Keslo, Emergency Management Address: 14 Highland Avenue, Ogdensburg, NJ 07439 Phone Number: (201) 400-9873 Email: OFDchief251@yahoo.com		Name / Title: George P. Hutnick, Mayor Address: 14 Highland Avenue, Ogdensburg, NJ 07439 Phone Number: (973) 903-1239 Email: oburgmayor@gmail.com
NFIP Floodplain Administrator		
Name / Title: Mike Vreeland, Borough Engineer Address: 14 Highland Avenue, Ogdensburg, NJ 07439 Phone Number: 862-284-1100 Email: mvreeland@vancliefengineering.com		
Name	Title	Method of Participation
Richard Keslo	Emergency Management	Primary point of contact; attended the municipal kickoff meeting; reviewed annex*
George P. Hutnick	Mayor	Alternate point of contact; reviewed annex*
Mike Vreeland	Borough Engineer	NFIP floodplain administrator; reviewed annex*
Michael Marceali	Fiscal/CFO	Reviewed annex*
Leigh Witty	Construction Official	Reviewed annex*
Chris Ross	Public Works	Reviewed annex*
Stephen Gordon	Chief of Police	Reviewed annex*
Eric Slater	Fire Chief	Reviewed annex*

*\*Refer to Jurisdictional Annex Review Sign-Off Sheet in Appendix B.*

### 9.17.2 Jurisdiction Profile

The Borough of Ogdensburg is located in eastern Sussex County. It bordered to the north by Franklin Borough, to the east by Sparta Township and Hardyston Township, and to the south and west by Sparta Township. The Borough has a total area of approximately 2.3 square miles. South Ogdensburg is an unincorporated community located within the Borough. The Wallkill River and its tributaries flow through the Borough. Heaters Pond is large pond that is located along the Borough's eastern border.

According to the U.S. Census, the 2010 population for the Borough of Ogdensburg was 2,410. The estimated 2018 population was 2,314, a 4.0 percent decrease from the 2010 Census. Data from the 2018 U.S. Census American Community Survey indicate that 3.6 percent of the population is 5 years of age or younger and 15.9 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.





### 9.17.3 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 9.16-2 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 9.17-2. Recent and Expected Future Development**

Type of Development	2015		2016		2017		2018		2019	
<b>Number of Building Permits for New Construction Issued Since the Previous HMP</b>										
	<b>Total</b>	<b>Within SFHA</b>	<b>Total</b>	<b>Within SFHA</b>	<b>Total</b>	<b>Within SFHA</b>	<b>Total</b>	<b>Within SFHA</b>	<b>Total</b>	<b>Within SFHA</b>
Single and Two-Family Units	0	0	1	0	1	0	1	0	0	0
Multi-Family	0	0	0	0	0	0	0	0	0	0
Other (commercial, mixed-use, etc.)	0	0	0	0	0	0	0	0	0	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	
<b>Recent Major Development and Infrastructure from 2015 to Present</b>										
Interstate Industrial Management	Commercial Site Plan		1		Block 21 Lot 10 & 12.01		None		Under Construction	
<b>Known or Anticipated Major Development and Infrastructure in the Next Five (5) Years</b>										
None anticipated										

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

### 9.17.4 Capability Assessment

Section 5 (Capability Assessment) describes the components included in the capability assessment and their significance for hazard mitigation planning. The Borough of Ogdensburg 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 Borough of Ogdensburg 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 Borough of Ogdensburg and where hazard mitigation has been integrated.

**Table 9.17-3. 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.
<b>Codes, Ordinances, &amp; Requirements</b>					
<b>Building Code</b>	Yes	State & Local	Yes	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>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</li> <li>The Borough is responsible for this code in compliance with State Uniform Construction Code Act (N.J.S.A. 52:27D-119 et seq.).</li> </ul>					
<b>Zoning Code</b>	Yes	Local	Yes – if municipality has a Planning Board	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>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.</li> <li>The Borough is responsible for this code in compliance with Chapter 30, Land Development.</li> <li>The Ordinance notes the objective to secure safety from fire, flood, panic, and other natural and manmade disaster.</li> </ul>					
<b>Subdivisions</b>	Yes	Local	Yes – if municipality has a Planning Board	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>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.</li> <li>The Borough is responsible for this code in compliance with Land Development.</li> </ul>					
<b>Stormwater Management</b>	Yes	Local	Yes	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>See Title 7 of the NJ Administrative Code, N.J.A.C. 7:8</li> <li>The DPW is responsible for this ordinance in compliance with Chapter 502 – Drainage, September 15, 2006.</li> </ul>					
<b>Post-Disaster Recovery</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Real Estate Disclosure</b>	Yes	State, Division of Consumer Affairs	Yes	Yes	-
<i>Comment:</i> 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					





	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.
<i>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.</i>					
<b>Growth Management</b>	No	-	Yes – if municipality has a Planning Board	-	-
<b>Comment:</b> <ul style="list-style-type: none"> <li>State Mandated on a municipal level. See Zoning Ordinance; Also - Plan Endorsement Process via the State Development &amp; 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.</li> </ul>					
<b>Site Plan Review</b>	Yes	County & Local	Yes – if municipality has a Planning Board	Yes	-
<b>Comment:</b> <ul style="list-style-type: none"> <li>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 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.</li> </ul>					
<b>Environmental Protection</b>	Yes	Local	No	Yes	-
<b>Comment:</b> <ul style="list-style-type: none"> <li>The Borough is responsible for this code in compliance with Chapter 30, Land Development.</li> <li>The Ordinance notes the objective to protect the environmentally sensitive portions of the Borough.</li> </ul>					
<b>Flood Damage Prevention</b>	Yes	Local	Yes	Yes	2021-Ogdensburg-004
<b>Comment:</b> <ul style="list-style-type: none"> <li>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.</li> <li>The Engineering Department is responsible for Chapter 20 Flood Damage Prevention.</li> <li>The Flood Damage Prevention Ordinance lacks the state mandated freeboard requirement.</li> </ul>					
<b>Wellhead Protection</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Emergency Management</b>	Yes	Local	No	Yes	-
<b>Comment:</b> <ul style="list-style-type: none"> <li>Chapter 3 Police Regulations discusses the role of the Police Department in the Borough.</li> <li>Chapter 13 Fire Prevention and Protection notes the role of the Ogdensburg Fire Department in fire prevention activities.</li> </ul>					
<b>Climate Change</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Disaster Recovery Ordinance</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Disaster Reconstruction Ordinance</b>	No	-	No	-	-
<b>Comment:</b>					



	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.
<b>Other:</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Planning Documents</b>					
<b>Comprehensive / Master Plan</b>	Yes	Local	Yes	Yes	-
<b>Comment:</b>					
<ul style="list-style-type: none"> <li>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.</li> <li>The Borough Council is responsible for this plan, which was adopted in December 2008.</li> </ul>					
<b>Capital Improvement Plan</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Disaster Debris Management Plan</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Floodplain or Watershed Plan</b>	Yes	Local	No	Yes	-
<b>Comment:</b> The Borough Council is responsible for this plan. The Borough has identified flood areas mapped.					
<b>Stormwater Management Plan</b>	Yes	Local	Yes	Yes/No	Yes/No
<b>Comment:</b>					
<ul style="list-style-type: none"> <li>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.</li> <li>The Borough Council is responsible for this plan in compliance with Stormwater Management Plan, November 2007.</li> </ul>					
<b>Stormwater Pollution Prevention Plan</b>	No	-	Yes	-	-
<b>Comment:</b>					
<ul style="list-style-type: none"> <li>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.</li> </ul>					
<b>Urban Water Management Plan</b>	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.
<i>Comment:</i>					
Habitat Conservation Plan	No	-	No	-	-
<i>Comment:</i>					
Economic Development Plan	No	-	No	-	-
<i>Comment:</i>					
Shoreline Management Plan	No	-	Yes – if located in a coastal zone	-	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>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.</li> </ul>					
Community Wildfire Protection Plan	No	-	No	-	-
<i>Comment:</i>					
Community Forest Management Plan	No	-	No	-	-
<i>Comment:</i>					
Transportation Plan	No	-	No	-	-
<i>Comment:</i>					
Agriculture Plan	No	-	No	-	-
<i>Comment:</i>					
Climate Action Plan	No	-	No	-	-
<i>Comment:</i>					
Tourism Plan	No	-	No	-	-
<i>Comment:</i>					
Business Development Plan	No	-	No	-	-
<i>Comment:</i>					
Other: Open Space Plan	Yes	Local	No	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>The Borough Council is responsible for this plan in compliance with the Master Plan.</li> </ul>					
<b>Response/Recovery Planning</b>					
Comprehensive Emergency Management Plan (CEMP) / Emergency Operations Plan (EOP)	Yes	Local	Yes	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>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.</li> <li>The Borough Council is responsible for this plan in compliance with Emergency Operations Plan, November 2011.</li> </ul>					
Threat & Hazard Identification & Risk Assessment (THIRA)	Yes	County	No	Yes	-
<i>Comment:</i>					
Post-Disaster Recovery Plan	No	-	No	-	-
<i>Comment:</i>					
Continuity of Operations Plan	Yes	County	No	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.
<i>Comment:</i>					
<b>Public Health Plan</b>	Yes	County	No	Yes	-
<i>Comment:</i>					
<b>Other: Strategic Recovery Planning Report</b>	Yes	Local	No	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>The Borough Council is responsible for this report in compliance with Strategic Growth Plan, February 2005.</li> </ul>					

**Table 9.17-4. Development and Permitting Capability**

Criterion	Response
Does your jurisdiction issue development permits? - If no, who does? If yes, which department?	No
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 Borough of Ogdensburg.

**Table 9.17-5. Administrative and Technical Capabilities**

Staff/Personnel Resource	Available?	Department/Agency/Position
<b>Administrative Capability</b>		
Planning Board	Yes	Land Use Board
Mitigation Planning Committee	No	-
Environmental Board / Commission	No	-
Open Space Board / Committee	No	-
Economic Development Commission / Committee	No	-
Warning Systems / Services (reverse 911, outdoor warning signals)	Yes	Fire Department whistle
Maintenance program to reduce risk	Yes	Public Works
Mutual aid agreements	Yes	County, neighboring municipalities
<b>Technical/Staffing Capability</b>		
Planners or engineers with knowledge of land development and land management practices	Yes	Borough Engineer
Engineers or professionals trained in building or infrastructure construction practices	No	-
Planners or engineers with an understanding of natural hazards	Yes	Borough Engineer
Staff with training in benefit/cost analysis	Yes	Borough Engineer
Staff with training in green infrastructure	Yes	Borough Engineer
Staff with education/knowledge/training in low impact development	Yes	Borough Engineer
Surveyor	Yes	Contracted





Staff/Personnel Resource	Available?	Department/Agency/Position
Stormwater engineer	Yes	Borough Engineer
Personnel skilled or trained in GIS applications	Yes	Borough Engineer
Local or state water quality professional	No	-
Scientist familiar with natural hazards in local area	No	-
Emergency manager	Yes	Richard Kelso
Watershed planner	No	-
Environmental specialist	No	-
Grant writers	Yes	Borough Engineer
Resilience Officer	No	-
Other: Professionals trained in conducting damage assessments	Yes	Borough Engineer

**FISCAL CAPABILITY**

The table below summarizes financial resources available to the Borough of Ogdensburg.

**Table 9.17-6. Fiscal Capabilities**

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

**EDUCATION AND OUTREACH CAPABILITY**

The table below summarizes the education and outreach resources available to the Borough of Ogdensburg.

**Table 9.17-7. Education and Outreach Capabilities**

Criterion	Response
Do you have a public information officer or communications office?	Yes, Mayor and OEM Coordinator
Do you have personnel skilled or trained in website development?	Yes, outside contractor
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.	Yes, Board reappointed at mayor and council reorganization meeting







Criterion	Response
Do you have any other programs already in place that could be used to communicate hazard-related information? If yes, briefly describe.	No

**COMMUNITY CLASSIFICATIONS**

The table below summarizes the classifications for community programs available to the Borough of Ogdensburg.

**Table 9.17-8. Community Classifications**

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

**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 9.17-9. 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	Weak
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.*





Climate change is not currently integrated into current policies/plans or actions (projects/monitoring) within the municipality but the administration is supportive of integrating climate change in the future.

**NATIONAL FLOOD INSURANCE PROGRAM**

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

**Table 9.17-10. National Flood Insurance Program Compliance**

Criterion	Response
What local department is responsible for floodplain management?	Engineer
Who is your floodplain administrator? (name, department/position)	Mike Vreeland, P.E., Engineer
Are any certified floodplain managers on staff in your jurisdiction?	Yes, Office of Borough Engineer
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 exceeds minimum requirements.
When was the most recent Community Assistance Visit or Community Assistance Contact?	2010
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.	No
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 consider attending continuing education and/or certification training on floodplain management if it were offered and if authorized by the Borough’s governing body. The FPA indicated that the Borough’s Emergency Management Coordinator and DPW Supervisor would possible attend the training as well.
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
How many flood insurance policies are in force in your jurisdiction? * -What is the insurance in force? -What is the premium in force?	11 policies \$3,719,000 insurance in force \$8,879 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?	9 claims \$49,122 in payments
Do you maintain a list of properties that have been damaged by flooding?	Yes
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





**ADDITIONAL AREAS OF EXISTING INTEGRATION**

- No additional areas of integration; refer to the Capability Assessment.

**OPPORTUNITIES FOR FUTURE INTEGRATION**

- **Flood Damage Prevention Ordinance:** The Borough will update the Flood Damage Prevention Ordinance to include freeboard (2021-Ogdensburg-004).

**9.17.5 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 Borough of Ogdensburg’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 9.16-11 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 9.17-11. 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 23 <sup>rd</sup> and 24 <sup>th</sup> .	Although the County was impacted, the Borough did not report damages.
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 Borough had approximately \$15,070 in unanticipated expenses due to Coronavirus Response. The Borough applied for and received \$13,671.00 in aid from the State LGEF Grant. Additionally, Borough revenue collections were down from prior years.

Source: FEMA 2020, NOAA NCEI 2020

**9.17.6 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 Borough of Ogdensburg 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 Borough of Ogdensburg 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 Borough of Ogdensburg has significant exposure.

**REPETITIVE FLOOD LOSSES**

The following summarizes the repetitive and severe repetitive flood losses in the Borough of Ogdensburg.

- Number of repetitive loss (RL) properties: 2
- 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 9.17-12. Critical Facilities and Lifelines Flood Exposure**

Name	Type	Exposure	
		1% Event	0.2% Event
None identified			

Source: Sussex County Planning Partnership 2020

**IDENTIFIED ISSUES AND PROBLEM AREAS**

The jurisdiction has identified the following vulnerabilities within their community:

- The Borough has two repetitive loss properties.
- Ogdensburg Public School requires backup power.
- Ogdensburg Fire House requires backup power.
- The Borough’s Flood Damage Prevention Ordinance lacks the state mandated freeboard requirement.
- The Borough is seeking to establish the First Aid Squad building as an emergency warming station. Upgrades will be needed to the facility to meet these needs.

**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 Borough of Ogdensburg 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 Borough of Ogdensburg. The Borough of Ogdensburg 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 Borough of Ogdensburg agreed with the calculated hazard rankings.





**Table 9.17-13. Borough of Ogdensburg Hazard Ranking**

<b>Dam Failure</b>	<b>Disease Outbreak</b>	<b>Drought</b>	<b>Earthquake</b>	<b>Flood</b>	<b>Geologic</b>	
Medium	Medium	Medium	Low	Medium	Low	
<b>Hazardous Materials</b>	<b>Hurricane and Tropical Storm</b>	<b>Invasive Species</b>	<b>Nor’Easter</b>	<b>Severe Weather</b>	<b>Severe Winter Weather</b>	<b>Wildfire</b>
Medium	High	Medium	High	High	High	Low

**9.17.7 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 9.16-15 and Table 9.16-16 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 9.17-14. 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	Enter 2021 HMP Action #
Ogdensburg-1 (old #4)	Implement the engineering study conducted on Heaters Pond – armor the dam on the pond and stabilize the bank of Heaters Pond.	Engineering, Borough administration	Complete		
Ogdensburg-2 (new)	Upgrade the emergency warning system in the Borough, including additional fire sirens.	Fire Department, OEM	Complete		
Ogdensburg-3 (new)	Implement Reverse 911 system for the Borough	OEM, Township Administration	Complete		
Ogdensburg-4 (new)	Implement a debris clearing program of the Wallkill River and Saw Mill Brook	Engineering and DPW, working with contractors and local utilities	Complete		
Ogdensburg-5 (old #9)	Continue to enhance and develop the Borough's public outreach and education programs for hazard mitigation and preparedness.	Elected Official’s Office	Ongoing Capability		
Ogdensburg-6 (revised old #3)	Ensure continuity of operations at critical facilities. At this time the following is identified: purchase and install backup generators at	Engineering, OEM	In Progress	X	2021-Ogdensburg-001, 2021-Ogdensburg-002





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 #
	the following critical facilities: <ul style="list-style-type: none"> <li>• First Aid Squad</li> <li>• Meadow Road pump station</li> <li>• Fire Department</li> </ul>				
Ogdensburg-7	Stream bank stabilization (vegetation addition) on Middle Sawmill Brook from RR tracks to Route 517.	Engineering, Borough Administration	Complete		
Ogdensburg-8 (revised old #1)	Support the mitigation of vulnerable structures via retrofit (e.g. elevation, flood-proofing) or acquisition/relocation to protect structures from future damage, with repetitive loss and severe repetitive loss properties as a priority when applicable. Phase 1: Identify appropriate candidates and determine most cost-effective mitigation option. Phase 2: Work with the property owners to implement selected action based on available funding and local match availability.	Engineering via NFIP FPA with NJOEM, FEMA support	In Progress	X	2021-Ogdensburg-003

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

- None identified.

**PROPOSED HAZARD MITIGATION INITIATIVES FOR THE PLAN UPDATE**

The Borough of Ogdensburg 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 Borough of Ogdensburg 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 9.16-15 summarizes the comprehensive-range of specific mitigation initiatives the Borough of Ogdensburg 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 9.16-16 provides a summary of the prioritization of all proposed mitigation initiatives for this HMP update.



Table 9.17-15. 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-Ogdensburg-001	Ogdensburg Public School Backup Power	<p><b>Problem:</b> Backup power sources are necessary to maintain critical services for critical facilities. The Ogdensburg Public School (100 Main St, Ogdensburg, NJ 07439) requires a backup power source. The school is a K-8 school and would serve as a shelter in place shelter during a sudden hazard event.</p> <p><b>Solution:</b> The Engineer will research what size generator is needed to power the Ogdensburg Public School. The Borough will then purchase and install the selected generator and necessary electrical components to supply backup power to the Ogdensburg Public School.</p> <p>In addition, the School will update the shower fixtures in the locker rooms and purchase cots to meet sheltering needs.</p>	Existing	Severe Weather, Severe Winter Weather, Hurricane, Nor'Easter	1	Engineer, School District, OEM	FEMA HMGP and BRIC, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Municipal Budget	Ensure continuity of operations of Ogdensburg Fire House	\$60,000	Within 5 years	High	SIP	ES
2021-Ogdensburg-002	Ogdensburg Fire House Backup Power	<p><b>Problem:</b> Backup power sources are necessary to maintain critical services for critical facilities. The Ogdensburg Fire Department (718 Ford St, Ogdensburg, NY 13669) requires a backup power source.</p> <p><b>Solution:</b> The Engineer will research what size generator is needed to power the Ogdensburg Fire House. The Borough will then purchase and install the selected generator and necessary electrical components to supply backup power to the Ogdensburg Fire House.</p>	Existing	Severe Weather, Severe Winter Weather, Hurricane, Nor'Easter	1	Engineer, Fire Department, OEM	FEMA HMGP and BRIC, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Assistance to Firefighters Grant Program, Municipal Budget	Ensure continuity of operations of Ogdensburg Fire House	\$50,000	Within 5 years	High	SIP	SP
	Repetitive Loss Mitigation	<b>Problem:</b> Frequent flooding events have resulted in damages to residential	Existing		2	NFIP Floodplain	FEMA HMGP and	Eliminates			High	SIP	PP







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-Ogdensburg-003		properties. These properties have been repetitively flooded as documented by paid NFIP claims. The Borough has 2 repetitive loss properties but other properties may be impacted by flooding as well.		Flood, Severe Weather		Administrator, supported by homeowners	FMA, local cost share by residents	flood damage to homes and residents, creates open space for the municipality increasing flood storage.	\$1 Million	3 years			
		<b>Solution:</b> Conduct outreach to 10 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). Areas of focus will include floodprone locations such as Predmore Road, Center Street, Richardville, Brooks Flat and Edison Avenue.											
2021-Ogdensburg-004	Flood Damage Prevention Ordinance Update	<b>Problem:</b> The Borough's Flood Damage Prevention Ordinance lacks the state mandated freeboard requirement.	New	Flood	2	FPA, Administration	Township budget	Meet state standards, reduce future flood risk	Staff time	6 months	High	LPR	PR
		<b>Solution:</b> The Borough will update the Flood Damage Prevention Ordinance to include the freeboard requirement.											
2021-Ogdensburg-005	Establish First Aid Squad Building as Emergency Warming Station	<b>Problem:</b> The Borough is seeking to establish the First Aid Squad building as an emergency warming station. Upgrades will be needed to the facility to meet these needs.	Existing	Severe Weather, Severe Winter Weather, Hurricane, Nor'easter, Flood	1	Engineer, OEM	FEMA HMGP and BRIC, USDA Community Facilities Grant Program, Emergency Management	Establish warming station	\$100,000	5 years	High	SIP	PP, ES, SP
		<b>Solution:</b> The Borough will complete the following upgrades to the First Aid Squad building to allow for use as an emergency warming station:											





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
		<ul style="list-style-type: none"> <li>Installation of a backup generator</li> <li>Roadway and drainage improvements to maintain access in flooding events</li> </ul>					Performance Grants (EMPG) Program, Municipal Budget						
2021-Ogdensburg-006	Disaster Debris Management Plan	<p><b>Problem:</b> The Borough lacks a Disaster Debris Management Plan to address post disaster cleanup.</p> <p><b>Solution:</b> The Borough will develop and adopt a Disaster Debris Management Plan.</p>	New and Existing	All Hazards	6	OEM, Public Works	Borough budget	Increased disaster response capabilities	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 9.17-16. 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-Ogdensburg-001	Ogdensburg Public School Backup Power	1	1	1	1	1	1	0	1	1	1	1	0	1	1	12	High ▲
2021-Ogdensburg-002	Ogdensburg Fire House Backup Power	1	1	1	1	1	1	0	1	1	1	1	0	1	1	12	High
2021-Ogdensburg-003	Repetitive Loss Mitigation	1	1	1	1	1	1	0	1	0	0	1	0	1	1	10	High
2021-Ogdensburg-004	Flood Damage Prevention Ordinance Update	0	1	1	1	1	1	1	1	1	1	0	1	1	1	12	High
2021-Ogdensburg-005	Establish First Aid Squad Building as Emergency Warming Station	1	1	1	1	1	1	0	1	1	1	1	0	1	1	12	High
2021-Ogdensburg-006	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 9.17-17. 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	X
Geologic					X			
Hazardous Materials					X			
Hurricane and Tropical Storm					X	X		X
Invasive Species					X			
Nor'Easter					X	X		
Severe Weather		X			X	X		X
Severe Winter Weather					X	X		X
Wildfire					X			

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

**RED** high ranked hazard

**ORANGE** medium ranked hazard

**YELLOW** low ranked hazard



Figure 9.17-1. Borough of Ogdensburg Hazard Area Extent and Location Map 1

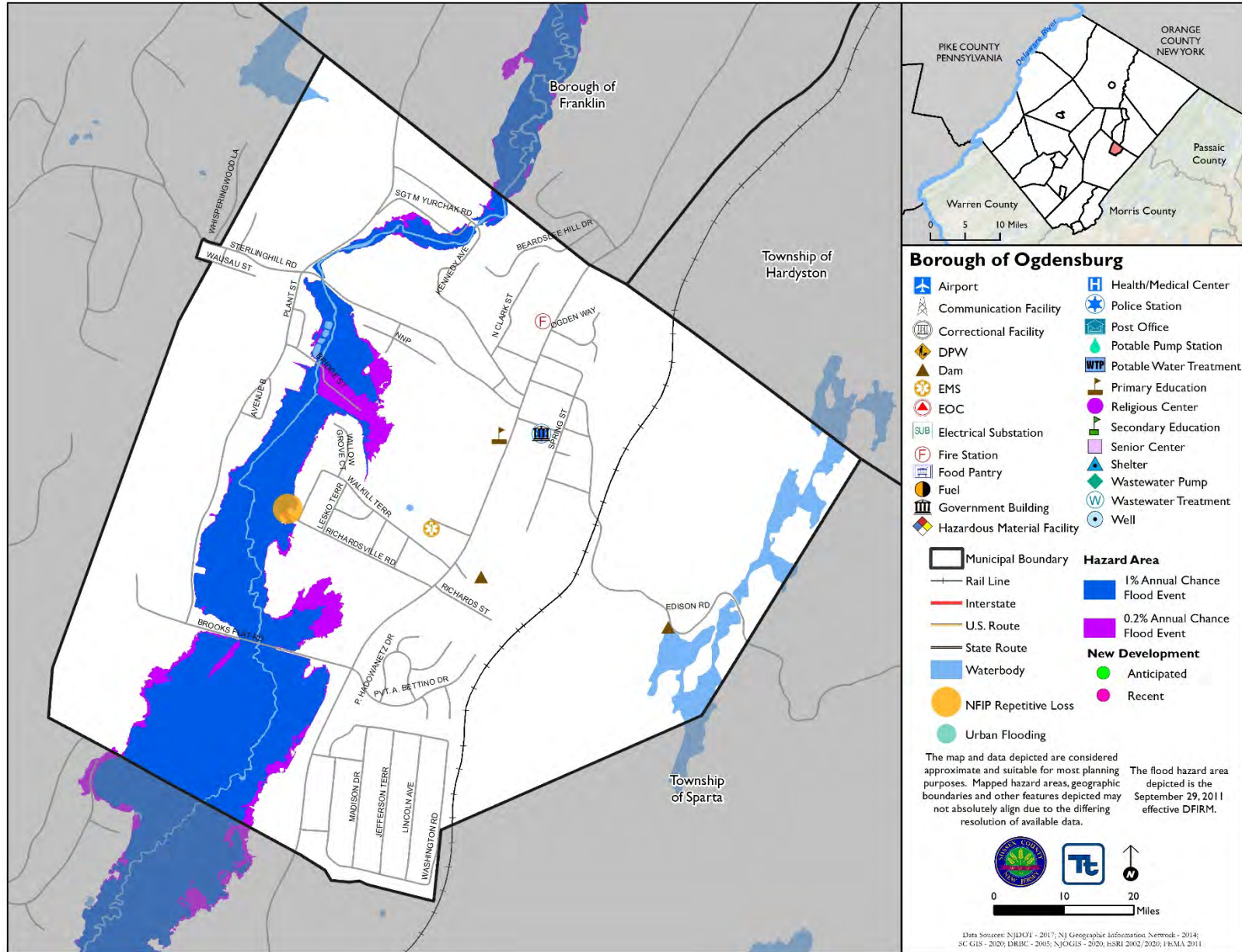




Figure 9.17-2. Borough of Ogdensburg Hazard Area Extent and Location Map 2

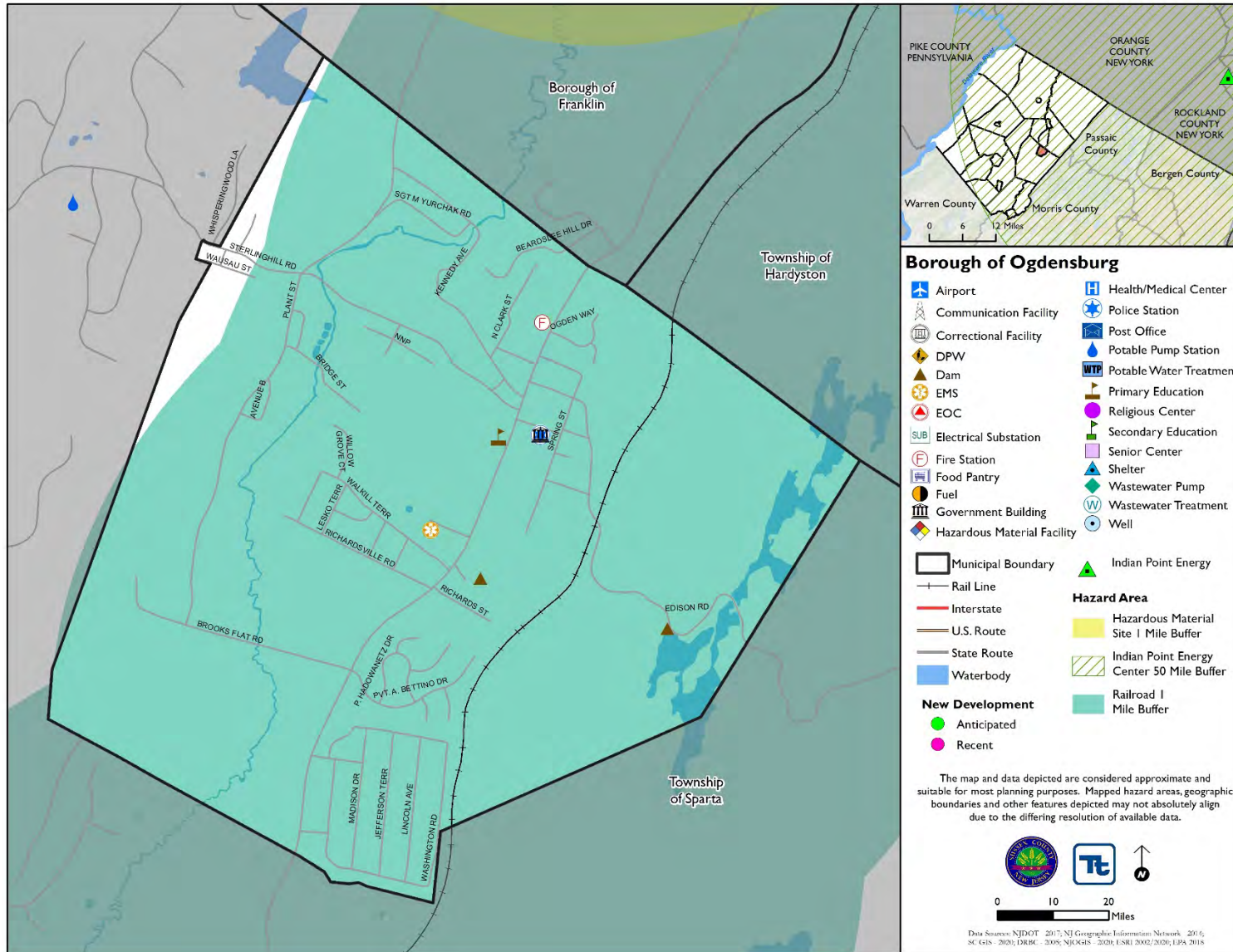
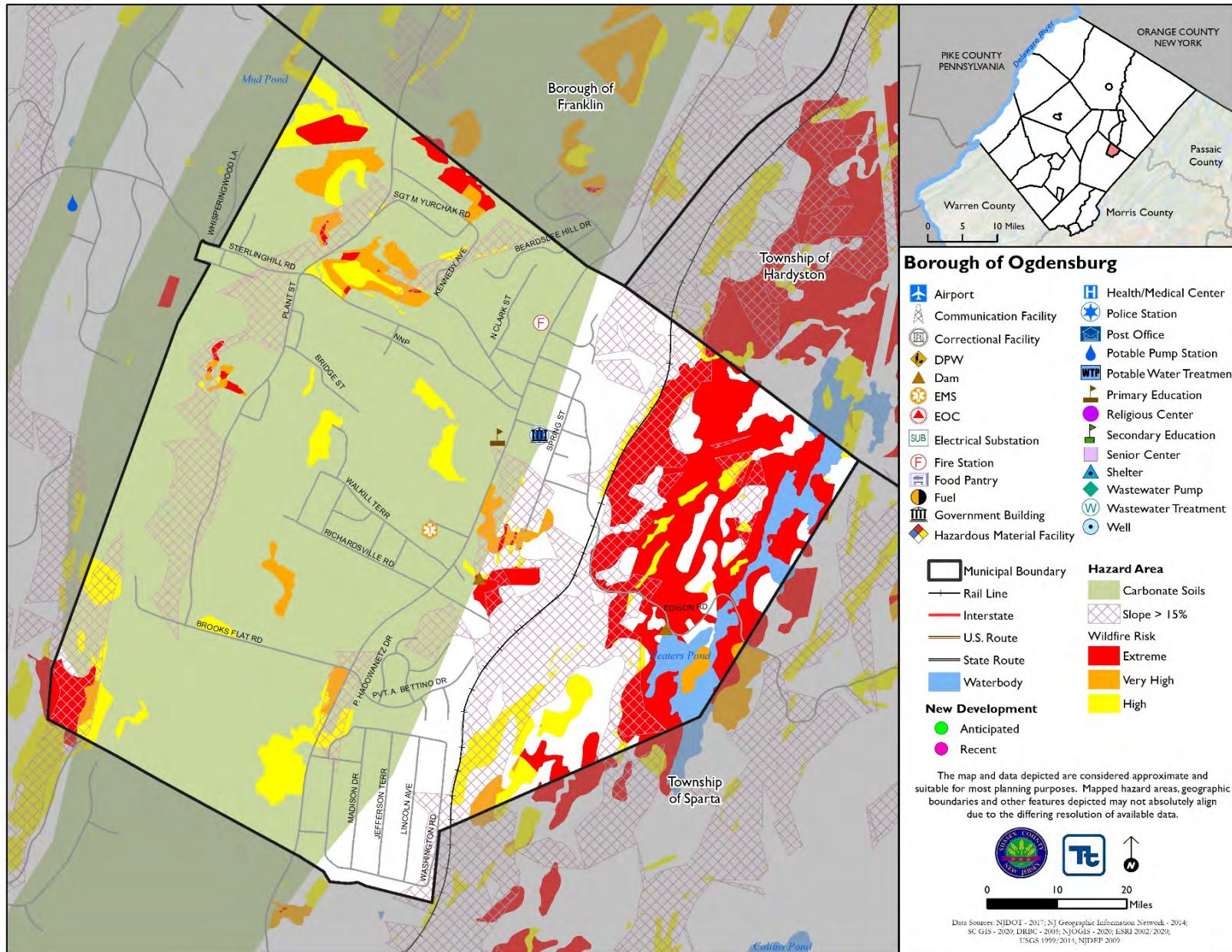




Figure 9.17-3 Borough of Ogdensburg Hazard Area Extent and Location Map 3







Action Worksheet			
<b>Project Name:</b>	Ogdensburg Public School Backup Power		
<b>Project Number:</b>	2021-Ogdensburg-001		
<b>Risk / Vulnerability</b>			
<b>Hazard(s) of Concern:</b>	Severe Weather, Severe Winter Weather, Hurricane, Nor'Easter		
<b>Description of the Problem:</b>	Backup power sources are necessary to maintain critical services for critical facilities. The Ogdensburg Public School (100 Main St, Ogdensburg, NJ 07439) requires a backup power source. The school is a K-8 school and would serve as a shelter in place shelter during a sudden hazard event.		
<b>Action or Project Intended for Implementation</b>			
<b>Description of the Solution:</b>	The Engineer will research what size generator is needed to power the Ogdensburg Public School. The Borough will then purchase and install the selected generator and necessary electrical components to supply backup power to the Ogdensburg Public School.  In addition, the School will update the shower fixtures in the locker rooms and purchase cots to meet sheltering needs.		
<b>Is this project related to a Critical Facility?</b>	Yes	<input checked="" type="checkbox"/>	No <input type="checkbox"/>
<b>Level of Protection:</b>	N/A	<b>Estimated Benefits (losses avoided):</b>	Ensures continuity of operations of Ogdensburg Fire House
<b>Useful Life:</b>	20 years	<b>Goals Met:</b>	1
<b>Estimated Cost:</b>	\$60,000	<b>Mitigation Action Type:</b>	Structure and Infrastructure Projects (SIP)
<b>Plan for Implementation</b>			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	Within 5 years
<b>Estimated Time Required for Project Implementation:</b>	1 year	<b>Potential Funding Sources:</b>	FEMA HMGP and BRIC, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Municipal Budget
<b>Responsible Organization:</b>	Engineer, School District, OEM	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard Mitigation, Emergency Management
<b>Three Alternatives Considered (including No Action)</b>			
<b>Alternatives:</b>	<b>Action</b>	<b>Estimated Cost</b>	<b>Evaluation</b>
	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
<b>Progress Report (for plan maintenance)</b>			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			



Action Worksheet		
<b>Project Name:</b>	Ogdensburg Public School Backup Power	
<b>Project Number:</b>	2021-Ogdensburg-001	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Project will protect critical services of Ogdensburg Public School
Property Protection	1	Project will protect building from power loss.
Cost-Effectiveness	1	
Technical	1	
Political	1	
Legal	1	The Borough has the legal authority to complete the project.
Fiscal	0	Project requires funding support.
Environmental	1	
Social	1	
Administrative	1	
Multi-Hazard	1	Severe Weather, Severe Winter Weather, Hurricane, Nor'Easter
Timeline	0	Within 5 years
Agency Champion	1	Engineer, School District, OEM
Other Community Objectives	1	
<b>Total</b>	12	
<b>Priority (High/Med/Low)</b>	High	



Action Worksheet			
<b>Project Name:</b>	Ogdensburg Fire House Backup Power		
<b>Project Number:</b>	2021-Ogdensburg-002		
<b>Risk / Vulnerability</b>			
<b>Hazard(s) of Concern:</b>	Severe Weather, Severe Winter Weather, Hurricane, Nor'Easter		
<b>Description of the Problem:</b>	Backup power sources are necessary to maintain critical services for critical facilities. The Ogdensburg Fire Department (30 Main Street, (One Fire House Lane) Ogdensburg NJ 07439) requires a backup power source.		
<b>Action or Project Intended for Implementation</b>			
<b>Description of the Solution:</b>	The Engineer will research what size generator is needed to power the Ogdensburg Fire House. The Borough will then purchase and install the selected generator and necessary electrical components to supply backup power to the Ogdensburg Fire House.		
<b>Is this project related to a Critical Facility?</b>	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
<b>Level of Protection:</b>	N/A	<b>Estimated Benefits (losses avoided):</b>	Ensures continuity of operations of Ogdensburg Fire House
<b>Useful Life:</b>	20 years	<b>Goals Met:</b>	1
<b>Estimated Cost:</b>	\$50,000	<b>Mitigation Action Type:</b>	Structure and Infrastructure Projects (SIP)
<b>Plan for Implementation</b>			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	Within 5 years
<b>Estimated Time Required for Project Implementation:</b>	1 year	<b>Potential Funding Sources:</b>	FEMA HMGP and BRIC, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Assistance to Firefighters Grant Program, Municipal Budget
<b>Responsible Organization:</b>	Engineer, Fire Department, OEM	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard Mitigation, Emergency Management
<b>Three Alternatives Considered (including No Action)</b>			
<b>Alternatives:</b>	<b>Action</b>	<b>Estimated Cost</b>	<b>Evaluation</b>
	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
<b>Progress Report (for plan maintenance)</b>			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			



Action Worksheet		
<b>Project Name:</b>	Ogdensburg Fire House Backup Power	
<b>Project Number:</b>	2021-Ogdensburg-002	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Project will protect critical services of Ogdensburg Fire House
Property Protection	1	Project will protect building from power loss.
Cost-Effectiveness	1	
Technical	1	
Political	1	
Legal	1	The Borough has the legal authority to complete the project.
Fiscal	0	Project requires funding support.
Environmental	1	
Social	1	
Administrative	1	
Multi-Hazard	1	Severe Weather, Severe Winter Weather, Hurricane, Nor'Easter
Timeline	0	Within 5 years
Agency Champion	1	Engineer, Fire Department, OEM
Other Community Objectives	1	
<b>Total</b>	12	
<b>Priority (High/Med/Low)</b>	High	



Action Worksheet			
<b>Project Name:</b>	Repetitive Loss Mitigation		
<b>Project Number:</b>	2021-Ogdensburg-003		
Risk / Vulnerability			
<b>Hazard(s) of Concern:</b>	Flood, Severe Weather		
<b>Description of the Problem:</b>	Frequent flooding events have resulted in damages to residential properties. These properties have been repetitively flooded as documented by paid NFIP claims. The Borough has 2 repetitive loss properties but other properties may be impacted by flooding as well.		
Action or Project Intended for Implementation			
<b>Description of the Solution:</b>	Conduct outreach to 10 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). Areas of focus will include floodprone locations such as Predmore Road, Center Street, Richardville, Brooks Flat and Edison Avenue.		
<b>Is this project related to a Critical Facility or Lifeline?</b>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
<b>Level of Protection:</b>	1% annual chance flood event + freeboard <i>(in accordance with flood ordinance)</i>	<b>Estimated Benefits (losses avoided):</b>	Eliminates flood damage to homes and residents, creates open space for the municipality increasing flood storage.
<b>Useful Life:</b>	Acquisition: Lifetime Elevation: 30 years (residential)	<b>Goals Met:</b>	2
<b>Estimated Cost:</b>	\$1Million	<b>Mitigation Action Type:</b>	Structure and Infrastructure Project
Plan for Implementation			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	6-12 months
<b>Estimated Time Required for Project Implementation:</b>	Three years	<b>Potential Funding Sources:</b>	FEMA HMGP and FMA, local cost share by residents
<b>Responsible Organization:</b>	NFIP Floodplain Administrator, supported by homeowners	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard Mitigation
Three Alternatives Considered (including No Action)			
<b>Alternatives:</b>	<b>Action</b>	<b>Estimated Cost</b>	<b>Evaluation</b>
	No Action	\$0	Current problem continues
	Elevate homes	\$500,000	When this area floods, the entire area is impacted; elevating homes would not eliminate the problem and still lead to road closures and impassable roads
Elevate roads	\$500,000	Elevated roadways would not protect the homes from flood damages	
Progress Report (for plan maintenance)			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			



Action Worksheet		
<b>Project Name:</b>	Repetitive Loss Mitigation	
<b>Project Number:</b>	2021-Ogdensburg-003	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Families moved out of high-risk flood areas.
Property Protection	1	Properties removed from high-risk flood areas.
Cost-Effectiveness	1	Cost-effective project
Technical	1	Technically feasible project
Political	1	
Legal	1	The Borough has the legal authority to conduct the project.
Fiscal	0	Project will require grant funding.
Environmental	1	
Social	0	Project would remove families from the flood prone areas of the Borough.
Administrative	0	
Multi-Hazard	1	Flood, Severe Weather
Timeline	0	
Agency Champion	1	NFIP Floodplain Administrator, supported by homeowners
Other Community Objectives	1	
<b>Total</b>	10	
<b>Priority (High/Med/Low)</b>	High	



Action Worksheet			
<b>Project Name:</b>	Establish First Aid Squad Building as Emergency Warming Station		
<b>Project Number:</b>	2021-Ogdensburg-005		
Risk / Vulnerability			
<b>Hazard(s) of Concern:</b>	Severe Weather, Severe Winter Weather, Hurricane, Nor'Easter, Flood		
<b>Description of the Problem:</b>	The Borough is seeking to establish the First Aid Squad building as an emergency warming station. Upgrades will be needed to the facility to meet these needs.		
Action or Project Intended for Implementation			
<b>Description of the Solution:</b>	<p>The Borough will complete the following upgrades to the First Aid Squad building to allow for use as an emergency warming station:</p> <ul style="list-style-type: none"> <li>• Installation of a backup generator               <ul style="list-style-type: none"> <li>○ The Engineer will research what size generator is needed to power the First Aid Squad building. The Borough will then purchase and install the selected generator and necessary electrical components to supply backup power to the First Aid Squad building.</li> </ul> </li> <li>• Roadway and drainage improvements to maintain access in flooding events               <ul style="list-style-type: none"> <li>○ The Engineer will research what improvements are need to the roadway and stormwater system surrounding the First Aid Squad building. The Borough will then carry out the identified improvements.</li> </ul> </li> </ul>		
<b>Is this project related to a Critical Facility?</b>	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
<b>Level of Protection:</b>	N/A	<b>Estimated Benefits (losses avoided):</b>	Establish warming station
<b>Useful Life:</b>	20 years	<b>Goals Met:</b>	1
<b>Estimated Cost:</b>	\$100,000	<b>Mitigation Action Type:</b>	Structure and Infrastructure Projects (SIP)
Plan for Implementation			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	Within 5 years
<b>Estimated Time Required for Project Implementation:</b>	1 year	<b>Potential Funding Sources:</b>	FEMA HMGP and BRIC, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Municipal Budget
<b>Responsible Organization:</b>	Engineer, OEM	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard Mitigation, Emergency Management
Three Alternatives Considered (including No Action)			
<b>Alternatives:</b>	<b>Action</b>	<b>Estimated Cost</b>	<b>Evaluation</b>
	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)			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			



Action Worksheet		
<b>Project Name:</b>	Establish First Aid Squad Building as Emergency Warming Station	
<b>Project Number:</b>	2021-Ogdensburg-005	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
<b>Life Safety</b>	1	Project will protect critical services of First Aid Squad building as an emergency warming station
<b>Property Protection</b>	1	Project will protect building from power loss.
<b>Cost-Effectiveness</b>	1	
<b>Technical</b>	1	
<b>Political</b>	1	
<b>Legal</b>	1	The Borough has the legal authority to complete the project.
<b>Fiscal</b>	0	Project requires funding support.
<b>Environmental</b>	1	
<b>Social</b>	1	
<b>Administrative</b>	1	
<b>Multi-Hazard</b>	1	Severe Weather, Severe Winter Weather, Hurricane, Nor'Easter, Flood
<b>Timeline</b>	0	Within 5 years
<b>Agency Champion</b>	1	Engineer, OEM
<b>Other Community Objectives</b>	1	
<b>Total</b>	12	
<b>Priority (High/Med/Low)</b>	High	





## 9.18 TOWNSHIP OF SANDYSTON

This section presents the jurisdictional annex for the Township of Sandyston. The annex includes a general overview of the Township of Sandyston; an assessment of the Township of Sandyston’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.

### 9.18.1 Hazard Mitigation Planning Team

The Township of Sandyston 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 9.18-1. Hazard Mitigation Planning Team**

Primary Point of Contact		Alternate Point of Contact
Name / Title: Shane Houghtaling, Emergency Management Address: 133 Route 645, Sandyston, NJ 07826 Phone Number: 973-222-5533 Email: oem@sandystontownship.com		Name / Title: Amanda F. Lobban, RMC, Municipal Clerk Address: 133 Route 645, Sandyston, NJ 07826 Phone Number:(973-948-3520 x200 Email: clerk@sandystontownship.com
NFIP Floodplain Administrator		
Name / Title: Robert W. Huber, Construction Official Address: 133 Route 645, Sandyston, NJ 07826 Phone Number: (973) 948-3520 x201 Email: deputyclerk@sandystontownship.com		
Name	Title	Method of Participation
Shane Houghtaling	Emergency Management	Primary point of contact, mitigation strategy development, reviewed annex*
Amanda F. Lobban	Municipal Clerk	Alternate point of contact, mitigation strategy development; attended the kickoff meeting and annex training and mitigation strategy workshop; reviewed the critical asset inventory; assisted with public outreach (Facebook); provided information and data for the updated annex, reviewed annex*
Robert W. Huber	Construction Official	NFIP floodplain administrator, reviewed annex*
Stanley J. Dutkus	Emergency Management	Attended kickoff meeting; reviewed the critical asset inventory
George B. Harper, Jr.	Mayor, Public Works Director	Reviewed annex*
Harold Pellow	Engineer	Reviewed annex*
Jessica M. Caruso	CFO	Reviewed annex*
Jessica Caldwell	Land Use Planner	Reviewed annex*
Scott House	Fire Department	Reviewed annex*

\*Refer to Jurisdictional Annex Review Sign-Off Sheet in Appendix B.





### 9.18.2 Jurisdiction 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 Tuttle's Corner Brook are all streams located within the Township. The following unincorporated communities are located within the Township: Shaytown, Hainesville, Abertown, Layton, Bevans, Tuttle's Corner, and Normanook.

According to the U.S. Census, the 2010 population for the Township of Sandyston was 1,998. The estimated 2018 population was 1,925, a 3.6 percent decrease from the 2010 Census. Data from the 2018 U.S. Census American Community Survey indicate that 5.9 percent of the population is 5 years of age or younger and 19.8 percent is 65 years of age or older. Communities must deploy a support system that enables all populations to safely reach shelters or to quickly evacuate a hazard area.

### 9.18.3 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 9.17-2 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 9.18-2. Recent and Expected Future Development**

Type of Development	2015		2016		2017		2018		2019	
<b>Number of Building Permits for New Construction Issued Since the Previous HMP</b>										
	<b>Total</b>	<b>Within SFHA</b>	<b>Total</b>	<b>Within SFHA</b>	<b>Total</b>	<b>Within SFHA</b>	<b>Total</b>	<b>Within SFHA</b>	<b>Total</b>	<b>Within SFHA</b>
Single and Two-Family Units	0	0	1	1	1	1	2	0	1	0
Multi-Family	0	0	0	0	0	0	0	0	0	0
Other (commercial, mixed-use, etc.)	0	0	0	0	0	0	0	0	0	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		
<b>Recent Major Development and Infrastructure from 2015 to Present</b>										
None identified.										
<b>Known or Anticipated Major Development and Infrastructure in the Next Five (5) Years</b>										
None anticipated.										

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

### 9.18.4 Capability Assessment

Section 5 (Capability Assessment) describes the components included in the capability assessment and their significance for hazard mitigation planning. The Township of Sandyston 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 Sandyston 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 Sandyston and where hazard mitigation has been integrated.

**Table 9.18-3. 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.
<b>Codes, Ordinances, &amp; Requirements</b>					
<b>Building Code</b>	Yes	State & Local	Yes	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>• 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</li> <li>• The Building Department is responsible for this code in compliance with State Uniform Construction Code Act (N.J.S. 52:27D-119 et seq.).</li> </ul>					
<b>Zoning Code</b>	Yes	Local	Yes – if municipality has a Planning Board	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>• 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.</li> <li>• The Zoning Department is responsible for this code in compliance with Chapter 150- Zoning.</li> <li>• The purpose of this chapter is to contribute to and provide for the recreational developments in the Delaware Valley; to promote and protect the health, safety and general welfare of the public; to preserve the present environment, rural in character, insofar as possible and conserve forest cover and streams; to provide for an orderly development of service zones; to implement the design of a residential community dedicated to the preservation of open space with population densities in harmony with the geology and water resources of the Flatbrook Watershed.</li> </ul>					
<b>Subdivisions</b>	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		
<b>Comment:</b> <ul style="list-style-type: none"> <li><i>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.</i></li> <li><i>The Building Department is responsible for this ordinance in compliance with Chapter 137 – Subdivision and Site Plan Review</i></li> </ul>					
<b>Stormwater Management</b>	Yes	State & Local	Yes	Yes	-
<b>Comment:</b> <ul style="list-style-type: none"> <li><i>See Title 7 of the NJ Administrative Code, N.J.A.C. 7:8</i></li> <li><i>Chapter 138 Stormwater Control</i></li> <li><i>It is the purpose of this chapter to establish minimum stormwater management requirements and controls for major development.</i></li> </ul>					
<b>Post-Disaster Recovery</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Real Estate Disclosure</b>	Yes	State, Division of Consumer Affairs	Yes	Yes	-
<b>Comment:</b> <ul style="list-style-type: none"> <li><i>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.</i></li> </ul>					
<b>Growth Management</b>	No	-	Yes – if municipality has a Planning Board	-	-
<b>Comment:</b> <ul style="list-style-type: none"> <li><i>State Mandated on a municipal level. See Zoning Ordinance ; Also - Plan Endorsement Process via the State Development &amp; Redevelopment Plan provides for the delineation of Growth Areas and Environs; Use of the endorsed plans in the implementation of state environmental regulations makes the Plan Endorsement process a growth management strategy.</i></li> </ul>					
<b>Site Plan Review</b>	Yes	Local	Yes – if municipality has a Planning Board	Yes	-
<b>Comment:</b> <ul style="list-style-type: none"> <li><i>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 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.</i></li> <li><i>The Building Department is responsible for these requirements in compliance with Chapter 137 – Subdivision and Site Plan Review.</i></li> </ul>					
<b>Environmental Protection</b>	Yes	Local	No	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.
<b>Comment:</b> <ul style="list-style-type: none"> <li>Chapter 85 Hazardous Wastes</li> <li>Chapter 100 Littering</li> <li>Chapter 141 Trees</li> </ul>					
<b>Flood Damage Prevention</b>	Yes	Federal, State & Local	Yes	Yes	-
<b>Comment:</b> <ul style="list-style-type: none"> <li>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.</li> <li>The Construction Official is responsible for this ordinance in compliance with Chapter 75- Flood Damage Prevention.</li> <li>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:               <ul style="list-style-type: none"> <li>A. Protect human life and health.</li> <li>B. Minimize expenditure of public money for costly flood-control projects.</li> <li>C. Minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public.</li> <li>D. Minimize prolonged business interruptions.</li> <li>E. Minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets, bridges located in areas of special flood hazard.</li> <li>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.</li> <li>G. Ensure that potential buyers are notified that property is in an area of special flood hazard.</li> <li>H. Ensure that those who occupy the areas of special flood hazard assume responsibility for their actions.</li> </ul> </li> <li>The Ordinance includes the state's 1-foot freeboard requirement.</li> </ul>					
<b>Wellhead Protection</b>	Yes	Local	No	Yes	-
<b>Comment:</b> <ul style="list-style-type: none"> <li>Chapter 150 Zoning, Article IV General Regulations and Standards establishes that wellhead protection areas may be reserved as open space as necessary.</li> </ul>					
<b>Emergency Management</b>	Yes	Local	No	No	-
<b>Comment:</b> <ul style="list-style-type: none"> <li>Chapter 11, Fire Department, Volunteer</li> <li>Chapter 71, Fire Prevention</li> </ul>					
<b>Climate Change</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Disaster Recovery Ordinance</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Disaster Reconstruction Ordinance</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Other:</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Planning Documents</b>					
<b>Comprehensive / Master Plan</b>	Yes	Local	Yes	Yes	-
<b>Comment:</b> <ul style="list-style-type: none"> <li>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</li> </ul>					





	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.
<p><i>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.</i></p> <ul style="list-style-type: none"> <li><i>The Township Comm. is responsible for this plan, which was adopted in 2008.</i></li> </ul>					
<b>Capital Improvement Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Disaster Debris Management Plan</b>	No	-	No	-	2021-Sandyston-006
<i>Comment:</i>					
<b>Floodplain or Watershed Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Stormwater Management Plan</b>	Yes	Local	Yes	Yes	-
<p><i>Comment:</i></p> <ul style="list-style-type: none"> <li><i>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.</i></li> <li><i>The DPW is responsible for this plan in compliance with Storm Water 2005.</i></li> </ul>					
<b>Stormwater Pollution Prevention Plan</b>	Yes	Local	Yes	No	-
<p><i>Comment:</i></p> <ul style="list-style-type: none"> <li><i>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.</i></li> </ul>					
<b>Urban Water Management Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Habitat Conservation Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Economic Development Plan</b>	Yes	Local	No	No	-
<p><i>Comment:</i></p> <ul style="list-style-type: none"> <li><i>The Township Committee is responsible for this plan in compliance with the 2008 Master Plan.</i></li> </ul>					
<b>Shoreline Management Plan</b>	No	-	Yes – if located in a coastal zone	-	-
<i>Comment:</i>					





	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.
<ul style="list-style-type: none"> <li>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.</li> </ul>					
<b>Community Wildfire Protection Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Community Forest Management Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Transportation Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Agriculture Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Climate Action Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Tourism Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Business Development Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Other: Open Space Plan</b>	Yes	Local	No	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>The Township Committee is responsible for this plan in compliance with Master Plan 2008.</li> </ul>					
<b>Response/Recovery Planning</b>					
<b>Comprehensive Emergency Management Plan (CEMP) / Emergency Operations Plan (EOP)</b>	Yes	Local	Yes	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>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.</li> <li>The OEM is responsible for this plan, which was adopted in August of 2013.</li> </ul>					
<b>Threat &amp; Hazard Identification &amp; Risk Assessment (THIRA)</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Post-Disaster Recovery Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Continuity of Operations Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Public Health Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Other</b>	No	-	No	-	-
<i>Comment:</i>					



**Table 9.18-4. Development and Permitting Capability**

Criterion	Response
Does your jurisdiction issue development permits? - If no, who does? If yes, which department?	Yes, Building 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 Much of the Township is preserved lands associated with the Delaware Water Gap park system.

**ADMINISTRATIVE AND TECHNICAL CAPABILITY**

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

**Table 9.18-5. Administrative and Technical Capabilities**

Staff/Personnel Resource	Available?	Department/Agency/Position
<b>Administrative Capability</b>		
Planning Board	Yes	Land Use/Zoning Board
Mitigation Planning Committee	No	-
Environmental Board / Commission	No	-
Open Space Board / Committee	No	-
Economic Development Commission / Committee	No	-
Warning Systems / Services (reverse 911, outdoor warning signals)	No	-
Maintenance program to reduce risk	No	-
Mutual aid agreements	Yes	Sussex County
<b>Technical/Staffing Capability</b>		
Planners or engineers with knowledge of land development and land management practices	Yes	Harold Pellow Assoc. J. Caldwell and Associates
Engineers or professionals trained in building or infrastructure construction practices	Yes	Harold Pellow Assoc.
Planners or engineers with an understanding of natural hazards	Yes	As per need, Bids for Prof. Services.
Staff with training in benefit/cost analysis	No	-
Staff with training in green infrastructure	Yes	Harold Pellow Assoc.
Staff with education/knowledge/training in low impact development	Yes	Harold Pellow Assoc.
Surveyor	Yes	Daniel Kent Inc.
Stormwater engineer	Yes	Harold Pellow Assoc.
Personnel skilled or trained in GIS applications	No	-
Local or state water quality professional	No	-
Scientist familiar with natural hazards in local area	No	-
Emergency manager	Yes	Township Emergency Management Coordinator
Watershed planner	No	-
Environmental specialist	No	-
Grant writers	No	-
Resilience Officer	No	-
Other: NFIP Floodplain Administrator	Yes	Construction Official





Staff/Personnel Resource	Available?	Department/Agency/Position
Other: Professionals trained in conducting damage assessments	Yes	As per need, Bids for Prof. Services.

**FISCAL CAPABILITY**

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

**Table 9.18-6. Fiscal Capabilities**

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

**EDUCATION AND OUTREACH CAPABILITY**

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

**Table 9.18-7. Education and Outreach Capabilities**

Criterion	Response
Do you have a public information officer or communications office?	No
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.	Yes, Emergency info posted
Do you use social media for hazard mitigation education and outreach? -If yes, briefly describe.	Yes. Facebook page for information. Share Sheriff’s page.
Do you have any citizen boards or commissions that address issues related to hazard mitigation? -If yes, briefly describe.	No
Do you have any other programs already in place that could be used to communicate hazard-related information? If yes, briefly describe.	No

**COMMUNITY CLASSIFICATIONS**

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



**Table 9.18-8. Community Classifications**

Program	Participating?	Classification	Date Classified
Community Rating System	No	-	-
Building Code Effectiveness Grading Schedule (BCEGS)	No	-	-
Public Protection (Fire ISO Protection Class)	Yes	Fire Department – 10	25 plus years ago.
Storm Ready Certification	No	-	-
Firewise Community Classification	No	-	-
Sustainable Jersey	No	-	-

N/A = Not Applicable. NP = Not Participating. - = Unavailable. TBD = To Be Determined.

**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 9.18-9. 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.

**NATIONAL FLOOD INSURANCE PROGRAM**

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





**Table 9.18-10. National Flood Insurance Program Compliance**

Criterion	Response
What local department is responsible for floodplain management?	Construction
Who is your floodplain administrator? (name, department/position)	Robert W. Huber, 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?	November 2013
Does your floodplain management program meet or exceed minimum requirements? -If exceeds, in what ways?	The program exceeds the minimum set by FEMA and the State.
When was the most recent Community Assistance Visit or Community Assistance Contact?	January 27, 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.	No
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 welcome continuing education and 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, however, the Township has considered joining and would attend a CRS seminar if offered.
How many flood insurance policies are in force in your jurisdiction? * -What is the insurance in force? -What is the premium in force?	8 policies \$1,944,800 insurance in force \$7,675 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?	5 claims \$209,806 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  
Reference: FEMA 2020

### 9.18.5 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 Sandyston’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 9.17-11 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 9.18-11. 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 23 <sup>rd</sup> and 24 <sup>th</sup> .	None identified
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 sought \$3,250 in reimbursements for teleworking equipment and cleaning supplies.

Source: FEMA 2020, NOAA NCEI 2020

### 9.18.6 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 Sandyston 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 Sandyston 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 Sandyston has significant exposure.

#### REPETITIVE FLOOD LOSSES

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

- Number of repetitive loss (RL) properties: 1
- 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 9.18-12. Critical Facilities and Lifelines Flood Exposure**

Name	Type	Exposure	
		1% Event	0.2% Event
Sandyston Township Building	Post Office		X
21-6 Kittatinny Lake Dam	Dam	X	X





Name	Type	Exposure	
		1% Event	0.2% Event
21-13 Flat Brook Valley Dam	Dam	X	X
21-18 Stony Lake Dam	Dam	X	X
21-23 Lake Ashroe Dam	Dam	X	X
21-26 Morgan Pond Dam	Dam	X	X
21-28 Lance Mill Dam	Dam	X	X
21-49 Harper Dam	Dam	X	X
22-113 Skellinger Lake Dam	Dam	X	X

Source: Sussex County Planning Partnership 2020

Note:

\*Identified lifeline

### IDENTIFIED ISSUES AND PROBLEM AREAS

The jurisdiction has identified the following vulnerabilities within their community:

- 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.
- Little Flat Brook crosses Degroat Road just east of the road’s intersection with Route 206. The Brook experiences occasional riverine flooding.
- Lack of forest management of federal and private lands has increased fire risk for residents of Sandyston.
- 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.

### 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 Sandyston 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 Sandyston. The Township of Sandyston 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 Sandyston agreed with the calculated hazard rankings.

**Table 9.18-13. Township of Sandyston Hazard Ranking**

Dam Failure	Disease Outbreak	Drought	Earthquake	Flood	Geologic	
Medium	Medium	Medium	Low	Medium	High	
Hazardous Materials	Hurricane and Tropical Storm	Invasive Species	Nor’Easter	Severe Weather	Severe Winter Weather	Wildfire





Medium	High	Medium	High	High	High	Low
--------	------	--------	------	------	------	-----

### 9.18.7 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 9.17-15 and Table 9.17-16 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 9.18-14. 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	Enter 2021 HMP Action #
Sandyston-1 (new)	Sandyston Township Sunrise Communications Tower Generator	Township OEM	Completed using a FEMA grant; project total \$6,173.		
Sandyston-2 (new)	To ensure continuity of operations at critical facilities and municipal buildings, install generator Wiring at Municipal Complex	Township OEM	Completed using a FEMA grant; project total \$9,300.		
Sandyston-3 (new)	Emergency Generator for DPW Garage & Fire Station #2	Township OEM	Completed using a FEMA grant; project total \$21,000.		
Sandyston-4 (old #1)	Implement Fire Wise Program throughout the Township.	Fire Department, OEM	Ongoing Capability		
Sandyston-5 (old #2)	Conduct all-hazards public education and outreach program for hazard mitigation and preparedness.	Township OEM	Ongoing Capability (Follow-up)		
Sandyston-6 (new)	Install early warning devices in the Township.	Fire Department	In Progress	X	2021-Sandyston-001
Sandyston-7 (new)	Protect school building from severe weather related incidents	Board of Education	No Progress	X	2021-Sandyston-002
Sandyston-8 (new)	Purchase a mini pumper four-wheel drive unit with extended crew cab to support wildland and structural fires.	Fire Department	No Progress	X	2021-Sandyston-003
Sandyston-9 (new)	Work with the PUC and FCC for regulations requiring phone providers to maintain phone service during loss of power.	Township	Ongoing Capability		





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 #
Sandyston-10 (new)	Protect roadway crossing the Delaware River from damages and debris during hazard events.	Private Toll Bridge Owner/Operator	No Progress	X	2021-Sandyston-005
Sandyston-11 (new)	Initiate a program to verify that all dams in the community meet the state safety requirements.	NJDEP, Dam Owners, Township	Ongoing Capability		

**PROPOSED HAZARD MITIGATION INITIATIVES FOR THE PLAN UPDATE**

The Township of Sandyston 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 Sandyston 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 9.17-15 summarizes the comprehensive-range of specific mitigation initiatives the Township of Sandyston 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 9.17-16 provides a summary of the prioritization of all proposed mitigation initiatives for this HMP update.



Table 9.18-15. 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-Sandyston-001	Sandyston Early Warning Systems	<p><b>Problem:</b> 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.</p>	New & Existing	All Hazards	1, 5	OEM	HMGP; BRIC; Township Funds	Increased emergency warnings	Low	Within 3 years	High	LPR	ES
		<p><b>Solution:</b> The Township proposes to replace and augment its early warning capabilities at the Fire Station with a siren with enhanced reach and functionality.</p>											
2021-Sandyston-002	Sandyston-Walpack School Retrofits	<p><b>Problem:</b> The Sandyston-Walpack School building is not protected from severe weather events.</p>	Existing	Severe Weather; Severe Winter Weather	1, 2	Sandyston-Walpack Board of Education	Board of Education; Township funds	Increased ability to withstand hazards	Medium	Within five years	High	SIP	PP
		<p><b>Solution:</b> The Township and Board of Education propose to retrofit the school building to withstand hazard events such as snowfall.</p>											
2021-Sandyston-003	Brush Truck and Utility Truck Acquisition	<p><b>Problem:</b> 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.</p>	New	Earthquake; Flood Geologic; Hazardous Materials Hurricane and Tropical Storm; Nor'Easter; Severe Weather; Severe Winter Weather; Wildfire	1, 2, 5, 6	Fire Department	Assistance to Firefighters Grant Program; Township funds	Enhanced response for fire facilities	Medium	Within five years	\$150,000	SIP	ES
		<p><b>Solution:</b> The Township proposes to purchase a brush truck and utility truck</p>											





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
		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.											
2021-Sandyston-004	Phone Service Retention	<p><b>Problem:</b> Sandyston Township experiences cable outages that impact phone lines during severe storm events.</p> <p><b>Solution:</b> The Township proposes to work with the PUC and FCC to enact regulations requiring phone providers to maintain phone service during loss of power.</p>	Existing	All Hazards	1, 2, 3, 4, 5, 6	Century Link; Optimum; PUC	Staff time/Township funds	Increased phone/cable reliability	Low	Within five years	High	LPR	PI
2021-Sandyston-005	Delaware River Bridge Retrofit	<p><b>Problem:</b> The Dingman’s Ferry bridge is the primary access road between the Township and Pennsylvania. The Bridge is privately owned and vulnerable to flooding.</p> <p><b>Solution:</b> 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.</p>	Existing	Flood Geologic; Hazardous Materials Hurricane and Tropical Storm; Nor’Easter ; Severe Weather; Severe Winter Weather;	1, 2, 5, 6	NJDEP; Sussex County; Private owners; Township Administration	Private funds; BRIC; NJDOT; HMGP	Continued bridge access following hazard events	High	Within five years	High	SIP	PP
2021-Sandyston-006	Disaster Debris Management Plan	<p><b>Problem:</b> The Township lacks a Disaster Debris Management Plan.</p> <p><b>Solution:</b> The Township will develop and adopt a Disaster Debris Management Plan. The Plan will include any</p>	N/A	All Hazards	5	Township OEM, Administration	Township budget	Increased disaster capabilities	Staff time	2 years	High	LPR	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
		necessary mutual aid discussions to supplement the Township’s capabilities.											
2021-Sandyston-007	Reverse 911	<p><b>Problem:</b> The Township lacks a reverse 9-1-1 notification system to warn residents about hazard events.</p> <p><b>Solution:</b> 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.</p>	New	All Hazards	1, 3, 4, 6	Township OEM, Administration	Township budget	Enhanced warning capabilities to safeguard residents	Low	Within three years	High	EAP	PI
2021-Sandyston-008	Repetitive Loss Properties	<p><b>Problem:</b> 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.</p> <p><b>Solution:</b> 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).</p>	Existing	Flood, Severe Weather	2	NFIP Floodplain Administrator, supported by homeowners	FEMA HMGP and FMA, local cost share by residents	Eliminates flood damage to homes and residents, creates open space for the municipality increasing flood storage.	\$500,000	3 years	High	SIP	PP
2021-Sandyston-009	Firewise Participation	<p><b>Problem:</b> 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.</p> <p><b>Solution:</b> The Township proposes to undertake the documentation and process necessary to re-enter the Firewise program and undertake associated mitigation activities.</p>	Existing	Wildfire	5	Township OEM: Fire Department ; NFPA; NJ State Forest Service	Staff Time	Enhanced community preparedness	Low – staff time	Within one 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:

BRIC	Building Resilient Infrastructure and Communities
FMA	Flood Mitigation Assistance Grant Program
HMGF	Hazard Mitigation Grant 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 9.18-16. 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-Sandyston-001	Sandyston Early Warning Systems	1	1	1	1	1	1	0	1	1	1	1	1	1	1	13	High ⚠
2021-Sandyston-002	Sandyston-Walpack School Retrofits	1	1	1	1	1	1	0	1	1	0	1	1	1	1	12	High
2021-Sandyston-003	Mini-Pumper and Utility Truck Acquisition	1	1	1	1	1	1	0	1	1	1	1	1	1	1	13	High
2021-Sandyston-004	Phone Service Retention	1	1	1	1	1	1	0	1	1	1	1	1	1	1	13	High
2021-Sandyston-005	Delaware River Bridge Retrofit	1	1	1	1	1	0	0	1	1	0	1	1	1	1	11	High
2021-Sandyston-006	Disaster Debris Management Plan	1	1	1	1	1	1	0	1	1	1	1	1	1	1	13	High
2021-Sandyston-007	Reverse 911	1	1	1	1	1	1	0	1	1	1	1	1	1	1	13	High
2021-Sandyston-008	Repetitive Loss Properties	1	1	1	1	1	1	0	1	0	0	1	0	1	1	10	High
2021-Sandyston-009	Firewise Participation	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	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 9.18-17. 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		X					X
Disease Outbreak	X		X					X
Drought	X		X					X
Earthquake	X		X			X		X
Flood	X	X	X			X		X
Geologic	X		X			X		X
Hazardous Materials	X		X			X		X
Hurricane and Tropical Storm	X		X			X		X
Invasive Species	X		X					X
Nor'Easter	X		X			X		X
Severe Weather	X	X	X			X		X
Severe Winter Weather	X		X			X		X
Wildfire	X		X		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 9.18-1. Township of Sandyston Hazard Area Extent and Location Map 1

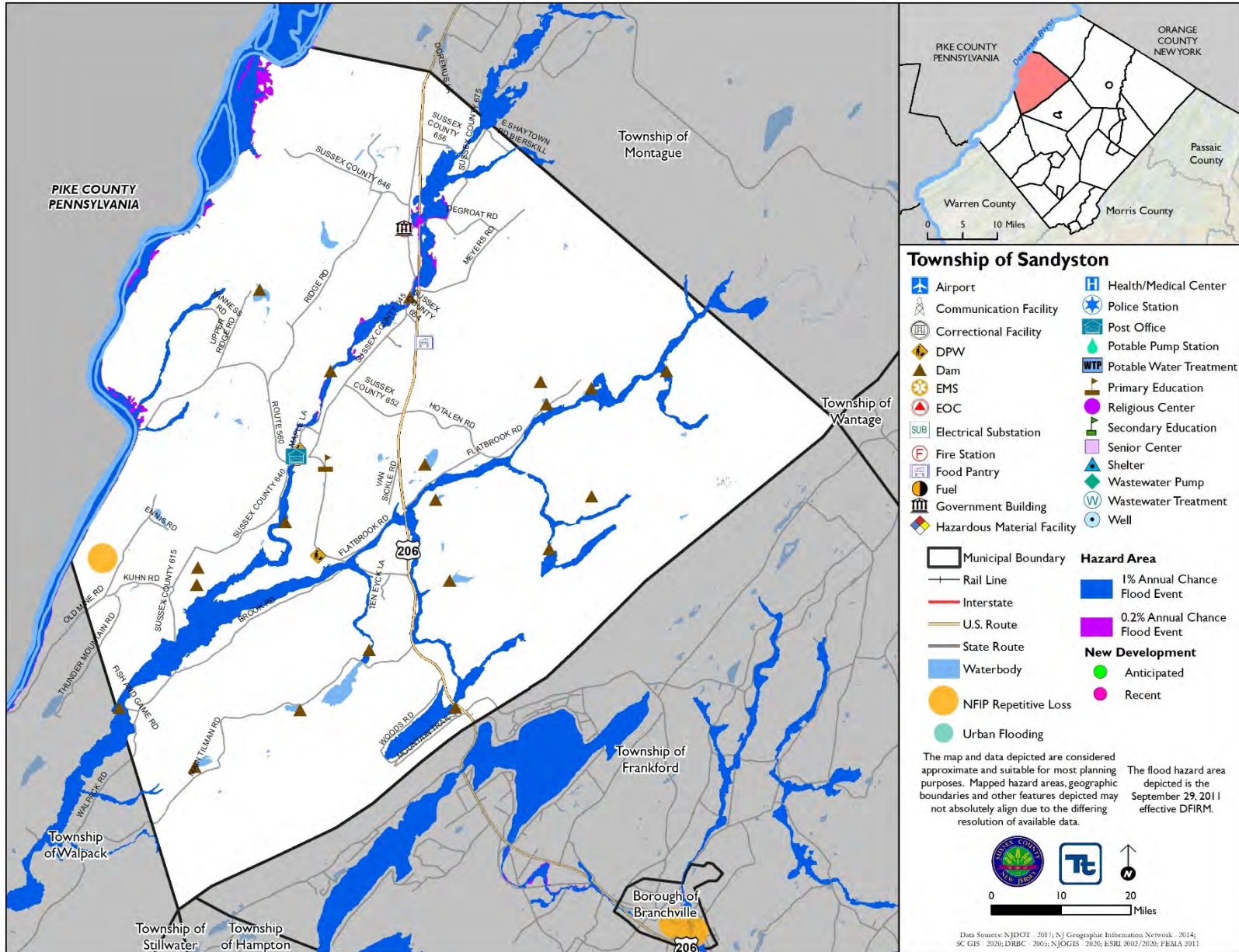




Figure 9.18-2. Township of Sandyston Hazard Area Extent and Location Map 2

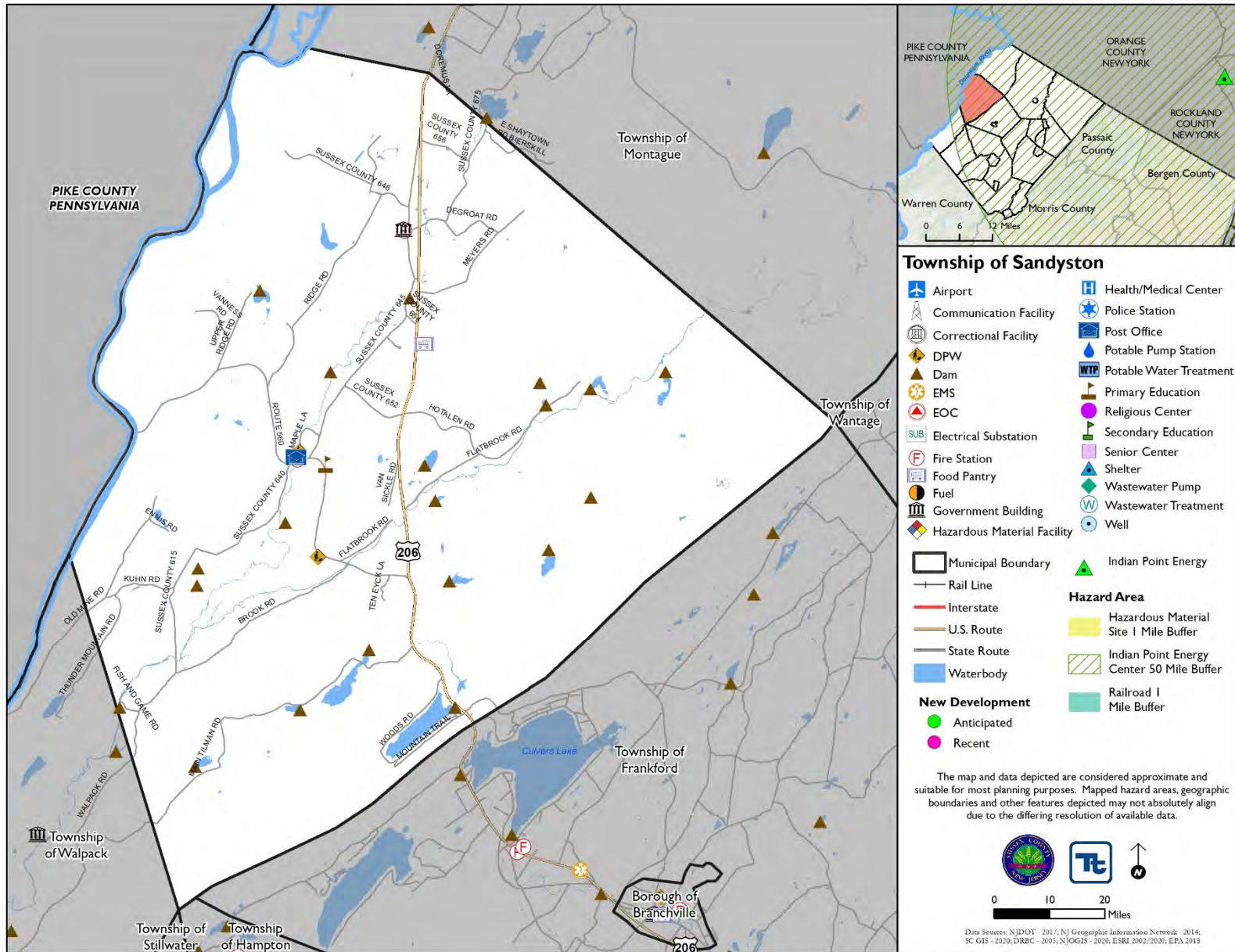
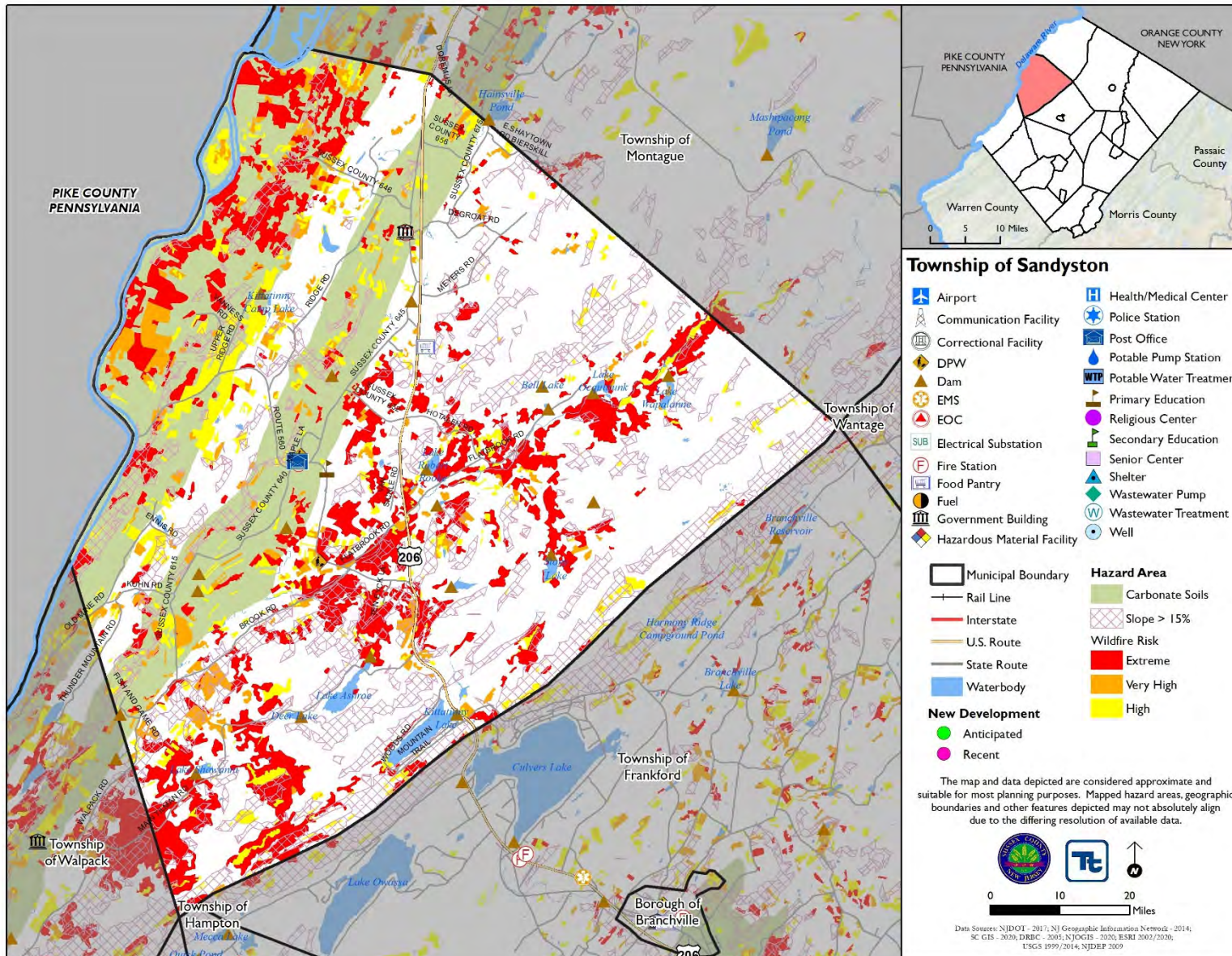




Figure 9.18-3 Township of Sandyston Hazard Area Extent and Location Map 3



The map and data depicted are considered approximate and suitable for most planning purposes. Mapped hazard areas, geographic boundaries and other features depicted may not absolutely align due to the differing resolution of available data.



Data Sources: NJDOT - 2017; NJ Geographic Information Network - 2014; SC GIS - 2020; DRBC - 2005; NJGIS - 2020; ESRI 2002/2020; USGS 1999/2014; NJDEP 2009





Action Worksheet			
<b>Project Name:</b>	Sandyston Early Warning Systems		
<b>Project Number:</b>	2021-Sandyston-001		
Risk / Vulnerability			
<b>Hazard(s) of Concern:</b>	All Hazards		
<b>Description of the Problem:</b>	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.		
Action or Project Intended for Implementation			
<b>Description of the Solution:</b>	The Township proposes to replace and augment its early warning capabilities at the Fire Station with a siren with enhanced reach and functionality.		
<b>Is this project related to a Critical Facility or Lifeline?</b>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
<b>Level of Protection:</b>	N/A	<b>Estimated Benefits (losses avoided):</b>	Increased emergency warnings
<b>Useful Life:</b>	30 years	<b>Goals Met:</b>	1, 5
<b>Estimated Cost:</b>	Low	<b>Mitigation Action Type:</b>	Local Plans and Regulations
Plan for Implementation			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	Within three years
<b>Estimated Time Required for Project Implementation:</b>	6 months	<b>Potential Funding Sources:</b>	HMGP; BRIC; Township Funds
<b>Responsible Organization:</b>	Township OEM; Fire Department	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard Mitigation
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	Sirens fail	\$0	Response inhibited
	Alternate communications	Medium	Cost prohibitive
	Siren enhancements	Low	Enhanced response capabilities
Progress Report (for plan maintenance)			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			



Action Worksheet		
<b>Project Name:</b>	Sandyston Early Warning Systems	
<b>Project Number:</b>	2021-Sandyston-001	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	
Property Protection	1	
Cost-Effectiveness	1	Cost-effective project
Technical	1	Technically feasible project
Political	1	
Legal	1	The Township has the legal authority to conduct the project.
Fiscal	0	Project will require capital funding.
Environmental	1	
Social	1	
Administrative	1	
Multi-Hazard	1	Addresses all hazards
Timeline	1	
Agency Champion	1	Township OEM; Fire Department
Other Community Objectives	1	
<b>Total</b>	13	
<b>Priority (High/Med/Low)</b>	High	



Action Worksheet			
<b>Project Name:</b>	Delaware River Bridge Retrofit		
<b>Project Number:</b>	2021-Sandyston-005		
Risk / Vulnerability			
<b>Hazard(s) of Concern:</b>	Flood; Geologic; Hazardous Materials; Hurricane and Tropical Storm; Nor'Easter; Severe Weather; Severe Winter Weather		
<b>Description of the Problem:</b>	The Dingman's Ferry bridge is the primary access road between the Township and Pennsylvania. The Bridge is privately owned and vulnerable to flooding.		
Action or Project Intended for Implementation			
<b>Description of the Solution:</b>	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.		
<b>Is this project related to a Critical Facility or Lifeline?</b>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
<b>Level of Protection:</b>	N/A	<b>Estimated Benefits (losses avoided):</b>	Continued bridge access following hazard events
<b>Useful Life:</b>	30 years	<b>Goals Met:</b>	1, 2, 5, 6
<b>Estimated Cost:</b>	High	<b>Mitigation Action Type:</b>	Structure and Infrastructure Project
Plan for Implementation			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	Within five years
<b>Estimated Time Required for Project Implementation:</b>	2 years	<b>Potential Funding Sources:</b>	Private funds; BRIC; NJDOT; HMGP
<b>Responsible Organization:</b>	NJDEP; Sussex County; Private owners; Township Administration	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard Mitigation
Three Alternatives Considered (including No Action)			
<b>Alternatives:</b>	<b>Action</b>	<b>Estimated Cost</b>	<b>Evaluation</b>
	No Action	High	Bridge damage
	Bridge abandonment/reconstruction	High	Not feasible
	Bridge retrofit	High	Most cost effective
Progress Report (for plan maintenance)			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			



Action Worksheet		
<b>Project Name:</b>	Delaware River Bridge Retrofit	
<b>Project Number:</b>	2021-Sandyston-005	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	
Property Protection	1	
Cost-Effectiveness	1	Cost-effective project
Technical	1	Technically feasible project
Political	1	
Legal	0	
Fiscal	0	Project will require capital funding from public/private
Environmental	1	
Social	1	
Administrative	0	
Multi-Hazard	1	Addresses all hazards
Timeline	1	
Agency Champion	1	NJDEP; Sussex County; Private owners; Township Administration
Other Community Objectives	1	
<b>Total</b>	11	
<b>Priority (High/Med/Low)</b>	High	



Action Worksheet			
<b>Project Name:</b>	Repetitive Loss Properties		
<b>Project Number:</b>	2021-Sandyston-008		
Risk / Vulnerability			
<b>Hazard(s) of Concern:</b>	Flood, Severe Weather		
<b>Description of the Problem:</b>	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.		
Action or Project Intended for Implementation			
<b>Description of the Solution:</b>	Conduct outreach to 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).		
<b>Is this project related to a Critical Facility or Lifeline?</b>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
<b>Level of Protection:</b>	1% annual chance flood event + freeboard ( <i>in accordance with flood ordinance</i> )	<b>Estimated Benefits (losses avoided):</b>	Eliminates flood damage to homes and residents, creates open space for the municipality increasing flood storage.
<b>Useful Life:</b>	Acquisition: Lifetime Elevation: 30 years (residential)	<b>Goals Met:</b>	2
<b>Estimated Cost:</b>	\$500,000	<b>Mitigation Action Type:</b>	Structure and Infrastructure Project
Plan for Implementation			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	6-12 months
<b>Estimated Time Required for Project Implementation:</b>	Three years	<b>Potential Funding Sources:</b>	FEMA HMGP and FMA, local cost share by residents
<b>Responsible Organization:</b>	NFIP Floodplain Administrator, supported by homeowners	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard Mitigation
Three Alternatives Considered (including No Action)			
<b>Alternatives:</b>	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues
	Elevate homes	\$500,000	When this area floods, the entire area is impacted; elevating homes would not eliminate the problem and still lead to road closures and impassable roads
	Elevate roads	\$500,000	Elevated roadways would not protect the homes from flood damages
Progress Report (for plan maintenance)			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			



Action Worksheet		
<b>Project Name:</b>	Repetitive Loss Properties	
<b>Project Number:</b>	2020-Sandyston-008	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Families moved out of high-risk flood areas.
Property Protection	1	Properties removed from high-risk flood areas.
Cost-Effectiveness	1	Cost-effective project
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 remove families from the flood prone areas of the Township.
Administrative	0	
Multi-Hazard	1	Flood, Severe Weather
Timeline	0	
Agency Champion	1	NFIP Floodplain Administrator, supported by homeowners
Other Community Objectives	1	
<b>Total</b>	10	
<b>Priority (High/Med/Low)</b>	High	



## 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 Puszczyk, P.E., Township Engineer Address: 11 Park Lake Road, Sparta, NJ 07871 Phone Number: 973-300-9003 Email: stan.puszczyk@cpengineers.com		
Name	Title	Method of Participation
Neil Spidaletto	OEM Coordinator; Chief of Police	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; reviewed annex*
William Close	Deputy OEM Coordinator	Alternate point of contact
Stan Puszczyk, P.E.	Township Engineer	NFIP floodplain administrator; attended the annex training and risk assessment meeting; provided data and information for the annex update; reviewed annex*
John Cahillane	Engineer	Provided data and information, contributed to the mitigation strategy
Thomas McIntyre	Deputy OEM Coordinator	Attended the annex training
Christine Quinn	Mayor	Reviewed annex*
Grant W. Rome	Fiscal/CFO	Reviewed annex*
Domenick Carnevale	Construction Official	Reviewed annex*
Diane Katzenstein	Planner	Reviewed annex*
Justin Muldoon	Fire Chief	Reviewed annex*

\*Refer to Jurisdictional Annex Review Sign-Off Sheet in Appendix B.





### 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 Soil, Steep Slopes, Nuclear Incident Area, Wildfire	50% Complete
<b>Known or Anticipated Major Development and Infrastructure in the Next Five (5) Years</b>					
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.
<b>Codes, Ordinances, &amp; Requirements</b>					
<b>Building Code</b>	Yes	State & Local	Yes	Yes	-
<b>Comment:</b>					
<ul style="list-style-type: none"> <li>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</li> <li>This code follows State Uniform Construction Code Act (N.J.S. 52:27D-119 et seq.).</li> </ul>					
<b>Zoning Code</b>	Yes	Local	Yes – if municipality has a Planning Board	Yes	-
<b>Comment:</b>					
<ul style="list-style-type: none"> <li>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.</li> <li>This code follows Chapter 18, Comprehensive Land Management Code.</li> <li>Part of the Code objectives is to secure safety from flood, fire, panic or other natural or man-made disaster.</li> </ul>					
<b>Subdivisions</b>	Yes	Local	Yes – if municipality has a Planning Board	Yes	-
<b>Comment:</b>					
<ul style="list-style-type: none"> <li>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.</li> <li>This ordinance follows Chapter 18 of the Township Code.</li> </ul>					
<b>Stormwater Management</b>	Yes	Local	Yes	Yes	-
<b>Comment:</b>					
<ul style="list-style-type: none"> <li>See Title 7 of the NJ Administrative Code, N.J.A.C. 7:8</li> <li>The Engineering Department is responsible for this ordinance in compliance with Chapter 18 of the Township Code.</li> <li>The Township Engineer, Planning Board Engineer, and Zoning Board Engineer have all completed NJDEP stormwater training.</li> </ul>					
<b>Post-Disaster Recovery</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Real Estate Disclosure</b>	Yes	State, Division of Consumer Affairs	Yes	No	-
<b>Comment:</b>					
<ul style="list-style-type: none"> <li>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.</li> </ul>					
<b>Growth Management</b>	Yes	Local	Yes – if municipality has a Planning Board	No	-
<b>Comment:</b>					



	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.
<ul style="list-style-type: none"> <li>State Mandated on a municipal level. See Zoning Ordinance; Also - Plan Endorsement Process via the State Development &amp; 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.</li> <li>These ordinance in compliance with Chapter 18.</li> </ul>					
Site Plan Review	Yes	Local	Yes – if municipality has a Planning Board	Yes	-
<p><b>Comment:</b></p> <ul style="list-style-type: none"> <li>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 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.</li> <li>The Planning Department is responsible for these requirements in compliance with Chapter 18 of the Township Code.</li> </ul>					
Environmental Protection	Yes	Local	No	Yes	-
<p><b>Comment:</b></p> <ul style="list-style-type: none"> <li>Chapter 2-39 of the Township Code establishes an 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.</li> <li>Chapter 18, Comprehensive Land Management Code. <ul style="list-style-type: none"> <li>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;</li> </ul> </li> <li>Chapter 25 of the Township Code establishes regulations regarding the use of lawn fertilizer(s) on properties within the Lake Mohawk Country Club.</li> </ul>					
Flood Damage Prevention	Yes	Federal, State & Local	Yes	Yes	-
<p><b>Comment:</b></p> <ul style="list-style-type: none"> <li>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.</li> <li>The Construction official is responsible for this ordinance in compliance with Chapter 28 of the Township Code.</li> <li>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: <ul style="list-style-type: none"> <li>a. Protect human life and health;</li> <li>b. Minimize expenditure of public money for costly flood control projects;</li> <li>c. Minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;</li> <li>d. Minimize prolonged business interruptions;</li> <li>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;</li> <li>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;</li> <li>g. Ensure that potential buyers are notified that property is in an area of special flood hazard; and</li> <li>h. Ensure that those who occupy the areas of special flood hazard assume responsibility for their actions.</li> </ul> </li> </ul>					
Wellhead Protection	Yes	State	Yes	Yes	-
<p><b>Comment:</b></p> <ul style="list-style-type: none"> <li>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.</li> </ul>					



	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.
<b>Emergency Management</b>	Yes	Federal, State & Local	No	Yes	-
<b>Comment:</b>					
<ul style="list-style-type: none"> <li>The Office of Emergency Management is established by Chapter 2-27 of the Township Code.</li> </ul>					
<b>Climate Change</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Disaster Recovery Ordinance</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Disaster Reconstruction Ordinance</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Planning Documents</b>					
<b>Comprehensive / Master Plan</b>	Yes	Local	Yes	Yes	-
<b>Comment:</b>					
<ul style="list-style-type: none"> <li>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.</li> <li>This plan was adopted in 1984.</li> <li>The Planning Department is responsible for this plan in compliance with the Master Plan.</li> </ul>					
<b>Capital Improvement Plan</b>	Yes	Local	No	No	-
<b>Comment:</b> The Engineering Department and DPW is responsible for this plan.					
<b>Disaster Debris Management Plan</b>	No	-	No	-	2021-Sparta-009
<b>Comment:</b>					
<b>Floodplain or Watershed Plan</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Stormwater Management Plan</b>	Yes	Local	Yes	Yes	-
<b>Comment:</b>					
<ul style="list-style-type: none"> <li>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.</li> <li>The Engineering Department is responsible for this plan, which is an element of the Master Plan.</li> </ul>					
<b>Stormwater Pollution Prevention Plan</b>	Yes	State	Yes	Yes	-
<b>Comment:</b>					
<ul style="list-style-type: none"> <li>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</li> </ul>					



	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.
<p><i>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.</i></p>					
<b>Urban Water Management Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Habitat Conservation Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Economic Development Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Shoreline Management Plan</b>	No	-	Yes – if located in a coastal zone	-	-
<p><i>Comment:</i></p> <ul style="list-style-type: none"> <li>• 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. 7:27E-1 et seq.</li> <li>• Sparta Township is not located in a coastal area.</li> </ul>					
<b>Community Wildfire Protection Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Community Forest Management Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Transportation Plan</b>	Yes	Local	No	No	-
<i>Comment: The Planning Department is responsible for this plan, which is an element of the Master Plan.</i>					
<b>Agriculture Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Climate Action Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Tourism Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Business Development Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Other: Open Space Plan</b>	Yes	Local	No	No	-
<p><i>Comment:</i></p> <ul style="list-style-type: none"> <li>• The Planning Department is responsible for this plan, which is an element of the Master Plan.</li> </ul>					
<b>Other: Watershed Management or Protection Plan</b>	Yes	Local	No	No	-
<i>Comment: The Planning Department is responsible for this plan, which is an element of the Master Plan.</i>					
<b>Response/Recovery Planning</b>					



	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.
<b>Comprehensive Emergency Management Plan (CEMP) / Emergency Operations Plan (EOP)</b>	Yes	Local	Yes	Yes	-
<b>Comment:</b> <ul style="list-style-type: none"> <li>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.</li> <li>The Police Department is responsible for this plan in compliance with the Office of Emergency Management.</li> </ul>					
<b>Threat &amp; Hazard Identification &amp; Risk Assessment (THIRA)</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Post-Disaster Recovery Plan</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Continuity of Operations Plan</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Public Health Plan</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Other</b>	No	-	No	-	-
<b>Comment:</b>					

**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
<b>Administrative Capability</b>		
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





Staff/Personnel Resource	Available?	Department/Agency/Position
Mutual aid agreements	Yes	Sparta Police Department, Fire Department and Surrounding Towns
<b>Technical/Staffing Capability</b>		
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	-
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
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







Hazard	Adaptive Capacity (Capabilities) - Strong/Moderate/Weak
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





Criterion	Response
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 23 <sup>rd</sup> and 24 <sup>th</sup> .	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 4 <sup>th</sup>	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**

<b>Dam Failure</b>	<b>Disease Outbreak</b>	<b>Drought</b>	<b>Earthquake</b>	<b>Flood</b>	<b>Geologic</b>	
Medium	Medium	Medium	Low	Medium	Medium	
<b>Hazardous Materials</b>	<b>Hurricane and Tropical Storm</b>	<b>Invasive Species</b>	<b>Nor’Easter</b>	<b>Severe Weather</b>	<b>Severe Winter Weather</b>	<b>Wildfire</b>
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	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
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	<b>Problem:</b> 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.	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
		<b>Solution:</b> 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.											
2021-Sparta-002	Groundwater Quality Protection	<b>Problem:</b> Groundwater in the Germany Flats area of Township requires protection from potential contamination.	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
		<b>Solution:</b> 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.											
2021-Sparta-003	Backup Power for Sparta Ambulance Service	<b>Problem:</b> 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.	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
		<b>Solution:</b> 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.											





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	<b>Problem:</b> 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.	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
		<b>Solution:</b> The Township will work to harden the DPW building using FEMA 361 standards.											
2021-Sparta-005	Harden Germany Flats Pump Facility	<b>Problem:</b> Windows of the Germany Flats pump facility are not impact resistant and pose a threat in the event of a high wind event.	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
		<b>Solution:</b> The Township will retrofit impact resistant windows and shutters on Germany Flats Pump Facility located on Park Lake Drive.											
2021-Sparta-006	Streambank Stabilization	<b>Problem:</b> Glen Brook and Walkkill River are prone to erosion of streambanks, threatening homes, roadways, and a JCP&L substation.	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 Walkkill River	Within 5 years	High	NSP	NR
		<b>Solution:</b> 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 Walkkill 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.											
2021-Sparta-007	Firewise	<b>Problem:</b> The Township does not participate in the Firewise program. Despite low wildfire risk, the Township is interested in enrollment.	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
		<b>Solution:</b> The Township will enroll in the Firewise program.											







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	<b>Problem:</b> West Mountain Road floods regularly between the High School football field and Main Street.	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
		<b>Solution:</b> The Township will replace the culvert at West Mountain Road and elevate the roadway to allow for larger storm events.											
2021-Sparta-009	Disaster Debris Management Plan	<b>Problem:</b> The Township lacks 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
		<b>Solution:</b> The Township will develop and adopt a Disaster Debris Management Plan.											

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.

- RED** 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

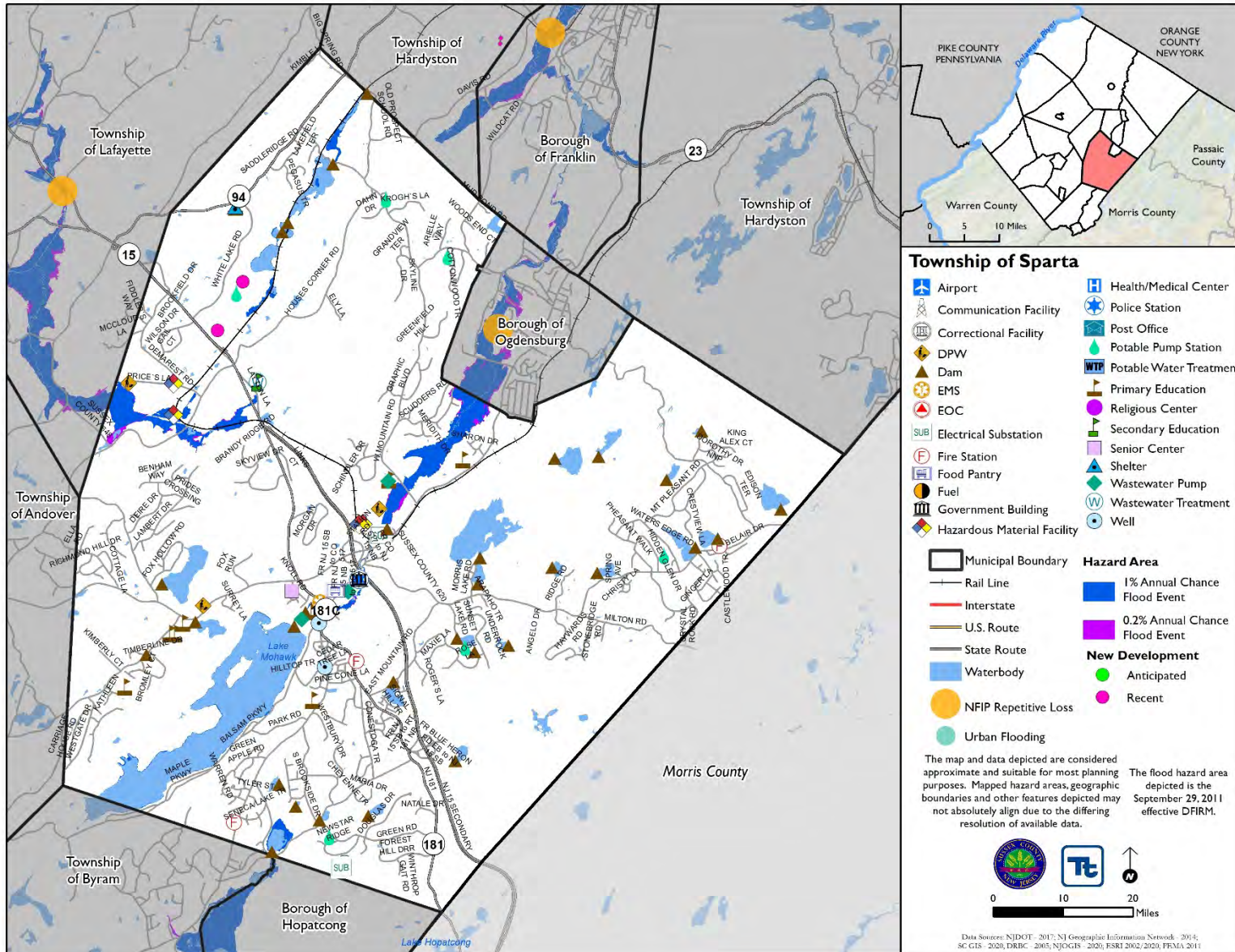




Figure 9.19-2. Township of Sparta Hazard Area Extent and Location Map 2

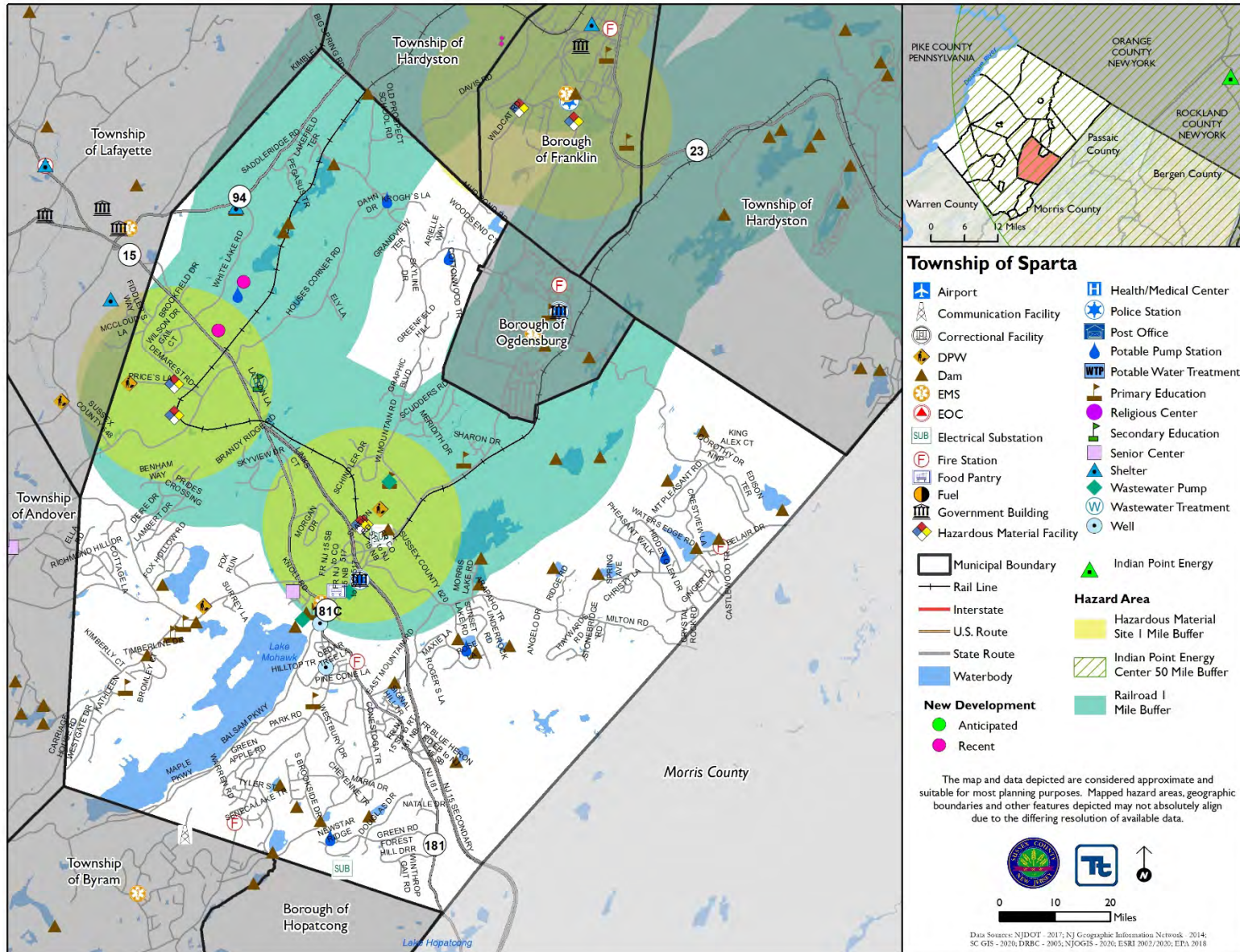
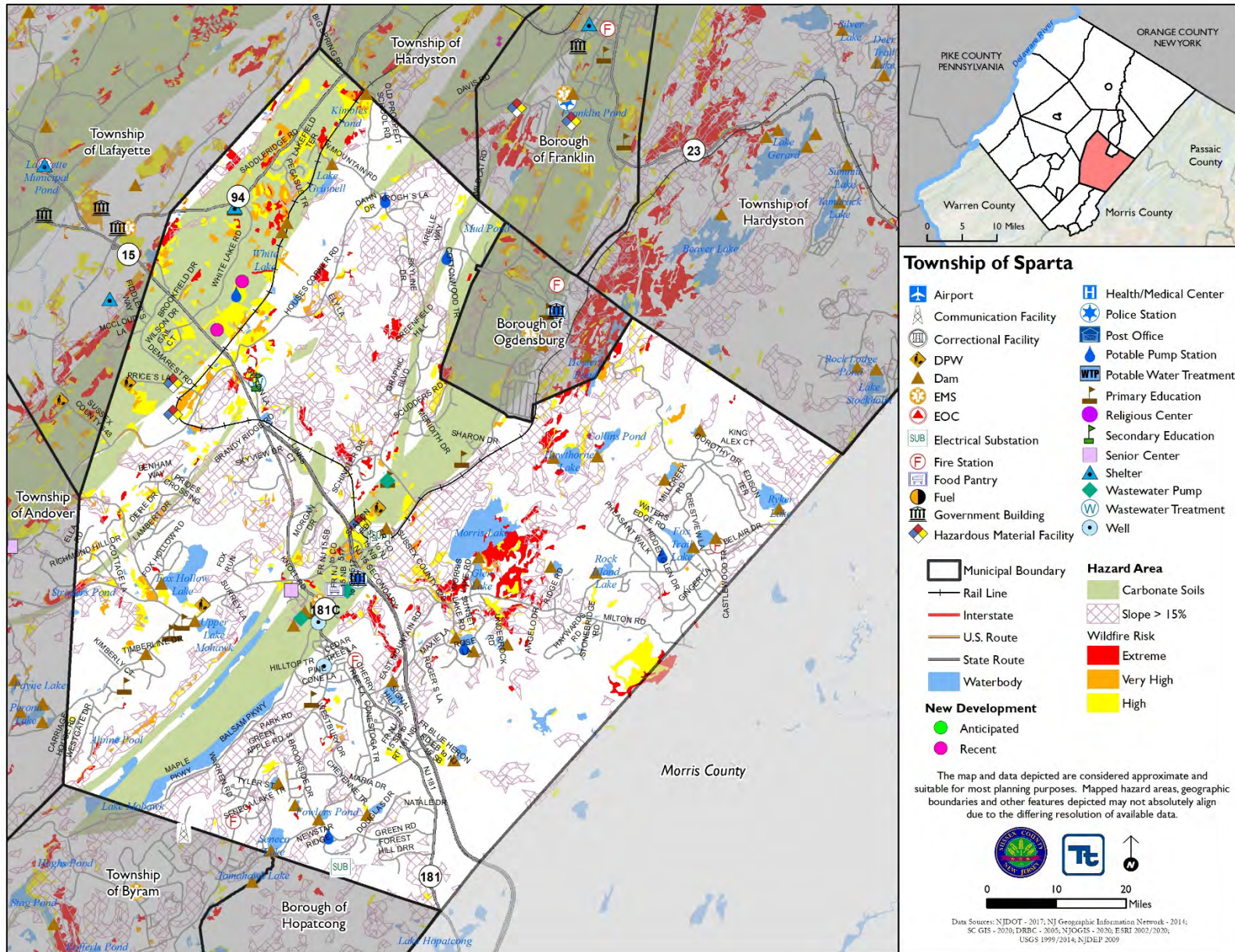




Figure 9.19-3 Township of Sparta Hazard Area Extent and Location Map 3





Action Worksheet			
<b>Project Name:</b>	Flood Damage Prevention/Mitigation		
<b>Project Number:</b>	2021-Sparta-001		
Risk / Vulnerability			
<b>Hazard(s) of Concern:</b>	Flood		
<b>Description of the Problem:</b>	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			
<b>Description of the Solution:</b>	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.		
<b>Is this project related to a Critical Facility?</b>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
<b>Level of Protection:</b>	500-year flood level	<b>Estimated Benefits (losses avoided):</b>	Protects infrastructure from flood damages
<b>Useful Life:</b>	TBD by feasibility assessment	<b>Goals Met:</b>	2, 6
<b>Estimated Cost:</b>	TBD by feasibility assessment	<b>Mitigation Action Type:</b>	Structure and Infrastructure Projects (SIP)
Plan for Implementation			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	Within 5 years
<b>Estimated Time Required for Project Implementation:</b>	1 year	<b>Potential Funding Sources:</b>	FEMA HMGP and PDM, BRIC, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Township Budget
<b>Responsible Organization:</b>	Engineer, OEM	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	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)			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			





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



Action Worksheet			
<b>Project Name:</b>	Groundwater Quality Protection		
<b>Project Number:</b>	2021-Sparta-002		
Risk / Vulnerability			
<b>Hazard(s) of Concern:</b>	Hazardous Materials		
<b>Description of the Problem:</b>	Groundwater in the Germany Flats area of Township requires protection from potential contamination.		
Action or Project Intended for Implementation			
<b>Description of the Solution:</b>	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.		
<b>Is this project related to a Critical Facility?</b>		Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
<b>Level of Protection:</b>	TBD by engineering study	<b>Estimated Benefits (losses avoided):</b>	Protection of groundwater from contamination
<b>Useful Life:</b>	20 years	<b>Goals Met:</b>	1, 2, 6
<b>Estimated Cost:</b>	High	<b>Mitigation Action Type:</b>	Structure and Infrastructure Project, Natural Systems Protection
Plan for Implementation			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	Within 5 years
<b>Estimated Time Required for Project Implementation:</b>	Within 5 years	<b>Potential Funding Sources:</b>	BRIC, HMGP, Township budget
<b>Responsible Organization:</b>	Engineering, Utilities	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Capital improvements planning
Three Alternatives Considered (including No Action)			
<b>Alternatives:</b>	<b>Action</b>	<b>Estimated Cost</b>	<b>Evaluation</b>
	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)			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			



Action Worksheet		
<b>Project Name:</b>	Groundwater Quality Protection	
<b>Project Number:</b>	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	
<b>Total</b>	9	
<b>Priority (High/Med/Low)</b>	High	



Action Worksheet			
<b>Project Name:</b>	Backup Power for Sparta Ambulance Service		
<b>Project Number:</b>	2021-Sparta-003		
<b>Risk / Vulnerability</b>			
<b>Hazard(s) of Concern:</b>	Hurricane, Nor’Easter, Severe Weather, Severe Winter Weather		
<b>Description of the Problem:</b>	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.		
<b>Action or Project Intended for Implementation</b>			
<b>Description of the Solution:</b>	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.		
<b>Is this project related to a Critical Facility?</b>	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
<b>Level of Protection:</b>	N/A	<b>Estimated Benefits (losses avoided):</b>	Ensures continuity of operations of Sparta Ambulance Service building
<b>Useful Life:</b>	20 years	<b>Goals Met:</b>	1, 3
<b>Estimated Cost:</b>	\$50,000	<b>Mitigation Action Type:</b>	Structure and Infrastructure Projects (SIP)
<b>Plan for Implementation</b>			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	Within 5 years
<b>Estimated Time Required for Project Implementation:</b>	1 year	<b>Potential Funding Sources:</b>	FEMA HMGP and BRIC, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Municipal Budget
<b>Responsible Organization:</b>	Engineer, OEM	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard Mitigation, Emergency Management
<b>Three Alternatives Considered (including No Action)</b>			
<b>Alternatives:</b>	<b>Action</b>	<b>Estimated Cost</b>	<b>Evaluation</b>
	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
<b>Progress Report (for plan maintenance)</b>			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			



Action Worksheet		
<b>Project Name:</b>	Backup Power for Sparta Ambulance Service	
<b>Project Number:</b>	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	
<b>Total</b>	12	
<b>Priority (High/Med/Low)</b>	High	



Action Worksheet			
<b>Project Name:</b>	Harden DPW Building		
<b>Project Number:</b>	2021-Sparta-004		
Risk / Vulnerability			
<b>Hazard(s) of Concern:</b>	Hurricane, Severe Weather		
<b>Description of the Problem:</b>	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			
<b>Description of the Solution:</b>	The Township will work to harden the DPW building using FEMA 361 standards.		
<b>Is this project related to a Critical Facility or Lifeline?</b>	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
<b>Level of Protection:</b>	FEMA 361 standards	<b>Estimated Benefits (losses avoided):</b>	Safe Room established
<b>Useful Life:</b>	25 years	<b>Goals Met:</b>	1, 2, 6
<b>Estimated Cost:</b>	High	<b>Mitigation Action Type:</b>	Structure and Infrastructure Project
Plan for Implementation			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	3 years
<b>Estimated Time Required for Project Implementation:</b>	1 year	<b>Potential Funding Sources:</b>	HMGP, BRIC, USDA Community Facilities Grant Program, Township budget
<b>Responsible Organization:</b>	OEM, Public Works, Engineer	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard mitigation, Emergency management
Three Alternatives Considered (including No Action)			
<b>Alternatives:</b>	<b>Action</b>	<b>Estimated Cost</b>	<b>Evaluation</b>
	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)			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			



Action Worksheet		
<b>Project Name:</b>	Harden DPW Building	
<b>Project Number:</b>	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	
<b>Total</b>	12	
<b>Priority (High/Med/Low)</b>	High	



Action Worksheet			
<b>Project Name:</b>	Harden Germany Flats Pump Facility		
<b>Project Number:</b>	2021-Sparta-005		
Risk / Vulnerability			
<b>Hazard(s) of Concern:</b>	Hurricane, Nor'Easter, Severe Weather, Severe Winter Weather		
<b>Description of the Problem:</b>	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			
<b>Description of the Solution:</b>	The Township will retrofit impact resistant windows and shutters on Germany Flats Pump Facility located on Park Lake Drive.		
<b>Is this project related to a Critical Facility or Lifeline?</b>	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
<b>Level of Protection:</b>	500-year wind event	<b>Estimated Benefits (losses avoided):</b>	Reduction in risk of roof failure and protection of critical services
<b>Useful Life:</b>	25 years	<b>Goals Met:</b>	2, 6
<b>Estimated Cost:</b>	High	<b>Mitigation Action Type:</b>	Structure and Infrastructure Project
Plan for Implementation			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	3 years
<b>Estimated Time Required for Project Implementation:</b>	1 year	<b>Potential Funding Sources:</b>	HMGP, BRIC, USDA Community Facilities Grant Program, Township budget
<b>Responsible Organization:</b>	OEM, Public Works	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard mitigation, Emergency management
Three Alternatives Considered (including No Action)			
<b>Alternatives:</b>	<b>Action</b>	<b>Estimated Cost</b>	<b>Evaluation</b>
	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)			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			





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



Action Worksheet			
<b>Project Name:</b>	Streambank Stabilization		
<b>Project Number:</b>	2020-Borough of Sussex-006		
<b>Risk / Vulnerability</b>			
<b>Hazard(s) of Concern:</b>	Flood, Landslide		
<b>Description of the Problem:</b>	Glen Brook and Wallkill River are prone to erosion of streambanks, threatening homes, roadways, and a JCP&L substation (located along the Wallkill River).		
<b>Action or Project Intended for Implementation</b>			
<b>Description of the Solution:</b>	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.		
<b>Is this project related to a Critical Facility?</b>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
<b>Level of Protection:</b>	N/A	<b>Estimated Benefits (losses avoided):</b>	Protect from home damage, road damage, JCP&L substation damage
<b>Useful Life:</b>	1 year	<b>Goals Met:</b>	1
<b>Estimated Cost:</b>	Medium for Glen Brook, \$1M for Wallkill River	<b>Mitigation Action Type:</b>	Natural Systems Protection
<b>Plan for Implementation</b>			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	Within 5 years
<b>Estimated Time Required for Project Implementation:</b>	1 year	<b>Potential Funding Sources:</b>	HMGP, BRIC, Township budget
<b>Responsible Organization:</b>	Administration	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard mitigation
<b>Three Alternatives Considered (including No Action)</b>			
<b>Alternatives:</b>	<b>Action</b>	<b>Estimated Cost</b>	<b>Evaluation</b>
	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
<b>Progress Report (for plan maintenance)</b>			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			



Action Worksheet		
<b>Project Name:</b>	Streambank Stabilization	
<b>Project Number:</b>	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
<b>Total</b>	10	
<b>Priority (High/Med/Low)</b>	High	



Action Worksheet			
<b>Project Name:</b>	Culvert at West Mountain Road		
<b>Project Number:</b>	2021-Sparta-008		
Risk / Vulnerability			
<b>Hazard(s) of Concern:</b>	Flood, Severe Weather		
<b>Description of the Problem:</b>	West Mountain Road floods regularly between the High School football field and Main Street.		
Action or Project Intended for Implementation			
<b>Description of the Solution:</b>	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.		
<b>Is this project related to a Critical Facility or Lifeline?</b>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
<b>Level of Protection:</b>	TBD by size selected	<b>Estimated Benefits (losses avoided):</b>	Reduction in flood risk
<b>Useful Life:</b>	30 years	<b>Goals Met:</b>	2
<b>Estimated Cost:</b>	\$600,000	<b>Mitigation Action Type:</b>	Structure and Infrastructure Projects
Plan for Implementation			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	Within 5 years
<b>Estimated Time Required for Project Implementation:</b>	6 months	<b>Potential Funding Sources:</b>	HMGP, BRIC, municipal budget
<b>Responsible Organization:</b>	Engineering	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard mitigation planning
Three Alternatives Considered (including No Action)			
<b>Alternatives:</b>	<b>Action</b>	<b>Estimated Cost</b>	<b>Evaluation</b>
	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)			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			



Action Worksheet		
<b>Project Name:</b>	Replace Culvert at West Mountain Road	
<b>Project Number:</b>	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	
<b>Total</b>	9	
<b>Priority (High/Med/Low)</b>	High	



## 9.20 BOROUGH OF STANHOPE

This section presents the jurisdictional annex for the Borough of Stanhope. The annex includes a general overview of the Borough of Stanhope; an assessment of the Borough of Stanhope’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.

### 9.20.1 Hazard Mitigation Planning Team

The Borough of Stanhope 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 9.20-1. Hazard Mitigation Planning Team**

Primary Point of Contact		Alternate Point of Contact
Name / Title: Brian McNeilly, Borough Administrator Address: 77 Main Street, Stanhope, NJ 07874 Phone Number: (973) 347-0159 x14 Email: bmneilly@stanhopenj.gov		Name / Title: Eric Keller, Borough Engineer Address: 77 Main Street, Stanhope, NJ 07874 Phone Number: (973) 291-2919 Email: ekeller@bowmanconsulting.com
NFIP Floodplain Administrator		
Name / Title: Thomas Pershouse, Construction Official Address: 77 Main Street, Stanhope, NJ 07874 Phone Number: (973) 347-0159 x20 Email: tminniti@stanhopenj.gov		
Name	Title	Method of Participation
Brian McNeilly	Administrator	Primary point of contact, lead information gathering, attended the annex training; reviewed annex*
Wayne Anthony	OEM Coordinator	Provided background on previous submissions and current OEM related info; reviewed annex*
Eric Keller	Borough Engineer	Alternate point of contact, information resource; reviewed annex*
Thomas Pershouse	Construction Official	NFIP floodplain administrator; reviewed annex*
Dany Mooney	CFO	Reviewed annex*
William Hamilton	Planner	Reviewed annex*
Jason Titsworth	DPW Supervisor	Reviewed annex*
Steve Pittigher	Police Chief	Reviewed annex*
Mike Donahue	Fire Chief	Reviewed annex*

\*Refer to Jurisdictional Annex Review Sign-Off Sheet in Appendix B.



### 9.20.2 Jurisdiction Profile

The Borough of Stanhope is located at the southern tip of Sussex County. It has a total area of 2.2 square miles and is bordered to the north and west by Byram Townships, to the north and east by Hopatcong Borough and to the south by Morris County. Lake Musconetcong is a large lake located in the southeastern portion of the Borough. Tributaries of the Musconetcong River flow through the Borough.

According to the U.S. Census, the 2010 population for the Borough of Stanhope was 3,610. The estimated 2018 population was 3,411, a 5.5 percent increase from the 2010 Census. Data from the 2018 U.S. Census American Community Survey indicate that 4.9 percent of the population is 5 years of age or younger and 8.3 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.

### 9.20.3 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 9.19-2 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 9.20-2. Recent and Expected Future Development**

Type of Development	2015		2016		2017		2018		2019	
<b>Number of Building Permits for New Construction Issued Since the Previous HMP</b>										
	<b>Total</b>	<b>Within SFHA</b>	<b>Total</b>	<b>Within SFHA</b>	<b>Total</b>	<b>Within SFHA</b>	<b>Total</b>	<b>Within SFHA</b>	<b>Total</b>	<b>Within SFHA</b>
Single and Two-Family Units	0	0	0	0	0	0	0	0	1	0
Multi-Family	0	0	0	0	0	0	0	0	0	0
Other (commercial, mixed-use, etc.)	0	0	0	0	0	0	0	0	0	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		
<b>Recent Major Development and Infrastructure from 2015 to Present</b>										
None identified										
<b>Known or Anticipated Major Development and Infrastructure in the Next Five (5) Years</b>										
None anticipated										

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

### 9.20.4 Capability Assessment

Section 5 (Capability Assessment) describes the components included in the capability assessment and their significance for hazard mitigation planning. The Borough of Stanhope 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 Borough of Stanhope 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 Borough of Stanhope and where hazard mitigation has been integrated.

**Table 9.20-3. 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.
<b>Codes, Ordinances, &amp; Requirements</b>					
<b>Building Code</b>	Yes	State & Local	Yes	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>• 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</li> <li>• This code follows State Uniform Construction Code Act (N.J.S. 52:27D-119 et seq.).</li> </ul>					
<b>Zoning Code</b>	Yes	Local	Yes – if municipality has a Planning Board	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>• 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.</li> <li>• The Land Use Department is responsible for this code in compliance with Chapter 100 of Borough Code.</li> </ul>					
<b>Subdivisions</b>	Yes	Local	Yes – if municipality has a Planning Board	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>• 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.</li> </ul>					







	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.
					<ul style="list-style-type: none"> <li>The Land Use Department is responsible for this ordinance in compliance with Chapter 100 of Borough Code.</li> </ul>
<b>Stormwater Management</b>	Yes	Local	Yes	Yes	-
<b>Comment:</b>					
<ul style="list-style-type: none"> <li>See Title 7 of the NJ Administrative Code, N.J.A.C. 7:8</li> <li>The Land Use Department is responsible for this ordinance in compliance with Chapter 100 of Borough Code.</li> </ul>					
<b>Post-Disaster Recovery</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Real Estate Disclosure</b>	Yes	State, Division of Consumer Affairs	Yes	Yes	-
<b>Comment:</b>					
<ul style="list-style-type: none"> <li>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.</li> </ul>					
<b>Growth Management</b>	No	-	Yes – if municipality has a Planning Board	-	-
<b>Comment:</b>					
<ul style="list-style-type: none"> <li>State Mandated on a municipal level. See Zoning Ordinance ; Also - Plan Endorsement Process via the State Development &amp; 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.</li> </ul>					
<b>Site Plan Review</b>	Yes	Local	Yes – if municipality has a Planning Board	Yes	-
<b>Comment:</b>					
<ul style="list-style-type: none"> <li>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 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.</li> <li>The Land Use Department is responsible for these requirements in compliance with Chapter 100 of Borough Code.</li> </ul>					
<b>Environmental Protection</b>	Yes	State, Federal	No	Yes	-
<b>Comment:</b>					
<ul style="list-style-type: none"> <li>Chapter 12 Environmental Commission</li> <li>Chapter 90 Hazardous Materials</li> </ul>					
<b>Flood Damage Prevention</b>	Yes	Federal, State & Local	Yes	Yes	-
<b>Comment:</b>					
<ul style="list-style-type: none"> <li>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.</li> <li>The Construction Official is responsible for this ordinance in compliance with Chapter 100, Article 21 – Flood Damage Prevention.</li> </ul>					



	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.
<ul style="list-style-type: none"> <li>It is the purpose of this article 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:               <ul style="list-style-type: none"> <li>A. Protect human life and health;</li> <li>B. Minimize expenditure of public money for costly flood-control projects;</li> <li>C. Minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;</li> <li>D. Minimize prolonged business interruptions;</li> <li>E. Minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets, bridges located in areas of special flood hazard;</li> <li>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;</li> <li>G. Ensure that potential buyers are notified that property is in an area of special flood hazard; and</li> <li>H. Ensure that those who occupy the areas of special flood hazard assume responsibility for their actions.</li> </ul> </li> <li>In order to accomplish its purposes, this article includes methods and provisions for:               <ul style="list-style-type: none"> <li>A. Restricting or prohibiting uses which are dangerous to health, safety, and property due to water or erosion hazards or which result in damaging increases in erosion or in flood heights or velocities;</li> <li>B. Requiring that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction;</li> <li>C. Controlling the alteration of natural floodplains, stream channels, and natural protective barriers, which help accommodate or channel floodwaters;</li> <li>D. Controlling filling, grading, dredging, and other development which may increase flood damage; and</li> <li>E. Preventing or regulating the construction of flood barriers which will unnaturally divert floodwaters or which may increase flood hazards in other areas.</li> </ul> </li> <li>The ordinance lacks discussion of the state's one-foot freeboard requirement and requires update.</li> </ul>	No	-	No	-	-
<b>Wellhead Protection</b>					
<i>Comment:</i>					
<b>Emergency Management</b>	Yes	Local	No	No	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>Chapter 15 Fire Department</li> <li>Chapter 37 Police Department</li> </ul>					
<b>Climate Change</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Disaster Recovery Ordinance</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Disaster Reconstruction Ordinance</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Other: Municipal Separate Storm Sewer System (MS4)</b>	Yes	State	Yes	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>The Land Use Department is responsible for this ordinance in compliance with Chapter 100 of Borough Code.</li> </ul>					
<b>Other [Special Purpose Ordinances (i.e., sensitive areas, steep slope)]</b>	Yes	Local	No	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>The Zoning Department is responsible for these ordinances in compliance with Chapter 100 of Borough Code.</li> </ul>					
<b>Planning Documents</b>					
<b>Comprehensive / Master Plan</b>	Yes	Local	Yes	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>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</li> </ul>					





	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.
<p><i>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.</i></p> <ul style="list-style-type: none"> <li><i>The Land Use Department is responsible for this plan, which was re-examined in April of 2018. The plan was updated in 2019.</i></li> </ul>					
<b>Capital Improvement Plan</b>	Yes	Local	No	No	-
<i>Comment:</i>					
<b>Disaster Debris Management Plan</b>	No	-	No	-	2021- Stanhope-003
<i>Comment:</i>					
<b>Floodplain or Watershed Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Stormwater Management Plan</b>	Yes	State	Yes	Yes	-
<p><i>Comment:</i></p> <ul style="list-style-type: none"> <li><i>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.</i></li> <li><i>The Boro Engineer is responsible for this plan, which is a part of the Master Plan.</i></li> </ul>					
<b>Stormwater Pollution Prevention Plan</b>	Yes	State, County	Yes	No	-
<p><i>Comment:</i></p> <ul style="list-style-type: none"> <li><i>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.</i></li> </ul>					
<b>Urban Water Management Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Habitat Conservation Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Economic Development Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Shoreline Management Plan</b>	No	-	Yes – if located in a coastal zone	-	-
<p><i>Comment:</i></p> <ul style="list-style-type: none"> <li><i>NJ Coastal Area Facility Review Act (N.J.S.A. 13:19) or CAFRA regulates almost all development along the coast for activities including construction, relocation, and enlargement of buildings or structures, and excavation, grading, shore protection structures, and site preparation. This law is implemented through NJ's Coastal Zone management Rules N.J.A.C. 7:7E-1 et seq.</i></li> </ul>					





	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.
<b>Community Wildfire Protection Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Community Forest Management Plan</b>	Yes	Local, County, State	No	No	-
<i>Comment:</i>					
<b>Transportation Plan</b>	Yes	State, County & Local	No	No	-
<i>Comment:</i>					
<b>Agriculture Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Climate Action Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Tourism Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Business Development Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Other: Open Space Plan</b>	Yes	Local	No	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>The Land Use Department is responsible for this plan, which was adopted in April of 2009.</li> </ul>					
<b>Response/Recovery Planning</b>					
<b>Comprehensive Emergency Management Plan (CEMP) / Emergency Operations Plan (EOP)</b>	Yes	Local	Yes	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>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.</li> <li>The OEM is responsible for this plan.</li> </ul>					
<b>Threat &amp; Hazard Identification &amp; Risk Assessment (THIRA)</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Post-Disaster Recovery Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Continuity of Operations Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Public Health Plan</b>	Yes	County	No	Yes	-
<i>Comment:</i>					
<b>Other</b>	No	-	No	-	-
<i>Comment:</i>					

**Table 9.20-4. Development and Permitting Capability**

Criterion	Response
Does your jurisdiction issue development permits? - If no, who does? If yes, which department?	Yes, Building Department





Criterion	Response
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 Borough of Stanhope.

**Table 9.20-5. Administrative and Technical Capabilities**

Staff/Personnel Resource	Available?	Department/Agency/Position
<b>Administrative Capability</b>		
Planning Board	Yes	Land Use Board
Mitigation Planning Committee	No	-
Environmental Board / Commission	Yes	Mayor and Council
Open Space Board / Committee	No	-
Economic Development Commission / Committee	No	-
Warning Systems / Services (reverse 911, outdoor warning signals)	Yes	Nixle Text Messaging System
Maintenance program to reduce risk	Yes	Risk Management Consultant
Mutual aid agreements	Yes	Fire Department
<b>Technical/Staffing Capability</b>		
Planners or engineers with knowledge of land development and land management practices	Yes	Borough Engineer / Planner
Engineers or professionals trained in building or infrastructure construction practices	Yes	Borough Engineer / Construction Official
Planners or engineers with an understanding of natural hazards	Yes	Borough Engineer
Staff with training in benefit/cost analysis	No	Chief Financial Officer
Staff with training in green infrastructure	Yes	Borough Engineer / Planner
Staff with education/knowledge/training in low impact development	Yes	Borough Engineer / Planner
Surveyor	Yes	Borough Engineer’s Office
Stormwater engineer	Yes	Borough Engineer
Personnel skilled or trained in GIS applications	Yes	Borough Engineer / Planner
Local or state water quality professional	No	-
Scientist familiar with natural hazards in local area	No	-
Emergency manager	Yes	Emergency Management Coordinator
Watershed planner	No	-
Environmental specialist	No	-
Grant writers	Yes	Millennium Strategies
Resilience Officer	No	-
Other: NFIP Floodplain Administrator	Yes	Construction Official

**FISCAL CAPABILITY**

The table below summarizes financial resources available to the Borough of Stanhope.





**Table 9.20-6. Fiscal Capabilities**

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

**EDUCATION AND OUTREACH CAPABILITY**

The table below summarizes the education and outreach resources available to the Borough of Stanhope.

**Table 9.20-7. 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.	No
Do you have any other programs already in place that could be used to communicate hazard-related information? If yes, briefly describe.	Yes, Borough website and social media

**COMMUNITY CLASSIFICATIONS**

The table below summarizes the classifications for community programs available to the Borough of Stanhope.

**Table 9.20-8. Community Classifications**

Program	Participating?	Classification	Date Classified
Community Rating System	No	-	-
Building Code Effectiveness Grading Schedule (BCEGS)	No	-	-
Public Protection (Fire ISO Protection Class)	Yes	Unknown	Unknown
Storm Ready Certification	No	-	-
Firewise Community Classification	No	-	-
Sustainable Jersey	Yes	Not certified	Joined program on September 14, 2010





**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 9.20-9. Adaptive Capacity**

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

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 Borough does not have access to resources to determine the possible impacts of climate change upon the municipality. However, the administration is 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 9.20-10. National Flood Insurance Program Compliance**

Criterion	Response
What local department is responsible for floodplain management?	Borough Engineer / DPW
Who is your floodplain administrator? (name, department/position)	Thomas Pershouse, 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?	2006
Does your floodplain management program meet or exceed minimum requirements? -If exceeds, in what ways?	The program meets minimum requirements set by FEMA and the State.
When was the most recent Community Assistance Visit or Community Assistance Contact?	Unknown





Criterion	Response
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.	No
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?	No, but the FPA would attend training if needed.
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
How many flood insurance policies are in force in your jurisdiction?*	3 policies
-What is the insurance in force? -What is the premium in force?	
How many total loss claims have been filed in your jurisdiction?*	2 claims
-How many claims are still open or were closed without payment? -What were the total payments for losses?	\$16,257
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  
Reference: FEMA 2020

**OPPORTUNITIES FOR FUTURE INTEGRATION**

- **Disaster Debris Management Plan:** The Borough will develop a Disaster Debris Management Plan. (2021-Stanhope-003)
- **Flood Damage Prevention Ordinance:** The Borough will update the flood damage prevention ordinance to include freeboard (2021-Stanhope-004).

**9.20.5 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 Borough of Stanhope’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 9.19-11 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 9.20-11. 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 23 <sup>rd</sup> and 24 <sup>th</sup> .	While the County was impacted, the Borough did not experience damages or losses.







Date(s) of Event	Event Type (disaster declaration if applicable)	Sussex County Designated?	Summary of Event	Summary of Local Damages and Losses
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.	No Damages. Loss revenues and costs associated with PPE

Source: FEMA 2020, NOAA NCEI 2020

### 9.20.6 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 Borough of Stanhope 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 Borough of Stanhope 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 Borough of Stanhope has significant exposure.

#### REPETITIVE FLOOD LOSSES

The following summarizes the repetitive and severe repetitive flood losses in the Borough of Stanhope.

- 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

#### 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 9.20-12. Critical Facilities and Lifelines Flood Exposure**

Name	Type	Exposure	
		1% Event	0.2% Event
None identified			

Source: Sussex County Planning Partnership 2020

#### IDENTIFIED ISSUES AND PROBLEM AREAS

The jurisdiction has identified the following vulnerabilities within their community:

- There is no standby power at Lenape Valley Regional High School at 28 Sparta Road.
- There is no standby power at Stanhope Public School at 24 Valley Road.
- The Borough lacks a Disaster Debris Management Plan.





- The flood damage prevention ordinance lacks the state’s freeboard requirement.

### **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 Borough of Stanhope 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 Borough of Stanhope. The Borough of Stanhope 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 Borough of Stanhope agreed with the calculated hazard rankings.



**Table 9.20-13. Borough of Stanhope 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
High	High	High	High	High	High	Medium

### 9.20.7 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 9.19-15 and Table 9.19-16 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 9.20-14. 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	Enter 2021 HMP Action #
Stanhope-1 (revised old #1)	Ensure continuity of operations at critical facilities and municipal buildings. The following is identified at this time: Purchase and install a backup generators for Lenape Valley Regional High School and Valley Road School	Emergency Management	No Progress	X	2021-Stanhope-001, 2021-Stanhope-002
Stanhope-2 (old #4)	Conduct all-hazards public education and outreach program for hazard mitigation and preparedness.	Borough Administration	Ongoing Capability		
Stanhope-3 (new)	Utilize the Hazard Mitigation Plan (HMP) when updating the Comprehensive Master Plan; consider including hazard identification, hazard zones risk assessment information, and hazard mitigation goals as identified in the HMP. Further, the findings and recommendation of the HMP will be considered during any future site plan review processes.	Planning	Ongoing Capability		



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 #
Stanhope-4 (new)	Develop specific design guidelines and development review procedures for new construction, replacement, relocation and substantial improvement in hazard areas within the Borough.	Borough Administration	Ongoing Capability		
Stanhope-5 (new)	When updating the Zoning Ordinance, the Borough will recognize hazard areas as limits on changes to zoning within the municipality.	Borough Administration	Ongoing Capability		
Stanhope-6 (new)	Ensure hazard mitigation initiatives are incorporated into the capital improvement plan; budget for some of these projects.	Borough Administration	Ongoing Capability		
Stanhope-7 (new)	Incorporate risk assessment and hazard mitigation initiatives into planning efforts.	Borough Administration	Ongoing Capability		

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

- None identified

**PROPOSED HAZARD MITIGATION INITIATIVES FOR THE PLAN UPDATE**

The Borough of Stanhope 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 Borough of Stanhope 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 9.19-15 summarizes the comprehensive-range of specific mitigation initiatives the Borough of Stanhope 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 9.19-16 provides a summary of the prioritization of all proposed mitigation initiatives for this HMP update.



Table 9.20-15. 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-Stanhope-001	Generator for Lenape Valley Regional High School	<b>Problem:</b> Backup power sources are necessary to maintain critical services for critical facilities. There is no standby power at Lenape Valley Regional High School at 28 Sparta Road.	Existing	Hurricane, Nor'Easter, Severe Weather, Severe Winter Weather	1, 6	Emergency Management, School District	FEMA HMGP and BRIC, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Municipal Budget	Ensures continuity of operations of High School	\$75,000 - \$100,000	Within 5 years	High	SIP	ES
		<b>Solution:</b> The Borough will work with Lenape Valley High School to purchase and install a 75-85 kW generator and necessary electrical components to supply backup power to the School.											
2021-Stanhope-002	Generator for Stanhope School	<b>Problem:</b> Backup power sources are necessary to maintain critical services for critical facilities. There is no standby power at Stanhope Public School 24 Valley Road.	Existing	Hurricane, Nor'Easter, Severe Weather, Severe Winter Weather	1, 6	Emergency Management, School District	FEMA HMGP and BRIC, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Municipal Budget	Ensures continuity of operations of School	\$50,000	Within 5 years	High	SIP	ES
		<b>Solution:</b> The Borough will work with the Stanhope School to purchase and install a 35-40 kW generator and necessary electrical components to supply backup power to the School.											
2021-Stanhope-003	Disaster Debris Management Plan	<b>Problem:</b> The Borough lacks a Disaster Debris Management Plan. <b>Solution:</b> The Borough will develop and adopt a Disaster Debris Management Plan. The Plan will include any necessary mutual aid discussions to supplement the Borough's capabilities.	N/A	All Hazards	5	OEM, Administration	Borough budget	Increased disaster capabilities	Staff time	2 years	High	LPR	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
2021-Stanhope-004	Flood Damage Prevention Ordinance Update	<p><b>Problem:</b> The Borough’s Flood Damage Prevention Ordinance lacks discussion of the state’s one-foot freeboard requirement.</p> <p><b>Solution:</b> Borough will update the ordinance to include the state’s freeboard requirement.</p>	New	Flood	2	Floodplain administrated and Administration	Borough budget	Meet state standards, flood protection	Staff time	6 months	High	LPR	PR

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 9.20-16. 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-Stanhope-001	Generator for Lenape Valley Regional High School	1	1	1	1	1	1	0	1	1	1	1	0	1	1	12	High ⚠
2021-Stanhope-002	Generator for Stanhope School	1	1	1	1	1	1	0	1	1	1	1	0	1	1	12	High
2021-Stanhope-003	Disaster Debris Management Plan	0	1	1	1	1	1	1	1	1	1	1	1	1	1	13	High
2021-Stanhope-004	Flood Damage Prevention Ordinance Update	0	1	1	1	1	1	1	1	1	1	0	1	1	1	12	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 9.20-17. 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			X
Disease Outbreak					X			X
Drought					X			X
Earthquake					X			X
Flood	X				X			X
Geologic					X			X
Hazardous Materials					X			X
Hurricane and Tropical Storm					X			X
Invasive Species					X			X
Nor'Easter					X			X
Severe Weather					X			X
Severe Winter Weather					X			X
Wildfire					X			X

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

- RED** high ranked hazard
- ORANGE** medium ranked hazard
- YELLOW** low ranked hazard



Figure 9.20-1. Borough of Stanhope Hazard Area Extent and Location Map 1

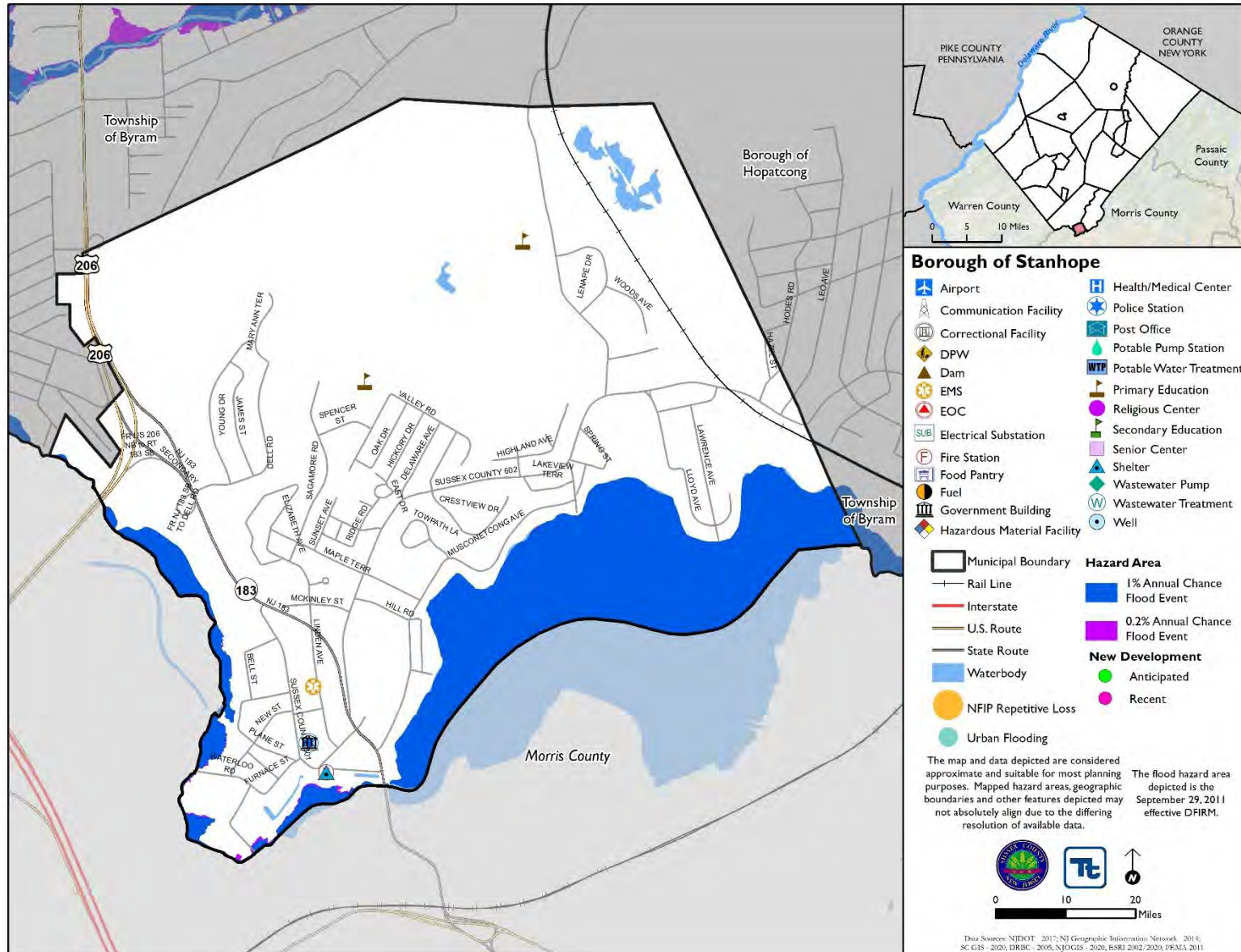




Figure 9.20-2. Borough of Stanhope Hazard Area Extent and Location Map 2

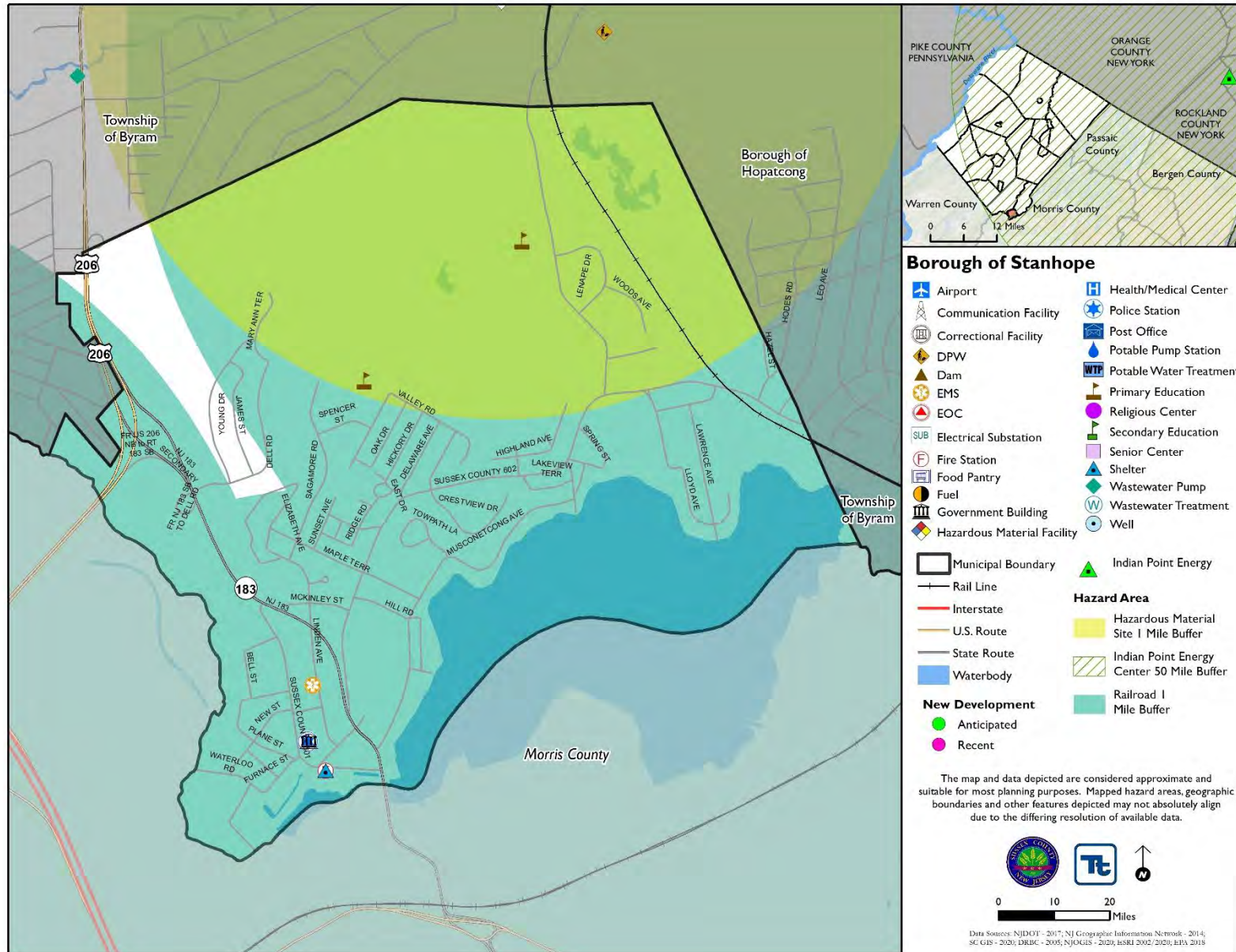
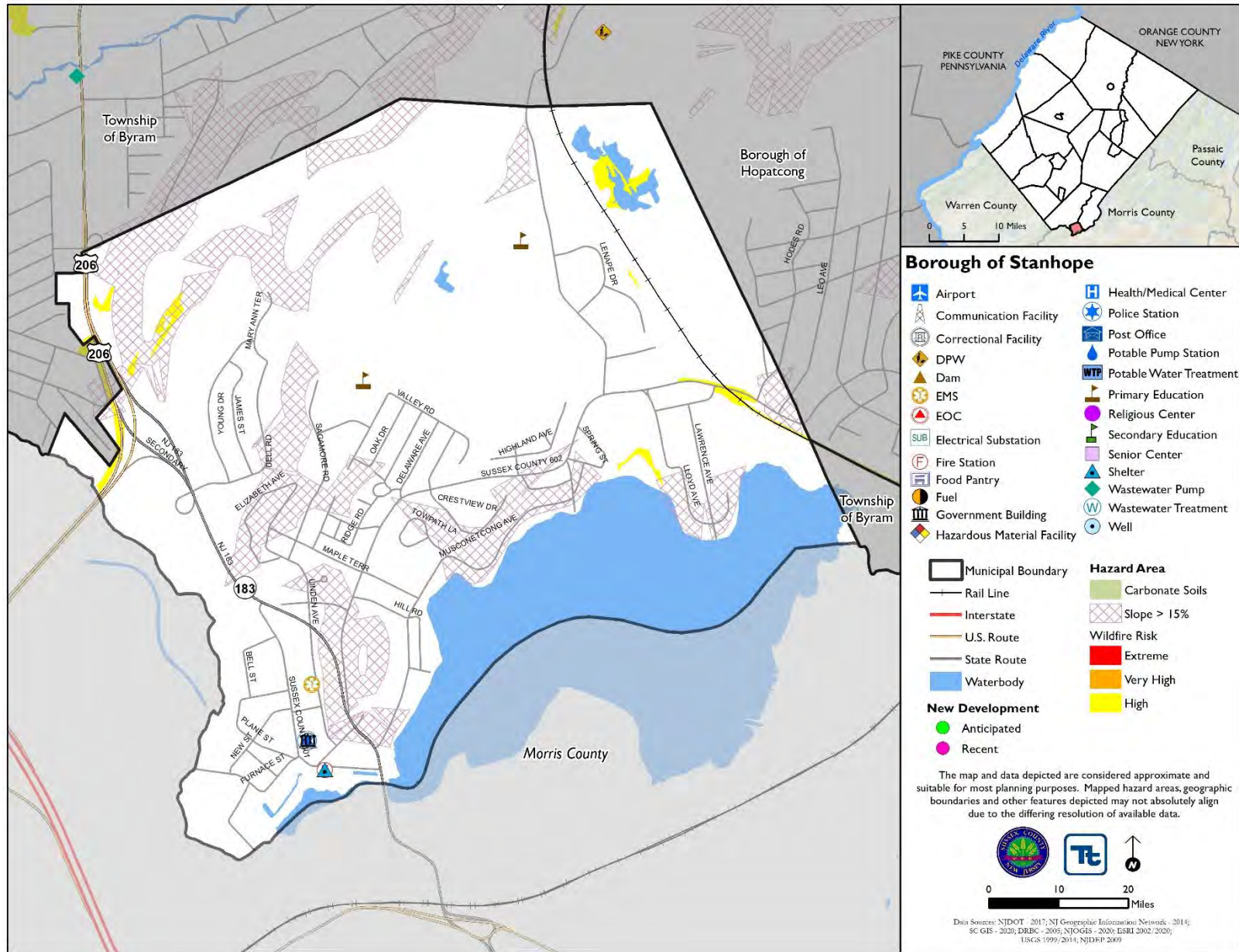




Figure 9.20-3 Borough of Stanhope Hazard Area Extent and Location Map 3





Action Worksheet			
<b>Project Name:</b>	Generator for Lenape Valley Regional High School		
<b>Project Number:</b>	2021-Stanhope-001		
<b>Risk / Vulnerability</b>			
<b>Hazard(s) of Concern:</b>	Severe Weather, Severe Winter Weather, Hurricane, Nor'Easter		
<b>Description of the Problem:</b>	Backup power sources are necessary to maintain critical services for critical facilities. There is no standby power at Lenape Valley Regional High School at 28 Sparta Road.		
<b>Action or Project Intended for Implementation</b>			
<b>Description of the Solution:</b>	The Borough will work with Lenape Valley High School to purchase and install a 75-85 kW generator and necessary electrical components to supply backup power to the School.		
<b>Is this project related to a Critical Facility?</b>	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
<b>Level of Protection:</b>	75-85 kW	<b>Estimated Benefits (losses avoided):</b>	Ensures continuity of operations of High School
<b>Useful Life:</b>	20 years	<b>Goals Met:</b>	1, 6
<b>Estimated Cost:</b>	\$75,000 - \$100,000	<b>Mitigation Action Type:</b>	Structure and Infrastructure Projects (SIP)
<b>Plan for Implementation</b>			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	Within 5 years
<b>Estimated Time Required for Project Implementation:</b>	1 year	<b>Potential Funding Sources:</b>	FEMA HMGP and BRIC, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Municipal Budget
<b>Responsible Organization:</b>	Emergency Management, School District	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard Mitigation, Emergency Management
<b>Three Alternatives Considered (including No Action)</b>			
<b>Alternatives:</b>	<b>Action</b>	<b>Estimated Cost</b>	<b>Evaluation</b>
	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
<b>Progress Report (for plan maintenance)</b>			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			



Action Worksheet		
<b>Project Name:</b>	Generator for Lenape Valley Regional High School	
<b>Project Number:</b>	2021-Stanhope-001	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Project will protect critical services of Lenape Valley Regional High School
Property Protection	1	Project will protect building from power loss.
Cost-Effectiveness	1	
Technical	1	
Political	1	
Legal	1	The Borough has the legal authority to complete the project.
Fiscal	0	Project requires funding support.
Environmental	1	
Social	1	
Administrative	1	
Multi-Hazard	1	Severe Weather, Severe Winter Weather, Hurricane, Nor'Easter
Timeline	0	Within 5 years
Agency Champion	1	Emergency Management, School District
Other Community Objectives	1	
<b>Total</b>	12	
<b>Priority (High/Med/Low)</b>	High	



Action Worksheet			
<b>Project Name:</b>	Generator for Stanhope School		
<b>Project Number:</b>	2021-Stanhope-002		
<b>Risk / Vulnerability</b>			
<b>Hazard(s) of Concern:</b>	Severe Weather, Severe Winter Weather, Hurricane, Nor'Easter		
<b>Description of the Problem:</b>	Backup power sources are necessary to maintain critical services for critical facilities. There is no standby power at Stanhope Public School 24 Valley Road.		
<b>Action or Project Intended for Implementation</b>			
<b>Description of the Solution:</b>	The Borough will work with the Stanhope School to purchase and install a 35-40 kW generator and necessary electrical components to supply backup power to the School.		
<b>Is this project related to a Critical Facility?</b>	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
<b>Level of Protection:</b>	35-40 kW	<b>Estimated Benefits (losses avoided):</b>	Ensures continuity of operations of School
<b>Useful Life:</b>	20 years	<b>Goals Met:</b>	1, 6
<b>Estimated Cost:</b>	\$50,000	<b>Mitigation Action Type:</b>	Structure and Infrastructure Projects (SIP)
<b>Plan for Implementation</b>			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	Within 5 years
<b>Estimated Time Required for Project Implementation:</b>	1 year	<b>Potential Funding Sources:</b>	FEMA HMGP and BRIC, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Municipal Budget
<b>Responsible Organization:</b>	Emergency Management, School District	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard Mitigation, Emergency Management
<b>Three Alternatives Considered (including No Action)</b>			
<b>Alternatives:</b>	<b>Action</b>	<b>Estimated Cost</b>	<b>Evaluation</b>
	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
<b>Progress Report (for plan maintenance)</b>			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			



Action Worksheet		
<b>Project Name:</b>	Generator for Stanhope School	
<b>Project Number:</b>	2021-Stanhope-002	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Project will protect critical services of Stanhope School
Property Protection	1	Project will protect building from power loss.
Cost-Effectiveness	1	
Technical	1	
Political	1	
Legal	1	The Borough has the legal authority to complete the project.
Fiscal	0	Project requires funding support.
Environmental	1	
Social	1	
Administrative	1	
Multi-Hazard	1	Severe Weather, Severe Winter Weather, Hurricane, Nor'Easter
Timeline	0	Within 5 years
Agency Champion	1	Emergency Management, School District
Other Community Objectives	1	
<b>Total</b>	12	
<b>Priority (High/Med/Low)</b>	High	





## 9.21 TOWNSHIP OF STILLWATER

This section presents the jurisdictional annex for the Township of Stillwater. The annex includes a general overview of the Township of Stillwater; an assessment of the Township of Stillwater’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.

### 9.21.1 Hazard Mitigation Planning Team

The Township of Stillwater 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 9.21-1. Hazard Mitigation Planning Team**

Primary Point of Contact		Alternate Point of Contact
Name / Title: Lisa Chamblings, Mayor/OEM Address: 964 Stillwater Road, Newton, NJ 07860 Phone Number: (973) 903-3003 Email: lchamblings@ptd.net		Name / Title: Robert Wolfe, Deputy OEM Address: 964 Stillwater Road, Newton, NJ 07860 Phone Number: (973) 900-1559
NFIP Floodplain Administrator		
Name / Title: Joe Golden, Acting Zoning Officer Address: 964 Stillwater Road Newton NJ 0786 Phone Number: (973) 383-9484 Email: zoning@ptd.net		
Name	Title	Method of Participation
Lisa Chamblings	Mayor/OEM	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; assisted with public outreach by posting an announcement on the Township website, reviewed annex.*
Robert Wolfe	Deputy OEM	Alternate point of contact
Joe Golden	Acting Zoning Officer	NFIP floodplain administrator
Michael Vreeland	Engineer	Reviewed annex*
Tammy Leonard	Fiscal/CFO	Reviewed annex*
Rich Bizik	Building Code Official	Reviewed annex*
Josh Raff	Public Works Director	Reviewed annex*
Steven Sugar	Fire Department Chief	Reviewed annex*

\*Refer to Jurisdictional Annex Review Sign-Off Sheet in Appendix B.





### 9.21.2 Jurisdiction Profile

Stillwater Township is located in southwest Sussex County. It covers an area of 27.1 square miles and is bordered to the north by Sandyston Township, to the east by Frankford and Hampton Townships, to the south by Warren County, and to the west by Warren County and Walpack Township. The following unincorporated communities are located within the Township: Five Points, Swartswood, Paulinskill, Middleville, and Stillwater. There are many streams located throughout the Township and include: Blair Creek and its tributaries, Trout Brook and its tributaries, Swartswood Creek and its tributaries, Troy Brook and its tributaries, and Paulins Kill and its tributaries.

According to the U.S. Census, the 2010 population for the Township of Stillwater was 4099. The estimated 2018 population was 3870, a 5.6 percent decrease from the 2010 Census. Data from the 2018 U.S. Census American Community Survey indicate that 30.0 percent of the population is 18 years of age or younger and 11.2 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.

### 9.21.3 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 9.20-2 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 9.21-2. Recent and Expected Future Development**

Type of Development	2015		2016		2017		2018		2019	
<b>Number of Building Permits for New Construction Issued Since the Previous HMP</b>										
	<b>Total</b>	<b>Within SFHA</b>	<b>Total</b>	<b>Within SFHA</b>	<b>Total</b>	<b>Within SFHA</b>	<b>Total</b>	<b>Within SFHA</b>	<b>Total</b>	<b>Within SFHA</b>
Single and Two-Family Units	3	0	3	0	0	0	0	0	1	0
Multi-Family	0	0	0	0	0	0	0	0	0	0
Other (commercial, mixed-use, etc.)	3	0	1	0	0	0	0	0	1	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		
<b>Recent Major Development and Infrastructure from 2015 to Present</b>										
None identified										
<b>Known or Anticipated Major Development and Infrastructure in the Next Five (5) Years</b>										
None anticipated										

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

### 9.21.4 Capability Assessment

Section 5 (Capability Assessment) describes the components included in the capability assessment and their significance for hazard mitigation planning. The Township of Stillwater 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 Stillwater 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 Stillwater and where hazard mitigation has been integrated.

**Table 9.21-3. 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.
<b>Codes, Ordinances, &amp; Requirements</b>					
<b>Building Code</b>	Yes	State & Local	Yes	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>• 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</li> <li>• The Construction Official is responsible for this code in compliance with State Uniform Construction Code Act (N.J.S. 52:27D-119 et seq.) and Chapter 240 – Land Development.</li> </ul>					
<b>Zoning Code</b>	Yes	Local	Yes – if municipality has a Planning Board	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>• 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.</li> <li>• The Zoning Officer is responsible for this code in compliance with Chapter 240, Article 11 – Land Development / Zoning.</li> </ul>					
<b>Subdivisions</b>	Yes	Local	Yes – if municipality has a Planning Board	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>• 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</li> </ul>					





	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.
<p><i>condition for the issuance of a permit for any development, except that subdivision or individual lot applications for detached one or two dwelling-unit buildings shall be exempt from such site plan review and approval; provided that the resolution of the board of adjustment shall substitute for that of the planning board whenever the board of adjustment has jurisdiction over a subdivision or site plan pursuant to subsection 63b. of this act . Dictated by the Municipal Land Use Law. NJ Statute 40:27-6.2 - the board of commissioners of any county having a county planning board shall provide for the review of all subdivisions of land within the county by said county planning board and for the approval of those subdivisions affecting county road or drainage facilities as set forth and limited hereinafter in this section.</i></p> <ul style="list-style-type: none"> <li>The Zoning Officer is responsible for this ordinance in compliance with Chapter 240, Article 6 – Land Development / Subdivision and Site Plan Review and Approval.</li> </ul>					
<b>Stormwater Management</b>	Yes	Local	Yes	Yes	-
<p><b>Comment:</b></p> <ul style="list-style-type: none"> <li>See Title 7 of the NJ Administrative Code, N.J.A.C. 7:8</li> <li>This ordinance follows §240-89 – Stormwater management.</li> </ul>					
<b>Post-Disaster Recovery</b>	No	-	No	-	-
<p><b>Comment:</b></p>					
<b>Real Estate Disclosure</b>	Yes	State, Division of Consumer Affairs	Yes	Yes	-
<p><b>Comment:</b></p> <ul style="list-style-type: none"> <li>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.</li> </ul>					
<b>Growth Management</b>	No	-	Yes – if municipality has a Planning Board	-	-
<p><b>Comment:</b></p> <ul style="list-style-type: none"> <li>State Mandated on a municipal level. See Zoning Ordinance ; Also - Plan Endorsement Process via the State Development &amp; 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.</li> </ul>					
<b>Site Plan Review</b>	Yes	County & Local	Yes – if municipality has a Planning Board	Yes	-
<p><b>Comment:</b></p> <ul style="list-style-type: none"> <li>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 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.</li> </ul>					
<b>Environmental Protection</b>	Yes	Local	No	No	-
<p><b>Comment:</b></p> <ul style="list-style-type: none"> <li>Chapter 253 Littering</li> <li>Chapter 338 Soil Removal</li> <li>Chapter 382 Trees</li> <li>Chapter 400 Water</li> <li>Chapter 467 Water Supply</li> </ul>					
<b>Flood Damage Prevention</b>	Yes	Local	Yes	Yes	2021-Stillwater-003



	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.
<b>Comment:</b> <ul style="list-style-type: none"> <li>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.</li> <li>Chapter 202 – Flood Damage Prevention.</li> <li>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:               <ul style="list-style-type: none"> <li>A. Protect human life and health;</li> <li>B. Minimize expenditure of public money for costly flood control projects;</li> <li>C. Minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;</li> <li>D. Minimize prolonged business interruptions;</li> <li>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;</li> <li>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;</li> <li>G. Ensure that potential buyers are notified that property is in an area of special flood hazard; and</li> <li>H. Ensure that those who occupy the areas of special flood hazard assume responsibility for their actions.</li> </ul> </li> <li>The Ordinance was last revised in 2020 but does not include the state mandated freeboard requirement.</li> </ul>					
<b>Wellhead Protection</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Emergency Management</b>	Yes	Local	No	Yes	-
<b>Comment:</b> <ul style="list-style-type: none"> <li>Chapter 186 Fire Control</li> <li>Chapter 195 Fire Prevention</li> </ul>					
<b>Climate Change</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Disaster Recovery Ordinance</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Disaster Reconstruction Ordinance</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Other [Special Purpose Ordinances (i.e., sensitive areas, steep slope)]</b>	Yes	Local	No	Yes	-
<b>Comment:</b> <ul style="list-style-type: none"> <li>These ordinances follows Steep Slopes – Land Use ordinance within Township code.</li> </ul>					
<b>Planning Documents</b>					
<b>Comprehensive / Master Plan</b>	Yes	Local	Yes	Yes	-
<b>Comment:</b> <ul style="list-style-type: none"> <li>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.</li> <li>The Planning Board is responsible for this plan, which was re-examined on November 7, 2012.</li> </ul>					





	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.
<b>Capital Improvement Plan</b>	Yes	Local	No	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>The Engineering Department and DPW is responsible for this plan, which is updated annually, most recently in April 2016.</li> </ul>					
<b>Disaster Debris Management Plan</b>	Yes	Local	No	Yes	-
<i>Comment:</i>					
<b>Floodplain or Watershed Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Stormwater Management Plan</b>	Yes	Local	Yes	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>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.</li> <li>The Engineering Department is responsible for this plan, which was originally done in 2005 and became part of the Master Plan (included in re-examination).</li> </ul>					
<b>Stormwater Pollution Prevention Plan</b>	No	-	Yes	-	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>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.</li> </ul>					
<b>Urban Water Management Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Habitat Conservation Plan</b>	Yes	Local	No	Yes	-
<i>Comment:</i>					
<b>Economic Development Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Shoreline Management Plan</b>	No	-	Yes – if located in a coastal zone	-	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>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.</li> </ul>					
<b>Community Wildfire Protection Plan</b>	Yes	Local	No	Yes	-
<i>Comment:</i>					
<b>Community Forest Management Plan</b>	Yes	Local	No	Yes	-
<i>Comment:</i>					



	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.
<b>Transportation Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Agriculture Plan</b>	Yes	County	No	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>Sussex County Agricultural board assists in Preserved lands. Tax Assessor by ordinance confirms farmland assessment</li> </ul>					
<b>Climate Action Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Tourism Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Business Development Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Other: Open Space Plan</b>	Yes	Local	No	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>The Planning Board and Environmental Commission are responsible for this plan, which was adopted 2012. The ERI was updated in 2014.</li> </ul>					
<b>Response/Recovery Planning</b>					
<b>Comprehensive Emergency Management Plan (CEMP) / Emergency Operations Plan (EOP)</b>	Yes	Local	Yes	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>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.</li> <li>The Office of Emergency Management is responsible for this plan, which was adopted in 2014.</li> </ul>					
<b>Threat &amp; Hazard Identification &amp; Risk Assessment (THIRA)</b>	Yes	Local and County	No	Yes	-
<i>Comment:</i>					
<b>Post-Disaster Recovery Plan</b>	Yes	Local and County	No	Yes	-
<i>Comment:</i>					
<b>Continuity of Operations Plan</b>	Yes	Local and County	No	Yes	-
<i>Comment:</i>					
<b>Public Health Plan</b>	Yes	County	No	Yes	-
<i>Comment:</i>					
<b>Other</b>	No	-	No	-	-
<i>Comment:</i>					

**Table 9.21-4. Development and Permitting Capability**

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



**ADMINISTRATIVE AND TECHNICAL CAPABILITY**

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

**Table 9.21-5. Administrative and Technical Capabilities**

Staff/Personnel Resource	Available?	Department/Agency/Position
<b>Administrative Capability</b>		
Planning Board	Yes	Planning Board
Mitigation Planning Committee	No	-
Environmental Board / Commission	Yes	Environmental Commission
Open Space Board / Committee	No	-
Economic Development Commission / Committee	No	-
Warning Systems / Services (reverse 911, outdoor warning signals)	Yes	Swift911, Fire whistle
Maintenance program to reduce risk	Yes	Stormwater maintenance, tree trimming
Mutual aid agreements	Yes	Neighboring communities and County
<b>Technical/Staffing Capability</b>		
Planners or engineers with knowledge of land development and land management practices	Yes	Professional contract
Engineers or professionals trained in building or infrastructure construction practices	Yes	Professional contract
Planners or engineers with an understanding of natural hazards	Yes	Professional contract
Staff with training in benefit/cost analysis	Yes	CFO
Staff with training in green infrastructure	Yes	Township Engineer
Staff with education/knowledge/training in low impact development	No	-
Surveyor	No	-
Stormwater engineer	Yes	Township Engineer
Personnel skilled or trained in GIS applications	Yes	Township Engineer
Local or state water quality professional	No	-
Scientist familiar with natural hazards in local area	No	-
Emergency manager	Yes	Lisa Chammings, Mayor/OEM
Watershed planner	Yes	Township Engineer, Planning and Zoning Engineer
Environmental specialist	No	-
Grant writers	No	-
Resilience Officer	No	-
Other: Professionals trained in conducting damage assessments	Yes	Engineer

**FISCAL CAPABILITY**

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

**Table 9.21-6. Fiscal Capabilities**

Financial Resource	Accessible or Eligible to Use?
Community Development Block Grants (CDBG, CDBG-DR)	No
Capital Improvements Project Funding	Yes







Financial Resource	Accessible or Eligible to Use?
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service	No
Incur Debt through General Obligation Bonds	Yes
Incur Debt through Special Tax Bonds	No
Incur Debt through Private Activity Bonds	No
Withhold Public Expenditures in Hazard-Prone Areas	No
State-Sponsored Grant Programs	No
Development Impact Fees for Homebuyers or Developers	Yes – COAH fees
Clean Water Act 319 Grants (Nonpoint Source Pollution)	No
Other: Open Space Acquisition Funding Programs	Yes

**EDUCATION AND OUTREACH CAPABILITY**

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

**Table 9.21-7. 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.	Yes; Under the Emergency Management tab on the website, the plan is described in part.
Do you use social media for hazard mitigation education and outreach? -If yes, briefly describe.	Yes; The municipal website and Facebook page are used to reach out to residents during emergencies as well as during times to help prepare in case needs become present.
Do you have any citizen boards or commissions that address issues related to hazard mitigation? -If yes, briefly describe.	Yes. The Township has a CERT team that assists as needed during emergencies as well as during non-emergencies to help educate our residents.
Do you have any other programs already in place that could be used to communicate hazard-related information? If yes, briefly describe.	Yes; Again this would be the CERT Team as well as the Public Safety committee.

**COMMUNITY CLASSIFICATIONS**

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

**Table 9.21-8. Community Classifications**

Program	Participating?	Classification	Date Classified
Community Rating System	No	-	-
Building Code Effectiveness Grading Schedule (BCEGS)	Yes	4.4	2009; currently being updated
Public Protection (Fire ISO Protection Class)	Yes	04/4X	July 1, 2014
Storm Ready Certification	No	-	-
Firewise Community Classification	Yes – Lake Plymouth Community Association	N/A	2006
Sustainable Jersey	Yes	Not certified	Joined program on July 19, 2011





**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 9.21-9. Adaptive Capacity**

Hazard	Adaptive Capacity (Capabilities) – Strong/Moderate/Weak
Dam Failure	Moderate
Disease Outbreak	Moderate
Drought	Moderate
Earthquake	Strong
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.

**NATIONAL FLOOD INSURANCE PROGRAM**

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

**Table 9.21-10. National Flood Insurance Program Compliance**

Criterion	Response
What local department is responsible for floodplain management?	Zoning and Construction
Who is your floodplain administrator? (name, department/position)	Joe Golden, Zoning Officer
Are any certified floodplain managers on staff in your jurisdiction?	No
What is the date that your flood damage prevention ordinance was last amended?	August 2, 2011
Does your floodplain management program meet or exceed minimum requirements? -If exceeds, in what ways?	The program meets minimum requirements set by FEMA and the State.
When was the most recent Community Assistance Visit or Community Assistance Contact?	January 27, 1994
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? -If so, state what they are.	No





Criterion	Response
Are any RiskMAP projects currently underway in your jurisdiction? If so, state what they are.	No
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 does not feel adequately supported or trained to fulfill his responsibilities as the municipal floodplain administrator. The FPA indicated that he would consider attending continuing education and certification training if offered in the county.
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
How many flood insurance policies are in force in your jurisdiction? * -What is the insurance in force? -What is the premium in force?	7 policies \$3,036 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?	5 claims \$87,323 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

Reference: FEMA 2020

**OPPORTUNITIES FOR FUTURE INTEGRATION**

- **Flood Damage Prevention Ordinance:** The Township will update the Flood Damage Prevention Ordinance to include the state mandated freeboard requirement. (2021-Stillwater-003)

**9.21.5 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 Stillwater’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 9.20-11 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 9.21-11. 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 23 <sup>rd</sup> and 24 <sup>th</sup> .	Roadway closures, downed trees and powerlines, extended power outages, overtime for staff





Date(s) of Event	Event Type (disaster declaration if applicable)	Sussex County Designated?	Summary of Event	Summary of Local Damages and Losses
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 was subject to municipal office closures and social distancing and masking requirements.
August 4, 2020	Tropical Storm Isaias	Pending	Tropical Storm Isaias brought strong winds and downpours to Sussex County.	Roadway closures, downed trees and powerlines, extended power outages, overtime for staff
February 1, 2020	Winter Storm Orlena	Pending	36 inches of snow fell during Winter Storm Orlena	Roadway closures, overtime for DPW staff

Source: FEMA 2020, NOAA NCEI 2020

### 9.21.6 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 Stillwater 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 Stillwater 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 Stillwater has significant exposure.

#### REPETITIVE FLOOD LOSSES

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

- 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 9.21-12. Critical Facilities and Lifelines Flood Exposure**

Name	Type	Exposure	
		1% Event	0.2% Event
21-8 Wintermute's Mill Dam	Dam	X	X
21-19 Paulinskill Lake Dam	Dam	X	X
21-33 County Line Dam	Dam	X	X

Source: Sussex County Planning Partnership 2020





**IDENTIFIED ISSUES AND PROBLEM AREAS**

The jurisdiction has identified the following vulnerabilities within their community:

- The Flood Damage Prevention Ordinance requires update to include freeboard.

**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 Stillwater 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 Stillwater. The Township of Stillwater 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 Stillwater agreed with the calculated hazard rankings.

**Table 9.21-13. Township of Stillwater Hazard Ranking**

<b>Dam Failure</b>	<b>Disease Outbreak</b>	<b>Drought</b>	<b>Earthquake</b>	<b>Flood</b>	<b>Geologic</b>	
Medium	Medium	Medium	Low	Medium	Low	
<b>Hazardous Materials</b>	<b>Hurricane and Tropical Storm</b>	<b>Invasive Species</b>	<b>Nor’Easter</b>	<b>Severe Weather</b>	<b>Severe Winter Weather</b>	<b>Wildfire</b>
Medium	High	Medium	High	High	High	Low

**9.21.7 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 9.20-15 and Table 9.20-16 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 9.21-14. 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	Enter 2021 HMP Action #
Stillwater-1 (new)	Ensure continuity of operations at critical facilities. The following location is identified at this time: Stillwater Township Town Hall Generator	Township Committee	Complete, funded through FEMA		
Stillwater-2 (old #8)	Provide information on all types of hazards, preparedness and mitigation measures, and responses through social media and on the Township website.	Township	Ongoing Capability		
Stillwater-3 (old #7)	Implement Fire Wise Program throughout the Township.	Township	No Progress		
Stillwater-4 (revised old #6)	Support the mitigation of vulnerable structures via retrofit (e.g. elevation, flood-proofing) or acquisition / relocation to protect structures from future damage. Phase 1: Identify appropriate candidates and determine most cost-effective mitigation option. Phase 2: Work with the property owners to implement selected action based on available funding and local match availability.	Township / Homeowner	Complete; there are no repetitive loss properties remaining in the Township.		

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

- An extensive plan is in place by the Swartswood Lake Association to address harmful algal bloom. Through support by resolution of the Township Committee, the Swartswood Lake Association has secured grants to assist in water quality that will help with mitigation of the blooms.

**PROPOSED HAZARD MITIGATION INITIATIVES FOR THE PLAN UPDATE**

The Township of Stillwater 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 Stillwater 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 9.20-15 summarizes the comprehensive-range of specific mitigation initiatives the Township of Stillwater 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 9.20-16 provides a summary of the prioritization of all proposed mitigation initiatives for this HMP update.



Table 9.21-15. 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-Stillwater-001	Emergency Operations Center Roof	<b>Problem:</b> The Emergency Operations Center at 931 Swartswood Road requires a roof replacement to meet high wind standards and maintain continuity of operations. The facility has multiple uses for the base of operations for Emergency Management, as a sheltering location, and as a community center. The facility is supported by a backup generator.	Existing	Hurricane, Nor'Easter, Severe Weather, Severe Winter Weather	1, 2, 6	Engineer, OEM	FEMA HMGP, BRIC, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Township Budget	Protection of continuity of operations	Medium	Within 5 years	High	SIP	PP
		<b>Solution:</b> The Township Engineer will determine the necessary high wind design standards and costs of a new roof. The Township will then install the new roof.											
2021-Stillwater-002	Kohlbocker Road	<b>Problem:</b> Kohlbocker Road is eroding and is beginning to cause the collapse of the roadway along the bank of the stream. The elevation is relatively high as well. This road is an ingress and egress to a large lake community within Stillwater and Hampton Township.	Existing	Severe Weather, Flood	1, 2	Engineer, DPW	HMGP, BRIC, Township Budget	Protection of roadway	Medium	Within 5 years	High	SIP	PP
		<b>Solution:</b> The Township Engineer will design a means of correcting and fixing this issue. This is an extensive process that would need plan design, and NJDEP permits.											
2021-Stillwater-003	Flood Damage Prevention Ordinance Update	<b>Problem:</b> The Township's Flood Damage Prevention Ordinance lacks language to include the state mandated freeboard requirement.	New	Flood	2	Administration	Township budget	Meet state standards	Staff time	Within 6 months	High	LPR	PR
		<b>Solution:</b> The Township will update the Flood Damage Prevention Ordinance to include the state mandated freeboard requirement.											
2021-Stillwater-004	Duck Pond Road	<b>Problem:</b> Duck Pond Road is an area that floods during times of moderate to heavy rainfall over extended periods of time. Residents and emergency services often loose ingress or egress through this	Existing	Flood	1	Engineer, DPW	HMGP, BRIC, Township budget	Flood risk reduced	High	Within 5	High	SIP	PP







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
		roadway during moderate to heavy extended periods of rain. <b>Solution:</b> The Engineer will determine the elevation needed to reduce flooding on the roadway and maintain access. Public works will then carry out the elevation design.								years			
2021-Stillwater-005	Vegetation Management	<b>Problem:</b> Several specific areas of the Township continually have trees coming down across roadways which consequently take down power lines. The DPW can do small jobs but not jobs of large trees near power and other utility lines. JCPL only maintains certain distances from their lines. Other utilities only do reactive vegetative management rather than preventative mitigation. Having the financial resources to have properly equipped and insured Tree Removal companies remove trees within the Township Road ROW's would be extremely beneficial to mitigating against power outages both long and short term in length. <b>Solution:</b> The Township will pursue funding support to have a forester assess trees, complete deed searches to verify Township right of way in targeted areas, and then have the tree removal completed by qualified personnel.	N/A	Hurricane/ Tropical Storm, Nor'Easter, Severe Weather, Severe Winter Weather	2	Administration, DPW	HMGP, Township budget	Reduction in falling trees and power outages	Medium	Within 5 years	High	NSP	NR
2021-Stillwater-006	Controlled Burns	<b>Problem:</b> Wildfire risk exists in the Township. Drought and wildfire go hand in hand in Stillwater Township. As droughts or extended dry periods never classified as droughts occur, the undergrowth gets overly dry. Invasive species have caused forested areas to die out and leave large undergrowth areas that are getting thicker and harder to manage. <b>Solution:</b> The Township will pursue expansion of controlled burns, working with the local fire department and the NJ	N/A	Drought, Wildfire, Invasive Species	1, 2	Local Fire Departments, NJ Forest Fire Service	Township budget, Fire Department budgets	Reduction in wildfire risk	Low	2 years	High	NSP	NR



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
		Forest Fire Service to address forests on Township, state, and federal lands.											
2021-Stillwater-007	Stand Pipes and Dry Hydrants	<p><b>Problem:</b> Wildfire risk exists in the Township. Drought and wildfire go hand in hand in Stillwater Township. As droughts or extended dry periods never classified as droughts occur, the undergrowth gets overly dry. Invasive species have caused forested areas to die out and leave large undergrowth areas that are getting thicker and harder to manage.</p> <p><b>Solution:</b> The Township will work to install stand pipes or dry hydrants in various locations. Installation will be strategically located to areas that would assist in protection of homes near these high undergrowth areas.</p>	New	Drought, Wildfire, Invasive Species	1, 2, 5	Administration, Local Fire Department	Assistance to Firefighters Grant Program, HMGP, BRIC, Township budget	Increased wildfire fighting capabilities	High	Within 5 years	High	SIP	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 9.21-16. 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-Stillwater-001	Emergency Operations Center Roof	1	1	1	1	1	1	0	1	1	1	1	0	1	1	12	High ⚠
2021-Stillwater-002	Kohlbocker Road	1	1	1	0	1	1	0	1	1	1	1	0	1	0	9	High
2021-Stillwater-003	Flood Damage Prevention Ordinance Update	0	1	1	1	1	1	1	1	1	1	0	1	1	1	12	High
2021-Stillwater-004	Duck Pond Road	1	1	1	1	1	1	0	1	1	1	0	1	1	1	12	High
2021-Stillwater-005	Vegetation Management	0	1	1	1	1	1	1	1	1	1	1	0	1	1	12	High
2021-Stillwater-006	Controlled Burns	1	1	1	1	1	0	1	1	1	1	1	1	1	1	13	High
2021-Stillwater-007	Stand Pipes and Dry Hydrants	1	1	1	1	1	1	0	1	1	1	1	0	1	1	12	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 9.21-17. 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								
Disease Outbreak								
Drought				X	X			X
Earthquake								
Flood	X	X					X	
Geologic								
Hazardous Materials								
Hurricane and Tropical Storm		X		X				
Invasive Species				X	X			X
Nor’Easter		X		X				
Severe Weather		X		X				
Severe Winter Weather		X		X				
Wildfire				X	X			X

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

- RED** high ranked hazard
- ORANGE** medium ranked hazard
- YELLOW** low ranked hazard



Figure 9.21-1. Township of Stillwater Hazard Area Extent and Location Map 1

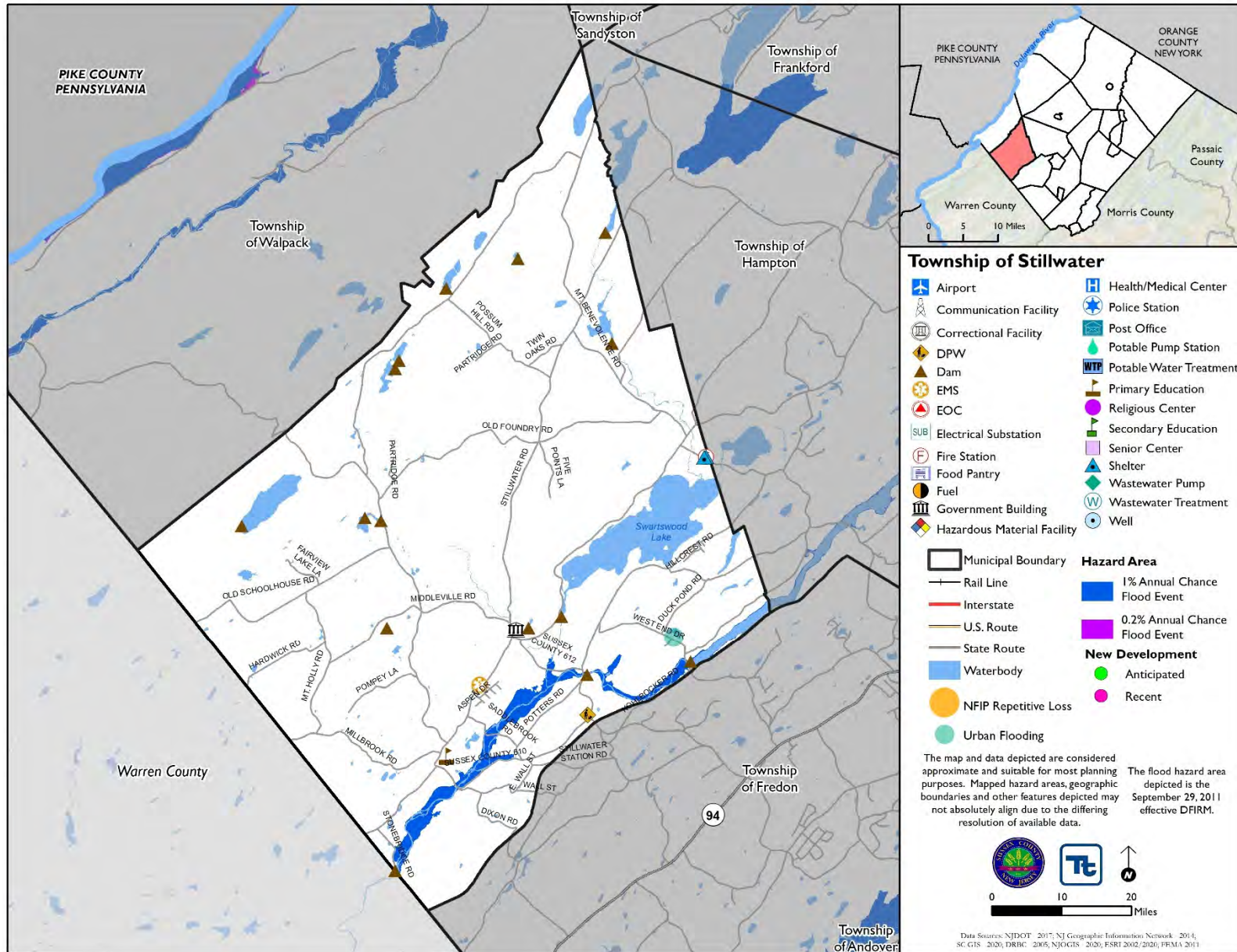




Figure 9.21-2. Township of Stillwater Hazard Area Extent and Location Map 2

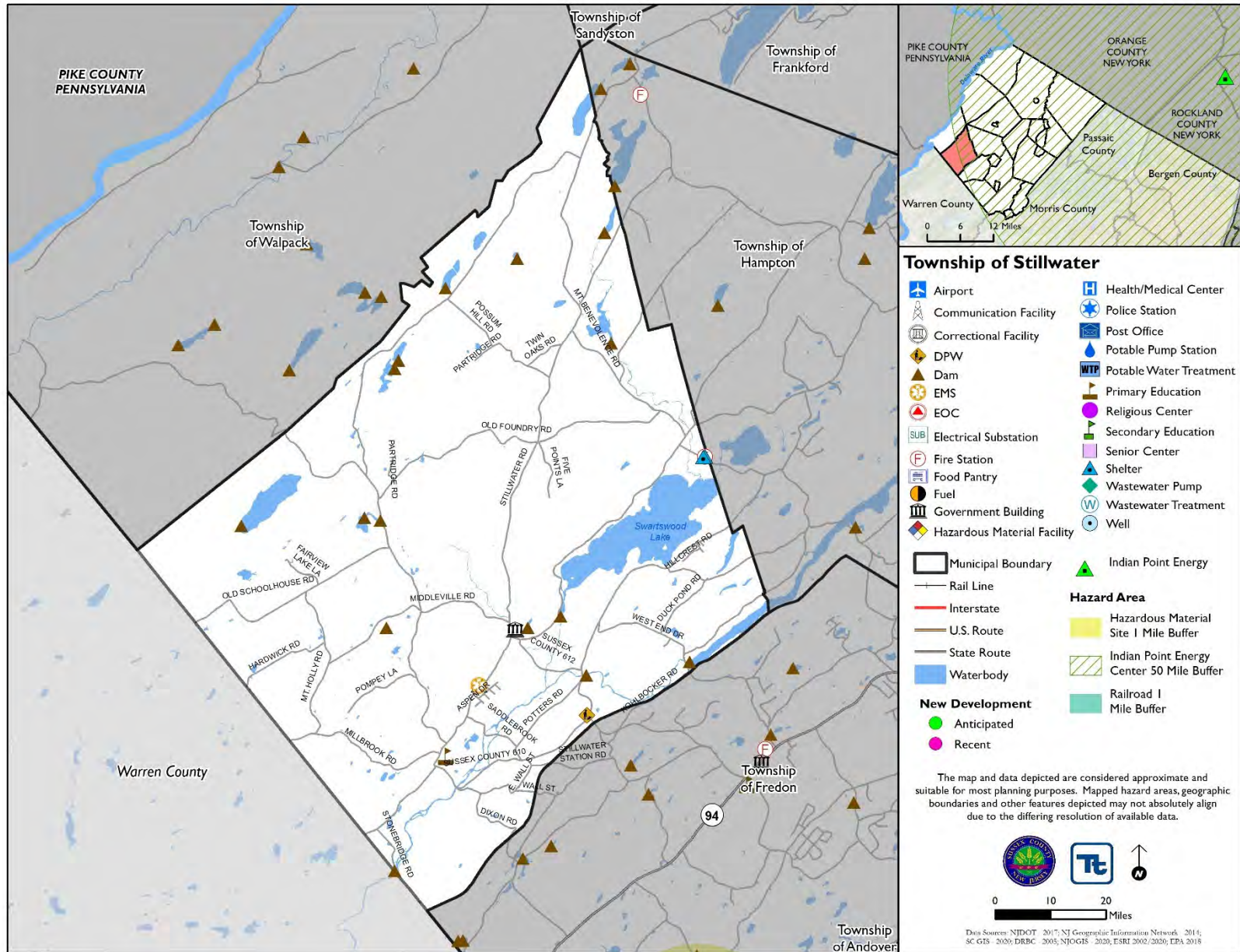
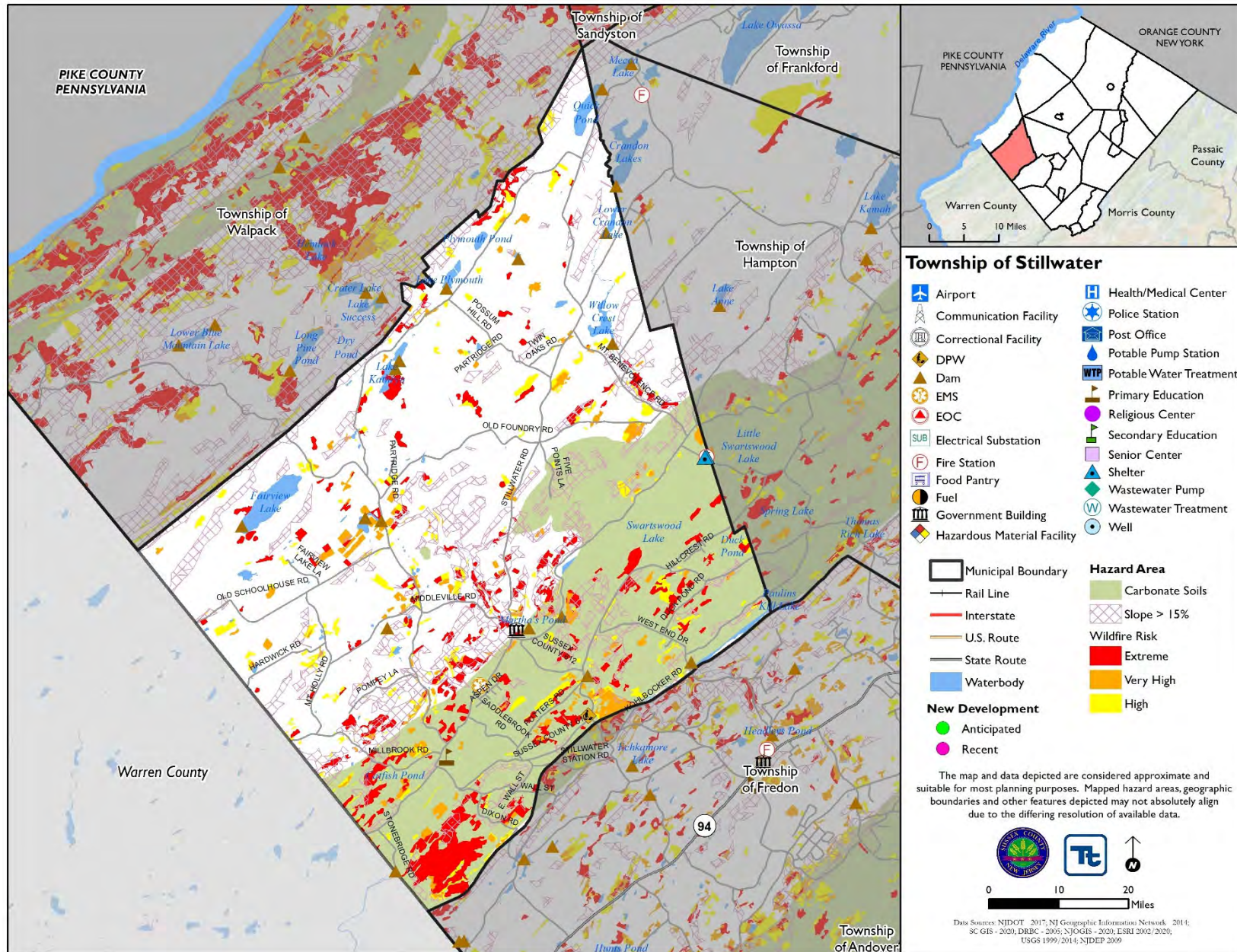




Figure 9.21-3 Township of Stillwater Hazard Area Extent and Location Map 3







Action Worksheet			
<b>Project Name:</b>	Emergency Operations Center Roof		
<b>Project Number:</b>	2021-Stillwater-001		
<b>Risk / Vulnerability</b>			
<b>Hazard(s) of Concern:</b>	Hurricane, Nor'Easter, Severe Weather, Severe Winter Weather		
<b>Description of the Problem:</b>	The Emergency Operations Center at 931 Swartswood Road requires a roof replacement to meet high wind standards and maintain continuity of operations. The facility has multiple uses for the base of operations for Emergency Management, as a sheltering location, and as a community center. The facility is supported by a backup generator.		
<b>Action or Project Intended for Implementation</b>			
<b>Description of the Solution:</b>	The Township Engineer will determine the necessary high wind design standards and costs of a new roof. The Township will then install the new roof.		
<b>Is this project related to a Critical Facility?</b>	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
<b>Level of Protection:</b>	500-year storm event	<b>Estimated Benefits (losses avoided):</b>	Municipal building protected from high winds
<b>Useful Life:</b>	15 years	<b>Goals Met:</b>	1, 2, 6
<b>Estimated Cost:</b>	Medium	<b>Mitigation Action Type:</b>	Structure and Infrastructure Projects (SIP)
<b>Plan for Implementation</b>			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	Within 5 years
<b>Estimated Time Required for Project Implementation:</b>	1 year	<b>Potential Funding Sources:</b>	FEMA HMGP, BRIC, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Town Budget
<b>Responsible Organization:</b>	Engineer, OEM	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard Mitigation, Emergency Management
<b>Three Alternatives Considered (including No Action)</b>			
<b>Alternatives:</b>	<b>Action</b>	<b>Estimated Cost</b>	<b>Evaluation</b>
	No Action	\$0	Problem continues.
	Rebuild facility to new standards	High	Costly and not necessary
	Build secondary facility protected to new standards	High	Costly and not necessary
<b>Progress Report (for plan maintenance)</b>			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			



Action Worksheet		
<b>Project Name:</b>	Emergency Operations Center Roof	
<b>Project Number:</b>	2021-Stillwater-001	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Project will protect critical services of the Emergency Operations Center, specifically as a shelter
Property Protection	1	Project will protect Emergency Operations Center from storm damage.
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	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	Protection of critical services
<b>Total</b>	12	
<b>Priority (High/Med/Low)</b>	High	



Action Worksheet			
<b>Project Name:</b>	Kohlbocker Road		
<b>Project Number:</b>	2021-Stillwater-002		
<b>Risk / Vulnerability</b>			
<b>Hazard(s) of Concern:</b>	Severe Weather, Flood		
<b>Description of the Problem:</b>	Kohlbocker Road is eroding and is beginning to cause the collapse of the roadway along the bank of the stream. The elevation is relatively high as well. This road is an ingress and egress to a large lake community within Stillwater and Hampton Township.		
<b>Action or Project Intended for Implementation</b>			
<b>Description of the Solution:</b>	The Township Engineer will design a means of correcting and fixing this issue. This is an extensive process that would need plan design, and NJDEP permits.		
<b>Is this project related to a Critical Facility?</b>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
<b>Level of Protection:</b>	TBD	<b>Estimated Benefits (losses avoided):</b>	Beaver Meadow Road kept open.
<b>Useful Life:</b>	10 years	<b>Goals Met:</b>	1, 2
<b>Estimated Cost:</b>	Medium	<b>Mitigation Action Type:</b>	Structure and Infrastructure Project
<b>Plan for Implementation</b>			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	Within 5 years
<b>Estimated Time Required for Project Implementation:</b>	1 year	<b>Potential Funding Sources:</b>	HMGP, BRIC, Municipal budget
<b>Responsible Organization:</b>	Engineer, DPW	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard Mitigation, Stormwater Management
<b>Three Alternatives Considered (including No Action)</b>			
<b>Alternatives:</b>	<b>Action</b>	<b>Estimated Cost</b>	<b>Evaluation</b>
	No Action	\$0	Problem continues.
	Close Lower Creek Road	\$200	Isolates residents
	Reroute Road to areas with less flood risk	N/A	Not technically feasible
<b>Progress Report (for plan maintenance)</b>			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			



Action Worksheet		
<b>Project Name:</b>	Kohlbocker Road	
<b>Project Number:</b>	2021-Stillwater-002	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Maintains ingress and egress to a large lake community within Stillwater and Hampton Township
Property Protection	1	Protects Kohlbocker Road from flood damage
Cost-Effectiveness	1	
Technical	0	
Political	1	
Legal	1	The Township has the legal authority to complete the project.
Fiscal	0	The project requires grant funding support.
Environmental	1	
Social	1	
Administrative	1	
Multi-Hazard	1	Severe Weather, Flood
Timeline	0	
Agency Champion	1	Engineer, DPW
Other Community Objectives	0	
<b>Total</b>	9	
<b>Priority (High/Med/Low)</b>	High	



Action Worksheet			
<b>Project Name:</b>	Duck Pond Road		
<b>Project Number:</b>	2021-Stillwater-004		
Risk / Vulnerability			
<b>Hazard(s) of Concern:</b>	Flood		
<b>Description of the Problem:</b>	Duck Pond Road is an area that floods during times of moderate to heavy rainfall over extended periods of time. Residents and emergency services often loose ingress or egress through this roadway during moderate to heavy extended periods of rain.		
Action or Project Intended for Implementation			
<b>Description of the Solution:</b>	The Engineer will determine the elevation needed to reduce flooding on the roadway and maintain access. Public works will then carry out the elevation design.		
<b>Is this project related to a Critical Facility?</b>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
<b>Level of Protection:</b>	TBD	<b>Estimated Benefits (losses avoided):</b>	Flood risk reduced
<b>Useful Life:</b>	50 years	<b>Goals Met:</b>	1
<b>Estimated Cost:</b>	High	<b>Mitigation Action Type:</b>	Structure and Infrastructure Project
Plan for Implementation			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	Within 5 years
<b>Estimated Time Required for Project Implementation:</b>	1 year	<b>Potential Funding Sources:</b>	HMGP, BRIC, Township budget
<b>Responsible Organization:</b>	Engineer, Public Works	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard mitigation, Stormwater management
Three Alternatives Considered (including No Action)			
<b>Alternatives:</b>	<b>Action</b>	<b>Estimated Cost</b>	<b>Evaluation</b>
	No Action	\$0	Problem continues.
	Remove flood prone roadways	N/A	Loss of access to neighborhoods, increased emergency risk
	Buyout properties that exist near flood prone roadways	Very high	Costly, loss of large portion of community
Progress Report (for plan maintenance)			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			



Action Worksheet		
<b>Project Name:</b>	Duck Pond Road	
<b>Project Number:</b>	2021-Stillwater-004	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Project will protect emergency access
Property Protection	1	Project will protect roadway from flood damage
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	Project requires funding support
Environmental	1	
Social	1	
Administrative	1	
Multi-Hazard	0	Flood
Timeline	1	Within 5 years
Agency Champion	1	Engineer, Public Works
Other Community Objectives	1	
<b>Total</b>	12	
<b>Priority (High/Med/Low)</b>	High	



Action Worksheet			
<b>Project Name:</b>	Vegetation Management		
<b>Project Number:</b>	2021-Stillwater-005		
<b>Risk / Vulnerability</b>			
<b>Hazard(s) of Concern:</b>	Hurricane/Tropical Storm, Nor'Easter, Severe Weather, Severe Winter Weather		
<b>Description of the Problem:</b>	Several specific areas of the Township continually have trees coming down across roadways which consequently take down power lines. The DPW can do small jobs but not jobs of large trees near power and other utility lines. JCPL only maintains certain distances from their lines. Other utilities only do reactive vegetative management rather than preventative mitigation. Having the financial resources to have properly equipped and insured Tree Removal companies remove trees within the Township Road ROW's would be extremely beneficial to mitigating against power outages both long and short term in length.		
<b>Action or Project Intended for Implementation</b>			
<b>Description of the Solution:</b>	The Township will pursue funding support to have a forester assess trees, complete deed searches to verify Township right of way in targeted areas, and then have the tree removal completed by qualified personnel.		
<b>Is this project related to a Critical Facility?</b>		Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
<b>Level of Protection:</b>	N/A	<b>Estimated Benefits (losses avoided):</b>	High risk trees removed
<b>Useful Life:</b>	5 years	<b>Goals Met:</b>	2
<b>Estimated Cost:</b>	Medium	<b>Mitigation Action Type:</b>	Natural Systems Protection
<b>Plan for Implementation</b>			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	Within 5 years
<b>Estimated Time Required for Project Implementation:</b>	6 months	<b>Potential Funding Sources:</b>	HMGP, Township budget
<b>Responsible Organization:</b>	Administration, DPW	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard mitigation
<b>Three Alternatives Considered (including No Action)</b>			
<b>Alternatives:</b>	<b>Action</b>	<b>Estimated Cost</b>	<b>Evaluation</b>
	No Action	\$0	Problem continues.
	Removal all trees with fall risk on power lines and private property	N/A	Private property issues
	Encourage residents to report problem trees	\$100	Reactive instead of preemptive. Not as effective in controlling risk.
<b>Progress Report (for plan maintenance)</b>			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			



Action Worksheet		
<b>Project Name:</b>	Vegetation Management	
<b>Project Number:</b>	2021-Stillwater-005	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	0	
Property Protection	1	Project will protect property from damage from falling trees
Cost-Effectiveness	1	
Technical	1	
Political	1	
Legal	1	The Township has the legal authority to conduct the project
Fiscal	1	Municipal budget
Environmental	1	
Social	1	
Administrative	1	
Multi-Hazard	1	Hurricane/Tropical Storm, Nor'Easter, Severe Weather, Severe Winter Weather
Timeline	0	Within 5 years
Agency Champion	1	Administration, DPW
Other Community Objectives	1	
<b>Total</b>	12	
<b>Priority (High/Med/Low)</b>	High	





Action Worksheet			
<b>Project Name:</b>	Stand Pipes and Dry Hydrants		
<b>Project Number:</b>	2021-Stillwater-007		
<b>Risk / Vulnerability</b>			
<b>Hazard(s) of Concern:</b>	Drought, Wildfire, Invasive Species		
<b>Description of the Problem:</b>	Wildfire risk exists in the Township. Drought and wildfire go hand in hand in Stillwater Township. As droughts or extended dry periods never classified as droughts occur, the undergrowth gets overly dry. Invasive species have caused forested areas to die out and leave large undergrowth areas that are getting thicker and harder to manage.		
<b>Action or Project Intended for Implementation</b>			
<b>Description of the Solution:</b>	The Township will work to install stand pipes or dry hydrants in various locations. Installation will be strategically located to areas that would assist in protection of homes near these high undergrowth areas.		
<b>Is this project related to a Critical Facility?</b>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
<b>Level of Protection:</b>	To be determined	<b>Estimated Benefits (losses avoided):</b>	Increased wildfire fighting capabilities
<b>Useful Life:</b>	20 years	<b>Goals Met:</b>	2
<b>Estimated Cost:</b>	High	<b>Mitigation Action Type:</b>	Structure and Infrastructure Project
<b>Plan for Implementation</b>			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	Within 5 years
<b>Estimated Time Required for Project Implementation:</b>	Within 5 years	<b>Potential Funding Sources:</b>	Assistance to Firefighters Grant Program, HMGP, BRIC, Township budget
<b>Responsible Organization:</b>	Administration, Local Fire Department	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Capital improvements planning
<b>Three Alternatives Considered (including No Action)</b>			
<b>Alternatives:</b>	<b>Action</b>	<b>Estimated Cost</b>	<b>Evaluation</b>
	No Action	\$0	Problem continues.
	Purchase tanker truck for water	\$190,000	Transportation route lost, emergency service response times.
	Develop contract with neighboring towns for fire response	N/A	Too slow of response times, towns unable
<b>Progress Report (for plan maintenance)</b>			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			



Action Worksheet		
<b>Project Name:</b>	Stand Pipes and Dry Hydrants	
<b>Project Number:</b>	2021-Stillwater-007	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Fire response preserved to protect life
Property Protection	1	Fire response preserved to protect property
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	Project requires funding support
Environmental	1	
Social	1	
Administrative	1	Coordination with fire departments
Multi-Hazard	1	Drought, Wildfire, Invasive Species
Timeline	0	Within 5 years
Agency Champion	1	Administration, Local Fire Department
Other Community Objectives	1	
<b>Total</b>	12	
<b>Priority (High/Med/Low)</b>	High	



## 9.22 BOROUGH OF SUSSEX

This section presents the jurisdictional annex for the Borough of Sussex. The annex includes a general overview of the Borough of Sussex; an assessment of the Borough of Sussex’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.

### 9.22.1 Hazard Mitigation Planning Team

The Borough of Sussex 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 9.22-1. Hazard Mitigation Planning Team**

Primary Point of Contact		Alternate Point of Contact
Name / Title: Floyd Southard, OEM Coordinator Address: 2 Main Street, Sussex, NJ 07461 Phone Number: (973) 534-7258 Email: oem@sussexboro.com		Name / Title: Robert Regavich, Deputy OEM Address: 2 Main Street, Sussex, NJ 07461 Phone Number: (973) 271-2047 Email: rregavich@gmail.com
NFIP Floodplain Administrator		
Name / Title: Kevin Kervatt, Zoning Officer Address: 2 Main Street Sussex NJ 07461 Phone Number: (973) 875-4831 Email: zoning@sussexboro.com		
Name	Title	Method of Participation
Floyd Southard	OEM Coordinator	Primary point of contact, provided data and information, contributed to mitigation strategy; attended kickoff meeting, annex training, risk assessment meeting and mitigation strategy workshop; assisted with public outreach; reviewed annex*
Robert Regavich	Deputy OEM	Alternate point of contact; attended the kickoff meeting
Kevin Kervatt	Zoning Officer	NFIP floodplain administrator; reviewed annex*
Edward J. Meyer	Mayor	Reviewed annex*
Harold Pellow	Engineer	Reviewed annex*
Michael Marceau	CFO	Reviewed annex*
Joseph Butto	Construction Official	Reviewed annex*
Ken Nelson	Planner	Reviewed annex*
Brian Demarest	Public Works	Reviewed annex*
Marc Leech	Fire Chief	Reviewed annex*

\*Refer to Jurisdictional Annex Review Sign-Off Sheet in Appendix B.





### 9.22.2 Jurisdiction Profile

The Borough of Sussex is located in northern Sussex County and is fully surrounded by the Township of Wantage. It has a total area of 0.6 square miles. Clove Brook flows through the Borough.

According to the U.S. Census, the 2010 population for the Borough of Sussex was 2,130. The estimated 2018 population was 1,854, a 12 percent decrease from the 2010 Census. Data from the 2018 U.S. Census American Community Survey indicate that 5.7 percent of the population is 5 years of age or younger and 12.6 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.

### 9.22.3 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 9.21-2 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 9.22-2. Recent and Expected Future Development**

Type of Development	2015		2016		2017		2018		2019	
<b>Number of Building Permits for New Construction Issued Since the Previous HMP</b>										
	<b>Total</b>	<b>Within SFHA</b>	<b>Total</b>	<b>Within SFHA</b>	<b>Total</b>	<b>Within SFHA</b>	<b>Total</b>	<b>Within SFHA</b>	<b>Total</b>	<b>Within SFHA</b>
Single and Two-Family Units	1	0	0	0	0	0	0	0	0	0
Multi-Family	0	0	0	0	0	0	0	0	0	0
Other (commercial, mixed-use, etc.)	0	0	0	0	0	0	0	0	0	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		
<b>Recent Major Development and Infrastructure from 2015 to Present</b>										
None identified										
<b>Known or Anticipated Major Development and Infrastructure in the Next Five (5) Years</b>										
Shoprite	Grocery store and supporting business's	1		Block 104 lot 1.01 Block 105 lot 1.03 Block 106 lot 1.02		Nuclear Incident Hazard Area, Wildfire		Approved Beginning site work		

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

### 9.22.4 Capability Assessment

Section 5 (Capability Assessment) describes the components included in the capability assessment and their significance for hazard mitigation planning. The Borough of Sussex 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 Borough of Sussex 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 Borough of Sussex and where hazard mitigation has been integrated.

**Table 9.22-3. 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.
<b>Codes, Ordinances, &amp; Requirements</b>					
<b>Building Code</b>	Yes	State & Local	Yes	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>• 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</li> <li>• This code follows State Uniform Construction Code Act (N.J.S. 52:27D-119 et seq.).</li> </ul>					
<b>Zoning Code</b>	Yes	Local	Yes – if municipality has a Planning Board	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>• 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.</li> <li>• The Zoning Officer is responsible for this code in compliance with Chapter 19, Zoning.</li> <li>• The ordinance notes the purpose of securing safety from fire, flood, panic, and other dangers.</li> </ul>					
<b>Subdivisions</b>	Yes	Local	Yes – if municipality has a Planning Board	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>• 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</li> </ul>					





	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.
<p><i>commissioners of any county having a county planning board shall provide for the review of all subdivisions of land within the county by said county planning board and for the approval of those subdivisions affecting county road or drainage facilities as set forth and limited hereinafter in this section.</i></p> <ul style="list-style-type: none"> <li>The Land Use Board is responsible for this ordinance in compliance with Chapter 18.</li> </ul>					
<b>Stormwater Management</b>	Yes	Local	Yes	Yes	-
<p><b>Comment:</b></p> <ul style="list-style-type: none"> <li>See Title 7 of the NJ Administrative Code, N.J.A.C. 7:8</li> <li>The Engineering Department is responsible for this ordinance.</li> </ul>					
<b>Post-Disaster Recovery</b>	No	-	No	-	-
<p><b>Comment:</b></p>					
<b>Real Estate Disclosure</b>	Yes	State, Division of Consumer Affairs	Yes	Yes	-
<p><b>Comment:</b> 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.</p>					
<b>Growth Management</b>	No	-	Yes – if municipality has a Planning Board	-	-
<p><b>Comment:</b></p> <ul style="list-style-type: none"> <li>State Mandated on a municipal level. See Zoning Ordinance; Also - Plan Endorsement Process via the State Development &amp; 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.</li> </ul>					
<b>Site Plan Review</b>	Yes	Local	Yes – if municipality has a Planning Board	Yes	-
<p><b>Comment:</b></p> <ul style="list-style-type: none"> <li>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 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.</li> <li>The Land Use Board is responsible for these requirements in compliance with Chapter 21.</li> </ul>					
<b>Environmental Protection</b>	Yes	Local	No	Yes	-
<p><b>Comment:</b></p> <ul style="list-style-type: none"> <li>The Zoning Officer is responsible for this code in compliance with Chapter 19, Zoning.</li> <li>The ordinance notes the purpose “to promote the establishment of appropriate population densities and concentrations that will contribute to the well being of persons, neighborhood, communities and preservation of the environment”</li> </ul>					
<b>Flood Damage Prevention</b>	Yes	Federal, State & Local	Yes	Yes	2020-Borough of Sussex-006
<p><b>Comment:</b></p> <ul style="list-style-type: none"> <li>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.</li> <li>This ordinance follows Chapter 22- Flood Hazard Areas. 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:</li> </ul>					



	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.
<ul style="list-style-type: none"> <li>○ Protect human life and health;</li> <li>○ Minimize expenditure of public money for costly flood control projects;</li> <li>○ Minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;</li> <li>○ Minimize prolonged business interruptions;</li> <li>○ Minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets, bridges located in areas of special flood hazard;</li> <li>○ 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;</li> <li>○ Ensure that potential buyers are notified that property is in an area of special flood hazard; and</li> <li>○ Ensure that those who occupy the areas of special flood hazard assume responsibility for their actions.</li> </ul> <ul style="list-style-type: none"> <li>● The ordinance currently lacks the state mandated freeboard requirement.</li> </ul>					
<b>Wellhead Protection</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Emergency Management</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Climate Change</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Disaster Recovery Ordinance</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Disaster Reconstruction Ordinance</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Other</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Planning Documents</b>					
<b>Comprehensive / Master Plan</b>	Yes	Local	Yes	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>● 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.</li> <li>● The Planner is responsible for this plan, which was adopted on September 21, 2009.</li> </ul>					
<b>Capital Improvement Plan</b>	Yes	Local	No	Yes	-
<i>Comment:</i>					
<b>Disaster Debris Management Plan</b>	No	-	No	-	2020-Borough of Sussex-007
<i>Comment:</i>					
<b>Floodplain or Watershed Plan</b>	No	-	No	-	-
<i>Comment:</i>					



	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.
<b>Stormwater Management Plan</b>	No	State & Local	Yes	-	-
<b>Comment:</b> <ul style="list-style-type: none"> <li>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.</li> </ul>					
<b>Stormwater Pollution Prevention Plan</b>	No	-	Yes	-	-
<b>Comment:</b> <ul style="list-style-type: none"> <li>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.</li> </ul>					
<b>Urban Water Management Plan</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Habitat Conservation Plan</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Economic Development Plan</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Shoreline Management Plan</b>	No	-	Yes – if located in a coastal zone	-	-
<b>Comment:</b> <ul style="list-style-type: none"> <li>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.</li> </ul>					
<b>Community Wildfire Protection Plan</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Community Forest Management Plan</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Transportation Plan</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Agriculture Plan</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Climate Action Plan</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Tourism Plan</b>	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.
<i>Comment:</i>					
<b>Business Development Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Other Plans</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Response/Recovery Planning</b>					
<b>Comprehensive Emergency Management Plan (CEMP) / Emergency Operations Plan (EOP)</b>	Yes	Local	Yes	No	2020-Borough of Sussex-008
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>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.</li> <li>The Office of Emergency Management is responsible for this plan.</li> </ul>					
<b>Threat &amp; Hazard Identification &amp; Risk Assessment (THIRA)</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Post-Disaster Recovery Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Continuity of Operations Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Public Health Plan</b>	No	-	No	-	-
<i>Comment:</i>					
	No	-	No	-	-
<i>Comment:</i>					

**Table 9.22-4. Development and Permitting Capability**

Criterion	Response
Does your jurisdiction issue development permits? - If no, who does? If yes, which department?	No
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 Borough of Sussex.

**Table 9.22-5. Administrative and Technical Capabilities**

Staff/Personnel Resource	Available?	Department/Agency/Position
<b>Administrative Capability</b>		
Planning Board	Yes	Planning & Zoning





Staff/Personnel Resource	Available?	Department/Agency/Position
Mitigation Planning Committee	No	-
Environmental Board / Commission	Yes	Shade Tree Commission
Open Space Board / Committee	No	-
Economic Development Commission / Committee	No	-
Warning Systems / Services (reverse 911, outdoor warning signals)	Yes	Administrator operates a Nixle alert system
Maintenance program to reduce risk	No	-
Mutual aid agreements	Yes	County
<b>Technical/Staffing Capability</b>		
Planners or engineers with knowledge of land development and land management practices	Yes	Planner-Ken Nelson, Engineer-Harold Pellow
Engineers or professionals trained in building or infrastructure construction practices	Yes	Planner-Ken Nelson, Engineer-Harold Pellow
Planners or engineers with an understanding of natural hazards	Yes	Planner-Ken Nelson, Engineer-Harold Pellow
Staff with training in benefit/cost analysis	Yes	CFO
Staff with training in green infrastructure	No	-
Staff with education/knowledge/training in low impact development	No	-
Surveyor	No	-
Stormwater engineer	No	-
Personnel skilled or trained in GIS applications	No	-
Local or state water quality professional	No	-
Scientist familiar with natural hazards in local area	No	-
Emergency manager	Yes	OEM
Watershed planner	No	-
Environmental specialist	No	-
Grant writers	Yes	Bruno Associates
Resilience Officer	No	-
Other: NFIP Floodplain Administrator	Yes	Municipal Zoning Enforcement Officer – Kevin Kervatt
Other: Professionals trained in conducting damage assessments	Yes	Water Sewer Engineer

**FISCAL CAPABILITY**

The table below summarizes financial resources available to the Borough of Sussex.

**Table 9.22-6. Fiscal Capabilities**

Financial Resource	Accessible or Eligible to Use?
Community Development Block Grants (CDBG, CDBG-DR)	No
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Yes (Special Assessments)
User Fees for Water, Sewer, Gas or Electric Service	Yes
Incur Debt through General Obligation Bonds	Yes
Incur Debt through Special Tax Bonds	No
Incur Debt through Private Activity Bonds	No
Withhold Public Expenditures in Hazard-Prone Areas	No





Financial Resource	Accessible or Eligible to Use?
State-Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	No
Clean Water Act 319 Grants (Nonpoint Source Pollution)	No
Other	No

**EDUCATION AND OUTREACH CAPABILITY**

The table below summarizes the education and outreach resources available to the Borough of Sussex.

**Table 9.22-7. Education and Outreach Capabilities**

Criterion	Response
Do you have a public information officer or communications office?	Yes – Administrator as part of the Emergency Management Committee
Do you have personnel skilled or trained in website development?	No
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.	No
Do you have any other programs already in place that could be used to communicate hazard-related information? If yes, briefly describe.	No

**COMMUNITY CLASSIFICATIONS**

The table below summarizes the classifications for community programs available to the Borough of Sussex.

**Table 9.22-8. Community Classifications**

Program	Participating?	Classification	Date Classified
Community Rating System	No	-	-
Building Code Effectiveness Grading Schedule (BCEGS)	No	-	-
Public Protection (Fire ISO Protection Class)	Yes	6	2016
Storm Ready Certification	No	-	-
Firewise Community Classification	No	-	-
Sustainable Jersey	No	-	-
Public Education Program/Outreach (through website, social media)	Yes	-	-

**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 9.22-9. 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	Moderate
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 Borough does not currently have access to resources to determine the possible impacts of climate change upon the municipality. The Borough 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 9.22-10. National Flood Insurance Program Compliance**

Criterion	Response
What local department is responsible for floodplain management?	Zoning
Who is your floodplain administrator? (name, department/position)	Kevin Kervatt/Zoning/Zoning Officer
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 set by FEMA and the State.
When was the most recent Community Assistance Visit or Community Assistance Contact?	July 26, 1990
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.	No
Do your flood hazard maps adequately address the flood risk within your jurisdiction? -If no, state why.	Yes





Criterion	Response
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 indicated that there are barriers to running an effective floodplain management program due to lack of personnel. The FPA also stated that he does not feel adequately supported or trained to fulfill his role as the municipal floodplain administrator and that he would consider attending continuing education and/or certification training on floodplain management if it was mandatory.
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
How many flood insurance policies are in force in your jurisdiction?*	4 policies
-What is the insurance in force?	\$1,910,000 in coverage
-What is the premium in force?	\$4,325 in premiums
How many total loss claims have been filed in your jurisdiction?*	4 claims
-How many claims are still open or were closed without payment?	\$65,202 in payments
-What were the total payments for losses?	
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?	Yes

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

### 9.22.5 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 Borough of Sussex’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 9.21-11 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 9.22-11. 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 Weather and Snowstorm	Yes	A major nor'easter, produced record snowfall and blizzard conditions in parts of New Jersey on January 23 <sup>rd</sup> and 24 <sup>th</sup> .	Although the County was impacted, the Borough did not report damages.
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.	Ongoing. PPE supplies purchased. Modified hours for the Borough Hall.

Source: FEMA 2020, NOAA NCEI 2020





### 9.22.6 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 Borough of Sussex 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 Borough of Sussex 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 Borough of Sussex has significant exposure.

#### REPETITIVE FLOOD LOSSES

The following summarizes the repetitive and severe repetitive flood losses in the Borough of Sussex.

- Number of repetitive loss (RL) properties: 1
- 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 CRITICAL FACILITIES

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

Table 9.22-12. Critical Facilities and Lifelines Flood Exposure

Name	Type	Exposure	
		1% Event	0.2% Event
JCP&L	Electrical Substation		X
Clove River Dam	Dam	X	X
DPW Garage/Sewer Department	DPW	X	X

Source: Sussex County Planning Partnership 2020

Note: \*Identified lifeline

#### IDENTIFIED ISSUES AND PROBLEM AREAS

The jurisdiction has identified the following vulnerabilities within their community:

- The Borough has aging equipment and limited manpower for a long duration winter storm.
- Borough Hall has no backup generator. It was not previously feasible to install until the Borough bought the lot next to the Borough Hall
- Firehouse is used as an EOC which leads to increased usage during a power outage.
- Clove River Dam is a flood risk. The County route and local road run over the Clove Brook which if flooded would take out two bridges that separate the Firehouse from the rest of the town. Flood risk





could be reduced through stream bank stabilization surrounding confluence of Clove Brook and Papakating Creek.

- The DPW Garage/Sewer Department is in floodplain of Papakating Creek.
- The Borough has one repetitive loss property.

**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 Borough of Sussex 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 Borough of Sussex. The Borough of Sussex 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 Borough of Sussex agreed with the calculated hazard rankings.

**Table 9.22-13. Borough of Sussex Hazard Ranking**

<b>Dam Failure</b>	<b>Disease Outbreak</b>	<b>Drought</b>	<b>Earthquake</b>	<b>Flood</b>	<b>Geologic</b>	
Medium	Medium	Medium	Low	Medium	Low	
<b>Hazardous Materials</b>	<b>Hurricane and Tropical Storm</b>	<b>Invasive Species</b>	<b>Nor’Easter</b>	<b>Severe Weather</b>	<b>Severe Winter Weather</b>	<b>Wildfire</b>
Medium	High	Medium	High	High	High	Low

**9.22.7 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 9.21-15 and Table 9.21-16 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 9.22-14. 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	Enter 2021 HMP Action #
Sussex Boro-1 (old #1)	Stream bank stabilization, rip-wrap instillation surrounding confluence of Clove Brook and Papakating Creek.	DPW Manager	No Progress	X	2020-Borough of Sussex-005
Sussex Boro-2 (old #2)	Stream bank stabilization of town reservoir and feeder waterway to water treatment plant.	DPW Manager	No Progress	X	2020-Borough of Sussex-005
Sussex Boro-3 (old #3)	Armoring of Lake Rutherford Dam located in High Point State Park.	DPW Manager	In Progress	X	
Sussex Boro-4 (old #4)	Armoring of Colesville Reservoir Dam located Brink Road	DPW Manager	In Progress	X	
Sussex Boro-5 (old #5)	Retrofit impact resistant windows and shutters on Sussex Fire Department building located on Loomis Avenue.	Station Commander	No Progress		
Sussex Boro-6 (old #6)	Retrofit impact resistant windows and shutters on Sussex Middle School located on Loomis Avenue	School Administration	No Progress		
Sussex Boro-7 (old #7)	Retrofit roof to meet current standards for snow load on original section of Sussex middle School located on Loomis Avenue.	School Administration	No Progress		
Sussex Boro-8 (old #8-10)	Ensure continuity of operations at critical facilities. The following were identified at this time: 1. Backup generator for shelter at Sussex Christian School located on Unionville Avenue 2. Backup generator for shelter at Emergency Operations Center located on Main Street. 3. Backup generator for shelter at Department of Public Works garage located on Brookside Avenue.	OEM Coordinator	In Progress; pursue generator for EOC and Borough Hall	X	2020-Borough of Sussex-001
Sussex Boro-9 (old #11)	Implement Fire Wise Program throughout the Borough.	OEM Coordinator	No Progress		
Sussex Boro-10 (old #12)	Flood-proofing of the Sussex Boro Fire Company building.	Municipal Fire Chief	No Progress		
Sussex Boro-11 (old #13)	Conduct all-hazards public education and outreach program for hazard mitigation and preparedness.	OEM Coordinator	Ongoing Capability		





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 #
Sussex Boro-12 (new)	Raise sewer pumps	DPW	No Progress	X	2020-Borough of Sussex-003
Sussex Boro-13 (new)	Sewer pumps and DPW garage floor	DPW Manager	No Progress	X	2020-Borough of Sussex-003

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

- None identified

**PROPOSED HAZARD MITIGATION INITIATIVES FOR THE PLAN UPDATE**

The Borough of Sussex 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 Borough of Sussex 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 9.21-15 summarizes the comprehensive-range of specific mitigation initiatives the Borough of Sussex 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 9.21-16 provides a summary of the prioritization of all proposed mitigation initiatives for this HMP update.



Table 9.22-15. 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
2020-Borough of Sussex-001	Backup Generator for Critical Facilities	<p><b>Problem:</b> Backup power sources are necessary to maintain critical services for critical facilities. Borough Hall has no backup generator. It was not previously feasible to install until the Borough bought the lot next to the Borough Hall. In addition, the Firehouse is used as an Emergency Operations Center which leads to increased usage during a power outage.</p> <p><b>Solution:</b> The Borough Engineer will research what size generator is needed to power the Borough Hall. The Borough will then purchase and install the selected generator and necessary electrical components to supply backup power to the Borough Hall.</p> <p>The Engineer will also review the generator in place at the Fire House to ensure that it has the capacity to support its use as an Emergency Operations Center. If the generator is lacking the capacity needed, the Borough will replace the generator with the correct sized generator.</p> <p>Public Works will be responsible for maintenance of generators.</p>	Existing	Severe Weather, Severe Winter Weather, Hurricane, Nor’Easter	1, 2, 3, 6	Engineer, Public Works	FEMA HMGP and BRIC, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Municipal Budget	Ensure continuity of operations of critical facilities	\$50,000	Within 5 years	High	SIP	ES
2020-Borough of Sussex-002	Repetitive Loss Mitigation	<p><b>Problem:</b> The Borough has one repetitive loss property. There may be additional properties with high flood risk. These properties require mitigation to prevent future losses and prevent loss of life and property damage.</p> <p><b>Solution:</b> The Borough will conduct outreach to the RL property owner and property owners that have high flood risk 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</p>	Existing	Flood, Severe Weather	1, 2	NFIP Floodplain Administrator, supported by homeowners	FEMA HMGP and FMA, BRIC, local cost share by residents	Eliminates flood damage to homes and residents, creates open space for the municipi	\$200,000	3 years	High	SIP	PP





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
		obtain funding to implement acquisition/purchase/moving/elevating residential homes in the flood prone areas that experience frequent flooding (high risk areas).						quality increasing flood storage					
2020-Borough of Sussex-003	Raised Sewer Pumps at DPW	<p><b>Problem:</b> The DPW Garage/Sewer Department is in floodplain of Papakating Creek. Flooding is a concern.</p> <p><b>Solution:</b> The Borough will install and raise larger replacement sewer pumps along with an applicable sized backup generator and necessary electrical components.</p>	Existing	Flood, Severe Weather	2, 6	Public Works	HMGP, BRIC, Borough budget	Reduction in flooding damages, continuity of operations	High	Within 5 years	High	SIP	PP
2020-Borough of Sussex-004	Increase Winter Storm Capabilities	<p><b>Problem:</b> The Borough has aging equipment and limited manpower for a long duration winter storm.</p> <p><b>Solution:</b> The Borough will work to secure funding for aging equipment and replace as necessary. The Borough will also explore shared services with other municipalities/county/state DPWs and establish agreements with private contractors for long duration storms.</p>	N/A	Severe Winter Weather	5, 6	Administration, DPW	Municipal budget	Increased winter storm capabilities	Low	Within 2 years	High	LPR	ES
2020-Borough of Sussex-005	Streambank Stabilization	<p><b>Problem:</b> Clove River Dam is a flood risk. The County route and local road run over the Clove Brook which if flooded would take out two bridges that separate the Firehouse from the rest of the town.</p> <p><b>Solution:</b> The Borough will aim to reduce flood risk through stream bank stabilization surrounding confluence of Clove Brook and Papakating Creek.</p>	N/A	Dam Failure, Flood, Severe Weather	2, 7	Administration	HMGP, BRIC, Borough budget	Reduction in flood risk	\$75,000	Within 5 years	High	NSP	NR
2020-Borough of Sussex-006	Flood Damage Prevention Ordinance	<p><b>Problem:</b> The Borough’s Flood Damage Prevention Ordinance lacks the state mandated freeboard requirement.</p> <p><b>Solution:</b> The Borough will adopt an updated version of the Flood Damage Prevention Ordinance which includes the state mandated freeboard requirement.</p>	New and Existing	Flood	2	FPA, Administration	Borough budget	Meeting of state standards	Staff time	1 year	High	LPR	PR



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
2020-Borough of Sussex-007	Disaster Debris Management Plan	<b>Problem:</b> The Borough lacks a Disaster Debris Management Plan.	Existing.	All Hazards	2, 3, 5, 6	OEM, DPW	Borough budget	Increased emergency capabilities	Staff time	1 year	High	LPR	ES
		<b>Solution:</b> The Borough will develop and adopt a Disaster Debris Management Plan.											
2020-Borough of Sussex-008	Update Emergency Operations Plan to Include Mitigation Integration	<b>Problem:</b> The Borough’s Emergency Operations Plan is due for update. The plan currently lacks information on hazard mitigation integration.	Existing	All Hazards	1, 2, 3, 4, 5, 6	OEM	Borough budget	Increased hazard mitigation integration and emergency capabilities	Staff time	Within 1 year	High	LPR	ES
		<b>Solution:</b> The Borough will update the Emergency Operations Plan and increase the integration of hazard mitigation concepts and information derived from the HMP.											
2020-Borough of Sussex-009	Dam Armoring	<b>Problem:</b> Lake Rutherford Dam (located in High Point State Park) and Colesville Reservoir Dam (located on Brink Road) require upgrades to reduce the change of dam failure. The areas the dams are located in have experienced flooding in the past, heightening the chance of dam failure.	Existing.	Dam Failure, Flood, Severe Weather	2, 7	DPW	HMGP, BRIC, FMA, High Hazard Potential Dam (HHPD) Grant, Borough budget	Address long term risk of dam failure	High	2 years	High	SIP	PP, SP
		<b>Solution:</b> The DPW manager will complete in progress efforts to armor Lake Rutherford Dam and Colesville Reservoir Dam.											

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 9.22-16. 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	Time line	Agency Champion	Other Community Objectives	Total	High / Medium / Low
2020-Borough of Sussex-001	Backup Generator for Critical Facilities	1	1	1	1	1	1	0	1	1	1	1	0	1	1	12	High ⚠
2020-Borough of Sussex-002	Repetitive Loss Mitigation	1	1	1	1	1	1	0	1	0	0	1	0	1	1	10	High
2020-Borough of Sussex-003	Raised Sewer Pumps at DPW	0	1	1	1	1	1	0	1	1	1	1	0	1	1	11	High
2020-Borough of Sussex-004	Increase Winter Storm Capabilities	1	1	1	1	1	1	1	1	1	1	1	0	1	1	13	High
2020-Borough of Sussex-005	Streambank Stabilization	0	1	1	1	1	0	0	1	1	1	1	0	1	1	10	High
2020-Borough of Sussex-006	Flood Damage Prevention Ordinance	0	1	1	1	1	1	1	1	1	1	0	1	1	1	12	High
2020-Borough of Sussex-007	Disaster Debris Management Plan	0	1	1	1	1	1	1	1	1	1	1	1	1	1	13	High
2020-Borough of Sussex-008	Update Emergency Operations Plan to Include Mitigation Integration	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	High
2020-Borough of Sussex-009	Dam Armoring	1	1	1	1	1	1	0	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 9.22-17. 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		X	X	X	X	X
Disease Outbreak					X			X
Drought					X			X
Earthquake					X			X
Flood	X	X		X	X			X
Geologic					X			X
Hazardous Materials					X			X
Hurricane and Tropical Storm					X			X
Invasive Species					X			X
Nor’Easter					X			X
Severe Weather		X		X	X	X		X
Severe Winter Weather					X			X
Wildfire					X			X

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

- RED** high ranked hazard
- ORANGE** medium ranked hazard
- YELLOW** low ranked hazard



Figure 9.22-1. Borough of Sussex Hazard Area Extent and Location Map 1

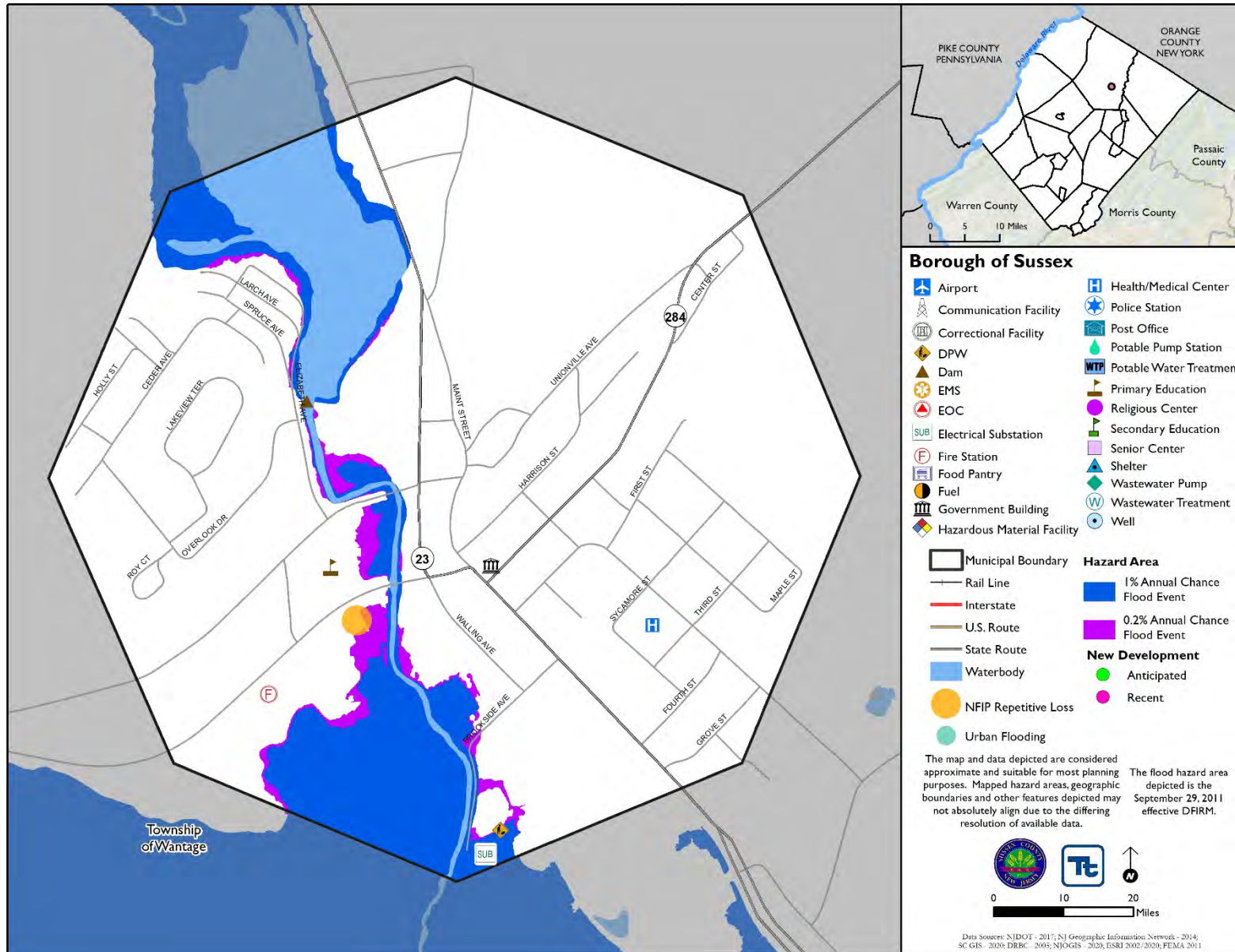






Figure 9.22-2. Borough of Sussex Hazard Area Extent and Location Map 2

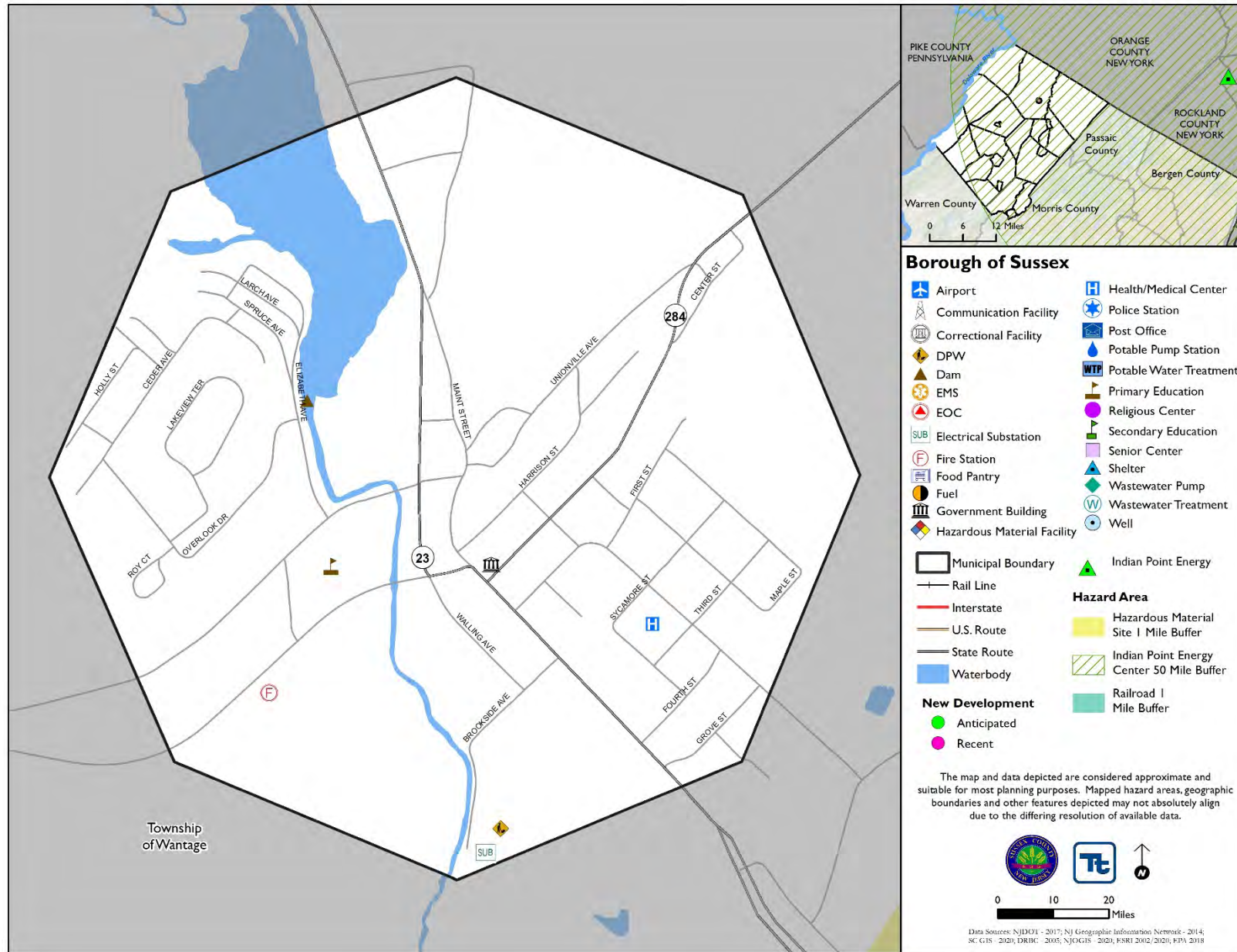
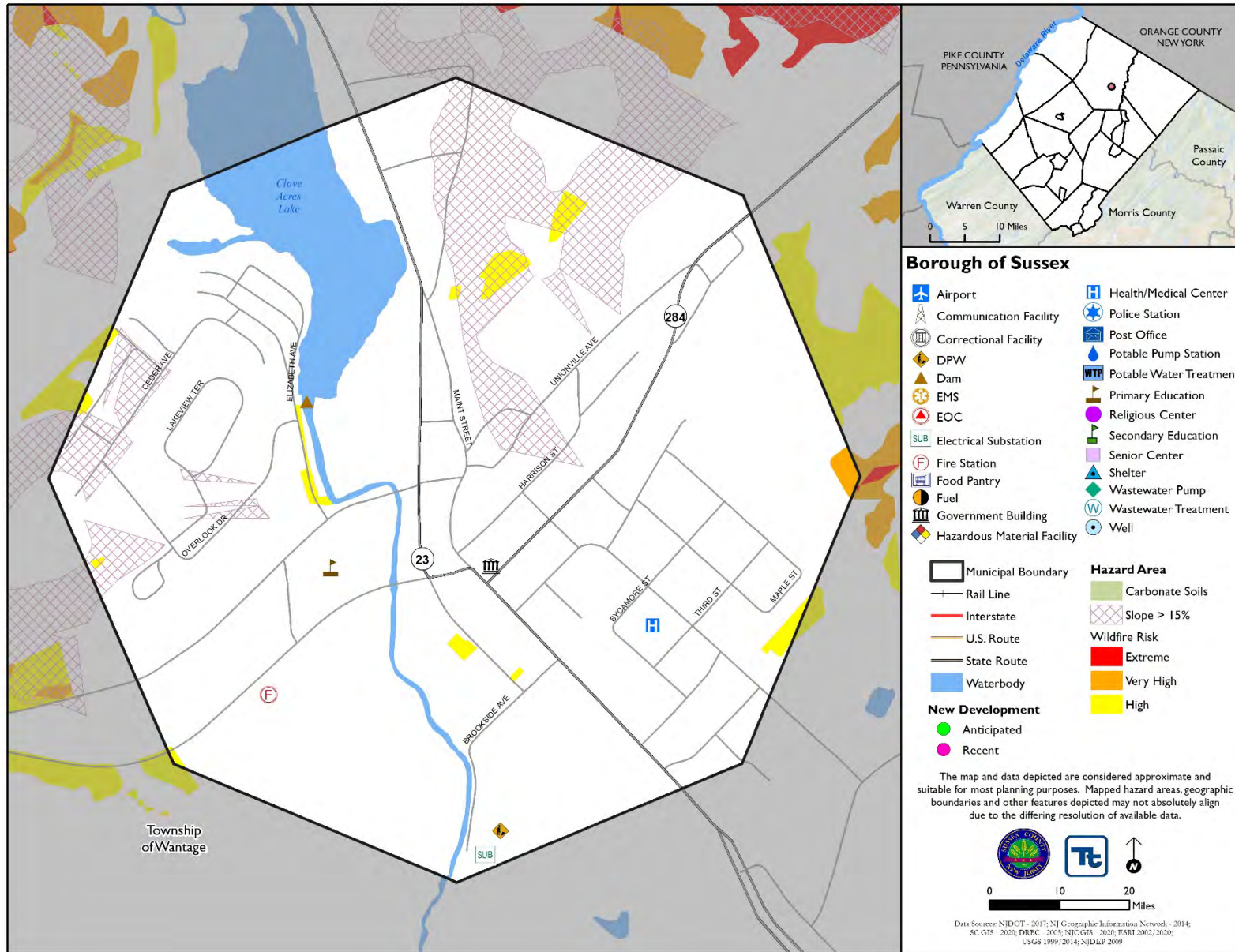




Figure 9.22-3 Borough of Sussex Hazard Area Extent and Location Map 3





Action Worksheet			
<b>Project Name:</b>	Backup Generator for Critical Facilities		
<b>Project Number:</b>	2020-Borough of Sussex-001		
Risk / Vulnerability			
<b>Hazard(s) of Concern:</b>	Severe Weather, Severe Winter Weather, Hurricane, Nor'Easter		
<b>Description of the Problem:</b>	Backup power sources are necessary to maintain critical services for critical facilities. Borough Hall has no backup generator. It was not previously feasible to install until the Borough bought the lot next to the Borough Hall. In addition, the Firehouse is used as an Emergency Operations Center which leads to increased usage during a power outage.		
Action or Project Intended for Implementation			
<b>Description of the Solution:</b>	<p>The Borough Engineer will research what size generator is needed to power the Borough Hall. The Borough will then purchase and install the selected generator and necessary electrical components to supply backup power to the Borough Hall.</p> <p>The Engineer will also review the generator in place at the Fire House to ensure that it has the capacity to support its use as an Emergency Operations Center. If the generator is lacking the capacity needed, the Borough will replace the generator with the correct sized generator.</p> <p>Public Works will be responsible for maintenance of generators.</p>		
<b>Is this project related to a Critical Facility?</b>	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
<b>Level of Protection:</b>	N/A	<b>Estimated Benefits (losses avoided):</b>	Ensures continuity of operations of critical facilities
<b>Useful Life:</b>	20 years	<b>Goals Met:</b>	1, 2, 3, 6
<b>Estimated Cost:</b>	\$50,000	<b>Mitigation Action Type:</b>	Structure and Infrastructure Projects (SIP)
Plan for Implementation			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	Within 5 years
<b>Estimated Time Required for Project Implementation:</b>	1 year	<b>Potential Funding Sources:</b>	FEMA HMGP and BRIC, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Municipal Budget
<b>Responsible Organization:</b>	Engineer, Public Works	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	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)			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			



Action Worksheet		
<b>Project Name:</b>	Backup Generator for Critical Facilities	
<b>Project Number:</b>	2020-Borough of Sussex-001	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
<b>Life Safety</b>	1	Project will protect critical services of Borough Hall and Fire House
<b>Property Protection</b>	1	Project will protect buildings from power loss.
<b>Cost-Effectiveness</b>	1	
<b>Technical</b>	1	
<b>Political</b>	1	
<b>Legal</b>	1	The Borough has the legal authority to complete the project.
<b>Fiscal</b>	0	Project requires funding support.
<b>Environmental</b>	1	
<b>Social</b>	1	
<b>Administrative</b>	1	
<b>Multi-Hazard</b>	1	Severe Weather, Severe Winter Weather, Hurricane, Nor'Easter
<b>Timeline</b>	0	Within 5 years
<b>Agency Champion</b>	1	Engineer, Public Works
<b>Other Community Objectives</b>	1	
<b>Total</b>	12	
<b>Priority (High/Med/Low)</b>	High	



Action Worksheet			
<b>Project Name:</b>	Repetitive Loss Mitigation		
<b>Project Number:</b>	2020-Borough of Sussex-002		
Risk / Vulnerability			
<b>Hazard(s) of Concern:</b>	Flood, Severe Weather, Hurricane, Nor'easter, Climate Change and Sea Level Rise		
<b>Description of the Problem:</b>	The Borough has one repetitive loss property. There may be additional properties with high flood risk. These properties require mitigation to prevent future losses and prevent loss of life and property damage.		
Action or Project Intended for Implementation			
<b>Description of the Solution:</b>	The Borough will conduct outreach to the RL property owner and property owners that have high flood risk 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).		
<b>Is this project related to a Critical Facility or Lifeline?</b>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
<b>Level of Protection:</b>	1% annual chance flood event + freeboard <i>(in accordance with flood ordinance)</i>	<b>Estimated Benefits (losses avoided):</b>	Eliminates flood damage to homes and residents, creates open space for the municipality increasing flood storage.
<b>Useful Life:</b>	Acquisition: Lifetime Elevation: 30 years (residential)	<b>Goals Met:</b>	1, 2
<b>Estimated Cost:</b>	\$200,000	<b>Mitigation Action Type:</b>	Structure and Infrastructure Project
Plan for Implementation			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	6-12 months
<b>Estimated Time Required for Project Implementation:</b>	Three years	<b>Potential Funding Sources:</b>	FEMA HMGP and FMA, BRIC, local cost share by residents
<b>Responsible Organization:</b>	NFIP Floodplain Administrator, supported by homeowners	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard Mitigation
Three Alternatives Considered (including No Action)			
<b>Alternatives:</b>	<b>Action</b>	<b>Estimated Cost</b>	<b>Evaluation</b>
	No Action	\$0	Current problem continues
	Elevate homes	\$200,000	When this area floods, the entire area is impacted; elevating homes would not eliminate the problem and still lead to road closures and impassable roads
	Elevate roads	\$200,000	Elevated roadways would not protect the homes from flood damages
Progress Report (for plan maintenance)			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			



Action Worksheet		
<b>Project Name:</b>	Repetitive Loss Mitigation	
<b>Project Number:</b>	2020-Borough of Sussex-002	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
<b>Life Safety</b>	1	Families moved out of high-risk flood areas.
<b>Property Protection</b>	1	Properties removed from high-risk flood areas.
<b>Cost-Effectiveness</b>	1	Cost-effective project
<b>Technical</b>	1	Technically feasible project
<b>Political</b>	1	
<b>Legal</b>	1	The Borough has the legal authority to conduct the project.
<b>Fiscal</b>	0	Project will require grant funding.
<b>Environmental</b>	1	
<b>Social</b>	0	Project would remove families from the flood prone areas of the Borough.
<b>Administrative</b>	0	
<b>Multi-Hazard</b>	1	Flood, Severe Weather, Hurricane, Nor'easter, Climate Change and Sea Level Rise, Severe Weather
<b>Timeline</b>	0	
<b>Agency Champion</b>	1	NFIP Floodplain Administrator, supported by homeowners
<b>Other Community Objectives</b>	1	
<b>Total</b>	10	
<b>Priority (High/Med/Low)</b>	High	



Action Worksheet			
<b>Project Name:</b>	Raised Sewer Pumps at DPW		
<b>Project Number:</b>	2020-Borough of Sussex-003		
Risk / Vulnerability			
<b>Hazard(s) of Concern:</b>	Flood, Severe Weather		
<b>Description of the Problem:</b>	The DPW Garage/Sewer Department is in floodplain of Papakating Creek. Flooding is a concern.		
Action or Project Intended for Implementation			
<b>Description of the Solution:</b>	The Borough will install and raise larger replacement sewer pumps along with an appropriately sized backup generator and necessary electrical components. The pumps will be protected to the 500-year flood level.		
<b>Is this project related to a Critical Facility?</b>	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
<b>Level of Protection:</b>	500-year flood level	<b>Estimated Benefits (losses avoided):</b>	Reduction in flooding damages, continuity of operations
<b>Useful Life:</b>	50 years	<b>Goals Met:</b>	2, 6
<b>Estimated Cost:</b>	High	<b>Mitigation Action Type:</b>	Structure and Infrastructure Project
Plan for Implementation			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	Within 5 years
<b>Estimated Time Required for Project Implementation:</b>	1 year	<b>Potential Funding Sources:</b>	HMGP, BRIC, Borough budget
<b>Responsible Organization:</b>	Public Works	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard mitigation
Three Alternatives Considered (including No Action)			
<b>Alternatives:</b>	<b>Action</b>	<b>Estimated Cost</b>	<b>Evaluation</b>
	No Action	\$0	Problem continues.
	Raise roadways in the area	\$250,000	Flooding likely to impact property owners
	Elevate homes in the area	\$3 million	Costly and roadways still flood
Progress Report (for plan maintenance)			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			



Evaluation and Prioritization		
<b>Project Name:</b>	Raised Sewer Pumps at DPW	
<b>Project Number:</b>	2020-Borough of Sussex-003	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	0	
Property Protection	1	Project will protect sewer pumps from flooding
Cost-Effectiveness	1	
Technical	1	The project is technically feasible
Political	1	
Legal	1	The Borough is legally able to complete the project
Fiscal	0	Project requires funding support
Environmental	1	
Social	1	
Administrative	1	
Multi-Hazard	1	Flood, Severe Weather
Timeline	0	Within 5 years
Agency Champion	1	Public Works
Other Community Objectives	1	
<b>Total</b>	11	
<b>Priority (High/Med/Low)</b>	High	





Action Worksheet			
<b>Project Name:</b>	Streambank Stabilization		
<b>Project Number:</b>	2020-Borough of Sussex-005		
Risk / Vulnerability			
<b>Hazard(s) of Concern:</b>	Flood, Landslide		
<b>Description of the Problem:</b>	Clove River Dam is a flood risk. The County route and local road run over the Clove Brook which if flooded would take out two bridges that separate the Firehouse from the rest of the town.		
Action or Project Intended for Implementation			
<b>Description of the Solution:</b>	The Borough will aim to reduce flood risk through stream bank stabilization surrounding confluence of Clove Brook and Papakating Creek.		
<b>Is this project related to a Critical Facility?</b>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
<b>Level of Protection:</b>	N/A	<b>Estimated Benefits (losses avoided):</b>	Landslide and flood risk reduced
<b>Useful Life:</b>	1 year	<b>Goals Met:</b>	2, 7
<b>Estimated Cost:</b>	\$75,000	<b>Mitigation Action Type:</b>	Natural Systems Protection
Plan for Implementation			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	Within 5 years
<b>Estimated Time Required for Project Implementation:</b>	1 year	<b>Potential Funding Sources:</b>	HMGP, BRIC, Borough budget
<b>Responsible Organization:</b>	Administration	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard mitigation
Three Alternatives Considered (including No Action)			
<b>Alternatives:</b>	<b>Action</b>	<b>Estimated Cost</b>	<b>Evaluation</b>
	No Action	\$0	Problem continues.
	Retreat from areas near stream	High	Costly, unpopular
	Levees along stream	High	Not feasible/environmentally damaging, costly
Progress Report (for plan maintenance)			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			



Action Worksheet		
<b>Project Name:</b>	Streambank Stabilization	
<b>Project Number:</b>	2020-Borough of Sussex-005	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	0	
Property Protection	1	Project will protect properties 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	Dam Failure, Flood, Severe Weather
Timeline	0	
Agency Champion	1	Administration
Other Community Objectives	1	Restore natural floodplain function
<b>Total</b>	10	
<b>Priority (High/Med/Low)</b>	High	



Action Worksheet			
<b>Project Name:</b>	Dam Armoring		
<b>Project Number:</b>	2020-Borough of Sussex-009		
Risk / Vulnerability			
<b>Hazard(s) of Concern:</b>	Dam Failure, Flood, Severe Weather		
<b>Description of the Problem:</b>	Lake Rutherford Dam (located in High Point State Park) and Colesville Reservoir Dam (located on Brink Road) require upgrades to reduce the change of dam failure. The areas the dams are located in have experienced flooding in the past, heightening the chance of dam failure.		
Action or Project Intended for Implementation			
<b>Description of the Solution:</b>	The DPW manager will complete in progress efforts to armor Lake Rutherford Dam and Colesville Reservoir Dam.		
<b>Is this project related to a Critical Facility or Lifeline?</b>	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
<b>Level of Protection:</b>	500-year flood	<b>Estimated Benefits (losses avoided):</b>	Address long term risk of dam failure
<b>Useful Life:</b>	50 years	<b>Goals Met:</b>	2, 7
<b>Estimated Cost:</b>	High	<b>Mitigation Action Type:</b>	Structure and Infrastructure Project
Plan for Implementation			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	2 years
<b>Estimated Time Required for Project Implementation:</b>	2 years	<b>Potential Funding Sources:</b>	HMGP, BRIC, FMA, High Hazard Potential Dam (HHPD) Grant, Borough budget
<b>Responsible Organization:</b>	DPW	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard Mitigation Planning
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues
	Buyout properties downstream	High	High cost, high social impacts
	Remove Dam	High	Dams cannot be removed for safety reasons and water supply
Progress Report (for plan maintenance)			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			



Action Worksheet		
<b>Project Name:</b>	Dam Armoring	
<b>Project Number:</b>	2020-Borough of Sussex-009	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Project protects life from dam failure
Property Protection	1	Project protects property from dam failure
Cost-Effectiveness	1	
Technical	1	
Political	1	There is public support for the project
Legal	1	The Borough has the legal authority to complete the project
Fiscal	0	The project requires funding support
Environmental	1	
Social	1	
Administrative	1	
Multi-Hazard	1	Dam Failure, Flood
Timeline	1	1
Agency Champion	1	DPW
Other Community Objectives	1	
<b>Total</b>	13	
<b>Priority (High/Med/Low)</b>	High	



## 9.23 TOWNSHIP OF VERNON

This section presents the jurisdictional annex for the Township of Vernon. The annex includes a general overview of the Township of Vernon; an assessment of the Township of Vernon’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.

### 9.23.1 Hazard Mitigation Planning Team

The Township of Vernon 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 9.23-1. Hazard Mitigation Planning Team

Primary Point of Contact		Alternate Point of Contact
Name / Title: Ken Clark, OEM Coordinator Address: 21 Church Street, Vernon, NJ 07462 Phone Number: (973) 600-7612 Email: kenclark213@gmail.com		Name / Title: Dan Young, Deputy OEM Coordinator/Police Chief Address: 21 Church Street, Vernon, NJ 07462 Phone Number: 973-764-6155 Email: dyoung43@vernonpolice.com
NFIP Floodplain Administrator		
Name / Title: Robert Westenberger, Construction Official Address: 21 Church Street Vernon, NJ 07462 Phone Number: (973) 764-4055 Email: rwestenberger@vernontwp.com		
Name	Title	Method of Participation
Ken Clark	OEM Coordinator	Provided data and information for the annex update; contributed to the mitigation strategy; attended the kickoff meeting, annex training, risk assessment meeting and mitigation strategy workshop, reviewed annex*
Dan Young	Dep OEM Coordinator Police Chief	Attended the annex training, risk assessment meeting and mitigation strategy workshop
Howard L Burrell	Mayor	Reviewed annex*
Donelle DeCouto	Chief Financial Officer	Reviewed annex*
Robert Westenberger	Construction Official	NFIP floodplain administrator, reviewed annex*
Ed Babcock	Director of Department of Public Works	Reviewed annex*
Daniel B. Young	Chief of Police	Reviewed annex*
Thomas Van Le	Chief of PV Fire Department	Reviewed annex*

\*Refer to Jurisdictional Annex Review Sign-Off Sheet in Appendix B.





### 9.23.2 Jurisdiction Profile

Vernon Township is located in the northeast corner of Sussex County. It has a total area of 70.6 square miles. The Township is most populous municipalities and has the largest area in the county. It is bordered to the north by New York State, to the south by Hardyston Township, to the east by Passaic County, and to the west by Wantage Township. The following unincorporated communities are located within the Township: Owens, Willow Brook, Wantage, Independence Corner, McAfee, Sand Hills, Glenwood, Vernon Valley, DeKays, Highlands Lakes, Kampe, Cherry Ridge, and Wawayanda. There are many ponds and streams located throughout the Township and include, but not limited to: Highland Lake, Wawayanda Lake, Lake Wildwood, Double Kill, Wawayanda Creek, Pochuck Creek and its tributaries, Black Creek and its tributaries, and the Wallkill River.

According to the U.S. Census, the 2010 population for the Township of Vernon was 23,943. The estimated 2018 population was 21,989, an 8.16 percent decrease from the 2010 Census. Data from the 2018 U.S. Census American Community Survey indicate that 4.4 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.

### 9.23.3 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 9.22-2 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 9.23-2. Recent and Expected Future Development**

Type of Development	2015		2016		2017		2018		2019	
<b>Number of Building Permits for New Construction Issued Since the Previous HMP</b>										
	<b>Total</b>	<b>Within SFHA</b>	<b>Total</b>	<b>Within SFHA</b>	<b>Total</b>	<b>Within SFHA</b>	<b>Total</b>	<b>Within SFHA</b>	<b>Total</b>	<b>Within SFHA</b>
Single and Two-Family Units	7	0	5	0	7	0	8	0	3	0
Multi-Family	0	0	0	0	0	0	0	0	0	0
Other (commercial, mixed-use, etc.)	1	0	0	0	0	0	0	0	0	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		
<b>Recent Major Development and Infrastructure from 2015 to Present</b>										
No major developments constructed.										
<b>Known or Anticipated Major Development and Infrastructure in the Next Five (5) Years</b>										
No major developments anticipated.										

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





### 9.23.4 Capability Assessment

Section 5 (Capability Assessment) describes the components included in the capability assessment and their significance for hazard mitigation planning. The Township of Vernon 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 Vernon 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 Vernon and where hazard mitigation has been integrated.

**Table 9.23-3. 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.
<b>Codes, Ordinances, &amp; Requirements</b>					
<b>Building Code</b>	Yes	State & Local	Yes	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>• 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</li> <li>• The Construction Department is responsible for this code in compliance with State Uniform Construction Code Act (N.J.S. 52:27D-119 et seq.).</li> </ul>					
<b>Zoning Code</b>	Yes	Local	Yes – if municipality has a Planning Board	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>• 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.</li> <li>• The Land Use Department and Engineering Department are responsible for this code in compliance with Code Chapter 330.</li> </ul>					
<b>Subdivisions</b>	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		
<b>Comment:</b> <ul style="list-style-type: none"> <li>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.</li> <li>The</li> </ul>					
<b>Stormwater Management</b>	Yes	Local	Yes	Yes	-
<b>Comment:</b> <ul style="list-style-type: none"> <li>See Title 7 of the NJ Administrative Code, N.J.A.C. 7:8</li> <li>This ordinance follows Code Chapter 330-Article XII.</li> </ul>					
<b>Post-Disaster Recovery</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Real Estate Disclosure</b>	Yes	State, Division of Consumer Affairs	Yes	Yes	-
<b>Comment:</b> <ul style="list-style-type: none"> <li>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.</li> </ul>					
<b>Growth Management</b>	No	-	Yes – if municipality has a Planning Board	-	-
<b>Comment:</b> <ul style="list-style-type: none"> <li>State Mandated on a municipal level. See Zoning Ordinance ; Also - Plan Endorsement Process via the State Development &amp; 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.</li> </ul>					
<b>Site Plan Review</b>	Yes	Local	Yes – if municipality has a Planning Board	Yes	-
<b>Comment:</b> <ul style="list-style-type: none"> <li>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 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.</li> <li>The Land Use Department and Engineering Department are responsible for these requirements in compliance with Code Chapter 333-Article VI.</li> </ul>					
<b>Environmental Protection</b>	Yes	Regional/Local	No	No	-
<b>Comment:</b>					





	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.
<ul style="list-style-type: none"> <li>Vernon Township is located in both the Highlands Preservation and Planning Areas. The Township’s master planning and zoning ordinances reflect initiatives to protect water resources, preserve land, and promote compatible uses.</li> </ul>					
<b>Flood Damage Prevention</b>	Yes	Federal, State & Local	Yes	Yes	2021-Vernon-004
<b>Comment:</b> <ul style="list-style-type: none"> <li>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.</li> <li>The Construction Official is responsible for this ordinance in compliance with Code Chapter 275.</li> <li>The ordinance lacks the state’s one-foot freeboard requirement and requires update.</li> </ul>					
<b>Wellhead Protection</b>	Yes	State/Local	No	No	-
<b>Comment:</b> <ul style="list-style-type: none"> <li>Vernon Township has several well head protection areas. The identification of wellhead protection areas are required as part of permit applications in the Highlands Preservation Area.</li> </ul>					
<b>Emergency Management</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Climate Change</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Disaster Recovery Ordinance</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Disaster Reconstruction Ordinance</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Other [Special Purpose Ordinances (i.e., sensitive areas, steep slope)]</b>	Yes	Local	No	Yes	-
<b>Comment:</b> <ul style="list-style-type: none"> <li>The Land Use Department and Engineering Department are responsible for these ordinances in compliance with Code Chapter 330-Article XII and slopes, environmental sensitive areas, etc..</li> </ul>					
<b>Planning Documents</b>					
<b>Comprehensive / Master Plan</b>	Yes	Local	Yes	Yes	-
<b>Comment:</b> <ul style="list-style-type: none"> <li>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.</li> <li>The Land Use Department and Engineering Department are responsible for this plan in compliance with the 2010 Master Plan Update.</li> </ul>					
<b>Capital Improvement Plan</b>	Yes	Local	No	No	-
<b>Comment:</b> <ul style="list-style-type: none"> <li>The Administrator is responsible for this plan.</li> </ul>					
<b>Disaster Debris Management Plan</b>	Yes	State & Local	No	Yes	-
<b>Comment:</b> <ul style="list-style-type: none"> <li>December 2020- adopted.</li> </ul>					



	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.
<b>Floodplain or Watershed Plan</b>	Yes	County & Local	No	Yes	-
<b>Comment:</b>					
<ul style="list-style-type: none"> <li>The Engineering Department is responsible for this plan in compliance with Code Chapter 275-3.4.</li> </ul>					
<b>Stormwater Management Plan</b>	Yes	Local	Yes	Yes	-
<b>Comment:</b>					
<ul style="list-style-type: none"> <li>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.</li> <li>The Land Use Department and Engineering Department are responsible for this plan in compliance with Code Chapter 330-Article XII.</li> </ul>					
<b>Stormwater Pollution Prevention Plan</b>	Yes	Local	Yes	No	-
<b>Comment:</b>					
<ul style="list-style-type: none"> <li>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.</li> <li>The Township's Stormwater Management Plan was adopted in 2005</li> </ul>					
<b>Urban Water Management Plan</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Habitat Conservation Plan</b>	Yes	Federal	No	No	-
<b>Comment:</b>					
<ul style="list-style-type: none"> <li>The US Fish and Wildlife Service has produced a Comprehensive Conservation Planning document for the Wallkill River National Wildlife Refuge, which includes portions of Vernon Township.</li> </ul>					
<b>Economic Development Plan</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Shoreline Management Plan</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Community Wildfire Protection Plan</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Community Forest Management Plan</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Transportation Plan</b>	Yes	Local	No	No	-
<b>Comment:</b>					
<ul style="list-style-type: none"> <li>The Township's Master Plan incorporates a Circulation Element.</li> </ul>					
<b>Agriculture Plan</b>	No	-	No	-	-
<b>Comment:</b>					



	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.
<b>Climate Action Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Tourism Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Business Development Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Other: Open Space Plan</b>	Yes	Local	No	No	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>The Land Use Department and the Planner are responsible for this plan in compliance with Code Chapter 244.</li> <li>Part 2 of the Master Plan includes Parks and Open Space. The Plan was adopted in 1995 and updated in 2016.</li> </ul>					
<b>Response/Recovery Planning</b>					
<b>Comprehensive Emergency Management Plan (CEMP) / Emergency Operations Plan (EOP)</b>	Yes	Local	Yes	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>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.</li> <li>The Office of Emergency Management Coordinator is responsible for this plan in compliance with the Emergency Operations Plan.</li> </ul>					
<b>Threat &amp; Hazard Identification &amp; Risk Assessment (THIRA)</b>	Yes	Local	No	Yes	-
<i>Comment:</i>					
<b>Post-Disaster Recovery Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Continuity of Operations Plan</b>	Yes	Local	No	Yes	-
<i>Comment:</i>					
<b>Public Health Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Other:</b>	No	-	No	-	-
<i>Comment:</i>					

**Table 9.23-4. Development and Permitting Capability**

Criterion	Response
Does your jurisdiction issue development permits? - If no, who does? If yes, which department?	Yes; Building Department and Planning/Zoning
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.	Yes

**ADMINISTRATIVE AND TECHNICAL CAPABILITY**

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





**Table 9.23-5. Administrative and Technical Capabilities**

Staff/Personnel Resource	Available?	Department/Agency/Position
<b>Administrative Capability</b>		
Planning Board	Yes	Vernon Township Land Use Board
Mitigation Planning Committee	No	-
Environmental Board / Commission	Yes	Vernon Township Environmental Commission
Open Space Board / Committee	No	-
Economic Development Commission / Committee	Yes	Vernon Township Economic Development Advisory Committee
Warning Systems / Services (reverse 911, outdoor warning signals)	No	-
Maintenance program to reduce risk	No	-
Mutual aid agreements	Yes	Neighboring communities, County
<b>Technical/Staffing Capability</b>		
Planners or engineers with knowledge of land development and land management practices	Yes	Engineer/Planner
Engineers or professionals trained in building or infrastructure construction practices	Yes	Engineer
Planners or engineers with an understanding of natural hazards	Yes	Engineer
Staff with training in benefit/cost analysis	No	-
Staff with training in green infrastructure	Yes	Engineer/Planner
Staff with education/knowledge/training in low impact development	Yes	Engineer/Planner
Surveyor	No	-
Stormwater engineer	Yes	Cory Stoner (Harold Pellow & Associates)
Personnel skilled or trained in GIS applications	No	-
Local or state water quality professional	No	-
Scientist familiar with natural hazards in local area	No	-
Emergency manager	Yes	Ken Clark, Emergency Management Coordinator
Watershed planner	No	-
Environmental specialist	No	-
Grant writers	No	-
Resilience Officer	No	-

**FISCAL CAPABILITY**

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

**Table 9.23-6. Fiscal Capabilities**

Financial Resource	Accessible or Eligible to Use?
Community Development Block Grants (CDBG, CDBG-DR)	No
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service	Sewer only
Incur Debt through General Obligation Bonds	Yes
Incur Debt through Special Tax Bonds	No
Incur Debt through Private Activity Bonds	No





Financial Resource	Accessible or Eligible to Use?
Withhold Public Expenditures in Hazard-Prone Areas	No
State-Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	No
Clean Water Act 319 Grants (Nonpoint Source Pollution)	No
Other: Open Space Acquisition Funding Programs	Yes

**EDUCATION AND OUTREACH CAPABILITY**

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

**Table 9.23-7. Education and Outreach Capabilities**

Criterion	Response
Do you have a public information officer or communications office?	No
Do you have personnel skilled or trained in website development?	Yes- individual contractor
Do you have hazard mitigation information available on your website? -If yes, briefly describe.	OEM Facebook page—daily weather
Do you use social media for hazard mitigation education and outreach? -If yes, briefly describe.	Yes- OEM Facebook page
Do you have any citizen boards or commissions that address issues related to hazard mitigation? -If yes, briefly describe.	No
Do you have any other programs already in place that could be used to communicate hazard-related information? If yes, briefly describe.	No

**COMMUNITY CLASSIFICATIONS**

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

**Table 9.23-8. Community Classifications**

Program	Participating?	Classification	Date Classified
Community Rating System	No	-	-
Building Code Effectiveness Grading Schedule (BCEGS)	No	-	-
Public Protection (Fire ISO Protection Class)	Yes	5x	Update to 3y
Storm Ready Certification	No	-	-
Firewise Community Classification	No	-	-
Sustainable Jersey	Yes	Bronze	November 3, 2017

**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 9.23-9. 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.*

**NATIONAL FLOOD INSURANCE PROGRAM**

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

**Table 9.23-10. National Flood Insurance Program Compliance**

Criterion	Response
What local department is responsible for floodplain management?	Building Department
Who is your floodplain administrator? (name, department/position)	Construction Official (contracted service to Harold Pellow & Associates)
Are any certified floodplain managers on staff in your jurisdiction?	No
What is the date that your flood damage prevention ordinance was last amended?	September 12, 2011
Does your floodplain management program meet or exceed minimum requirements? -If exceeds, in what ways?	The program meets minimum requirements set by FEMA and the State.
When was the most recent Community Assistance Visit or Community Assistance Contact?	July 27, 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.	No
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?	No





Criterion	Response
- If so, what type of assistance/training is needed?	
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
How many flood insurance policies are in force in your jurisdiction?*	26 policies
-What is the insurance in force?	\$7,779,200 insurance in force
-What is the premium in force?	\$37,242 premium in force
How many total loss claims have been filed in your jurisdiction?*	18 claims
-How many claims are still open or were closed without payment?	\$119,012 in payments
-What were the total payments for losses?	
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  
Reference: FEMA 2020

**ADDITIONAL AREAS OF EXISTING INTEGRATION**

- The Division of Planning and Zoning and the Township’s Land Use Board consider the Hazard Mitigation Plan and the information contained therein and will use the plan when updating the Township’s Master Plan.
- The Township has taken steps to ensure the continuity of operations of municipal operations and infrastructure.

**9.23.5 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 Vernon’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 9.22-11 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 9.23-11. 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 23 <sup>rd</sup> and 24 <sup>th</sup> .	Excessive clean-up costs
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.	Excessive unbudgeted costs for PPE to Emergency Services. Tax revenue down and municipal center closed 5 weeks
Tropical Storm Isais (8/4/20)	DR-4574-NJ	Yes	A major tropical storm produced excessive winds and storm damage August 4, 2020	Clean up costs in excess of \$120,000.00





Date(s) of Event	Event Type (disaster declaration if applicable)	Sussex County Designated?	Summary of Event	Summary of Local Damages and Losses
Jan 31-Feb 2, 2021	Severe Winter Storm	No	A major winter snow event that dropped 30+ inches of snow in blizzard conditions.	Clean up Costs in excess of \$100,000.00
March 2021	Sinkhole	No	A relatively small sinkhole formed as a result of heavy rain, snow melt and lake run off at National Winter Activity Center. It was approximately 30” x 24” a 6’ deep that connected to a spill way basin that ties into a stream.	The sinkhole was kept under watch and is being remediated with the dam replacement project (2021-Vernon-005).

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

### 9.23.6 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 Vernon 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 Vernon 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 Vernon has significant exposure.

#### REPETITIVE FLOOD LOSSES

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

- Number of repetitive loss (RL) properties: 2
- Number of severe repetitive loss (SRL) properties: 0
- Number of RL/SRL properties that have been mitigated: 0

\*According to FEMA statistics as of October 13, 2020

#### 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 9.23-12. Critical Facilities and Lifelines Flood Exposure**

Name	Type	Exposure	
		1% Event	0.2% Event
Dorothy Henry Library Branch	Shelter	X	X
Canistear Reservoir #2 Dam	Dam	X	X
Lake Wanda Dam	Dam	X	X







Name	Type	Exposure	
		1% Event	0.2% Event
Kohout Lake Dam	Dam	X	X
Hickory Park Dam	Dam	X	X

Source: Sussex County Planning Partnership 2020

Note:

\*Identified lifeline

### IDENTIFIED ISSUES AND PROBLEM AREAS

The Township identified the following issues and problem areas:

- During the current COVID-19 pandemic, the Township did not have an adequate supply of personal protective equipment (PPE) for municipal staff. Without proper PPE, it puts municipal staff and residents at risk to the spread of infectious diseases.
- Vernon experiences frequent storm damage from downed trees. The Township’s roads are surrounded by vegetation over-growth throughout the Township’s 68 square miles. County Route 515, one of the Township’s busiest roads, is particularly impacted by downed trees. The Township has identified that 14 miles of vegetation management is needed to reduce impacts from trees to utility and vehicle right-of-ways. During storm events, delays of up to six hours are reported due to trees in the road.
- 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. The Township is currently not part of the Firewise program.
- The Township’s current flood damage prevention ordinance was last adopted in 2011. It currently does not have a freeboard requirement and does not meet New Jersey’s minimum requirement.
- A relatively small sinkhole formed as a result of heavy rain, snow melt and lake run off at National Winter Activity Center. It was approximately 30” x 24” a 6’ deep that connected to a dam spill way basin that ties into a stream. The dam requires replacement.

### 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 Vernon 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 Vernon. The Township of Vernon 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 Vernon indicated the following reasons why hazard rankings have changed since the 2016 HMP:

- Geologic hazards were reduced to a “Medium” rank from “high” due to low event frequency and impact.





**Table 9.23-13. Township of Vernon Hazard Ranking**

<b>Dam Failure</b>	<b>Disease Outbreak</b>	<b>Drought</b>	<b>Earthquake</b>	<b>Flood</b>	<b>Geologic</b>	
Medium	Medium	Medium	Low	Medium	Medium	
<b>Hazardous Materials</b>	<b>Hurricane and Tropical Storm</b>	<b>Invasive Species</b>	<b>Nor'Easter</b>	<b>Severe Weather</b>	<b>Severe Winter Weather</b>	<b>Wildfire</b>
Medium	High	Medium	High	High	High	Medium

**9.23.7 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 9.22-15 and Table 9.22-16 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 9.23-14. 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	Enter 2021 HMP Action #
Vernon-1 (new)	Utilize the Hazard Mitigation Plan (HMP) when updating the Comprehensive Master Plan; consider including hazard identification, hazard zones risk assessment information, and hazard mitigation goals as identified in the HMP. Further, the findings and recommendation of the HMP will be considered during any future site plan review processes.	Planning	Ongoing Capability		
Vernon-2 (old #2)	When replacing the roof of the Vernon Valley Police Department building on Church Street, ensure that it meets the current snow load standards.	Police Chief	Completed		
Vernon-3 (old #3)	When replacing the roof of the Lounsberry Hollow School building on Sammis Road, ensure that it meets the current snow load standards.	School Board Administrator	Completed		





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 #
Vernon-4 (old #4)	When replacing the roof of the High School building on Route 565, ensure that it meets the current snow load standards.	School Board Administrator	Completed		
Vernon-5 (old #5)	Implement the Fire Wise Program throughout the township.	OEM Coordinator	No Progress	X	2021-VernonTwp-003
Vernon-6 (old #6)	When replacing the roof of the Glen Meadows School building on Sammis Road, ensure that it meets the current snow load standards.	School Board Administrator	Completed		
Vernon-7 (old #7)	When replacing the roof of the Cedar Mountain School building on Sammis Road, ensure that it meets the current snow load standards.	School Board Administrator	Completed		
Vernon-8 (old #8)	When replacing the roof of the Rolling Hill School building on Sammis Road, ensure that it meets the current snow load standards.	School Board Administrator	Completed		
Vernon-9 (old #9)	When replacing the roof of the Walnut Ridge School building on Route 517, ensure that it meets the current snow load standards.	School Board Administrator	Completed		
Vernon-10 (old #10)	Stormwater management system upgrade and improvement along Maple Grange Road and Vernon Crossing Road.	DPW	Completed		
Vernon-11 (old #12)	Stormwater management system along Tenneco Pipeline.	DPW	Completed		
Vernon-12 (old #13)	Harden SES Americom building located on route 517 and Edsel Drive to FEMA 361 Standards.	Facility Administrator	No Progress		
Vernon-13 (old #14)	Conduct all-hazards public education and outreach program for hazard mitigation and preparedness. This will include providing better information regarding hazard risks and high-hazard areas in the Township.	OEM Coordinator in coordination with County OEM	Ongoing Capability		
Vernon-14 (new)	Ensure continuity of operations at critical facilities, municipal buildings, and infrastructure. At this time, the following was identified: Develop an action	Township with support from utility providers	Ongoing Capability		



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 #
	plan to improve the damage resistance of utilities (electricity, communications) throughout the Township.				

**PROPOSED HAZARD MITIGATION INITIATIVES FOR THE PLAN UPDATE**

The Township of Vernon 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 Vernon 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 9.22-15 summarizes the comprehensive-range of specific mitigation initiatives the Township of Vernon 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 9.22-16 provides a summary of the prioritization of all proposed mitigation initiatives for this HMP update.



Table 9.23-15. 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-Vernon-001	PPE Acquisition/Pandemic Response	<p><b>Problem:</b> During the current COVID-19 pandemic, the Township did not have an adequate supply of personal protective equipment (PPE) for municipal staff. Without proper PPE, it puts municipal staff and residents at risk to the spread of infectious diseases.</p> <p><b>Solution:</b> The Township will purchase PPE to create a stockpile for municipal staff. This will include gloves, masks, gowns, antibacterial handwash, antiviral cleaning solutions, sanitizers, and misters. This equipment can be used for the COVID-19 pandemic response as well as future infectious disease outbreaks, such as pandemic influenza.</p>	N/A	Disease Outbreak	1, 2, 3, 6	Township OEM	BRIC, NJDCA, Township Budget, FEMA Assistance to Firefighters Grant	Increase protection from diseases; decrease risk of spread	\$75,000	Within 2 years	High	LPR	PR, ES
2021-Vernon-002	Vegetation Management Planning and Implementation	<p><b>Problem:</b> Vernon experiences frequent storm damage from downed trees. The Township’s roads are surrounded by vegetation over-growth throughout the Township’s 68 square miles. County Route 515, one of the Township’s busiest roads, is particularly impacted by downed trees. The Township has identified that 14 miles of vegetation management is needed to reduce impacts from trees to utility and vehicle right-of-ways. During storm events, delays of up to six hours are reported due to trees in the road.</p> <p><b>Solution:</b> The Township proposes to develop a proactive vegetation management plan and contract with a vegetation management company to prioritize vegetation removal, implement best practices, and cutback overgrown and dead vegetation to reduce impacts of downed trees. Funding will be sought to hire a contractor to remove high hazard trees that are beyond the Township’s capabilities.</p>	New	Hurricane and Tropical Storm; Nor’easter; Severe Storm; Severe Winter Storm; Wildfire	1, 2, 3, 6	Sussex County; Vernon Township DPW	BRIC; HMGP; Township Funds;	Enhanced utility of roads and decreased frequency of power outage following hazard events	\$2 million	Within three years	High	LPR	PR, 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
2021-Vernon-003	Firewise Program Participation	<p><b>Problem:</b> 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. The Township is currently not part of the Firewise program.</p> <p><b>Solution:</b> 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 application will be completed online.</p>	Both	Wildfire	1, 2, 3, 4, 5	Township OEM and Fire Department	Township Budget, Staff Time	Helps Township identify wildfire safety efforts; access to funding and assistance	\$10,000+	Within 5 years	High	LPR, EAP	PI, ES
2021-Vernon-004	Update Flood Damage Prevention Ordinance	<p><b>Problem:</b> The Township’s current flood damage prevention ordinance was last adopted in 2011. It currently does not have a freeboard requirement and does not meet New Jersey’s minimum requirement.</p> <p><b>Solution:</b> The Township will update its flood damage prevention ordinance to meet the New Jersey requirement of one foot of freeboard.</p>	New and Existing	Flood	1, 2	Township Administration, Construction Official	Township budget	Meet state standards, reduce future flood risk	Staff time	6 months	High	LPR	PR
2021-Vernon-005	National Winter Activity Center Dam Replacement	<p><b>Problem:</b> A relatively small sinkhole formed as a result of heavy rain, snow melt and lake run off at National Winter Activity Center. It was approximately 30” x 24” a 6’ deep that connected to a dam spill way basin that ties into a stream. The dam requires replacement.</p> <p><b>Solution:</b> The National Winter Activity Center will carry out replacement of the dam.</p>	Existing	Dam Failure, Geologic	2, 7	National Winter Activity Center	National Winter Activity Center	Sinkhole mitigated, dam safety improved	Mode rate	1 year	High	SIP	SP

Notes:

Acronyms and Abbreviations:

CAV Community Assistance Visit  
 CRS Community Rating System

Potential FEMA HMA Funding Sources:

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

Timeline:

The time required for completion of the project upon implementation





DPW	Department of Public Works	HMGP	Hazard Mitigation Grant Program
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		

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 9.23-16. 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-Vernon-001	PPE Acquisition/Pandemic Response	1	0	1	1	1	1	0	1	1	1	1	1	1	1	12	High ⚠
2021-Vernon-002	Vegetation Management Planning and Implementation	1	1	1	1	1	1	0	0	1	1	1	1	1	1	12	High
2021-Vernon-003	Firewise Program Participation	1	1	1	1	1	1	0	1	1	1	1	1	1	1	13	High
2021-Vernon-004	Update Flood Damage Prevention Ordinance	1	1	1	1	1	1	0	1	1	1	1	1	1	1	13	High
2021-Vernon-005	National Winter Activity Center Dam Replacement	0	1	1	1	1	0	1	1	1	1	1	1	1	1	12	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 9.23-17. 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				X			
Drought								
Earthquake								
Flood	X						X	
Geologic						X		
Hazardous Materials								
Hurricane and Tropical Storm	X				X			
Invasive Species								
Nor'Easter	X				X			
Severe Weather	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 9.23-1. Township of Vernon Hazard Area Extent and Location Map 1

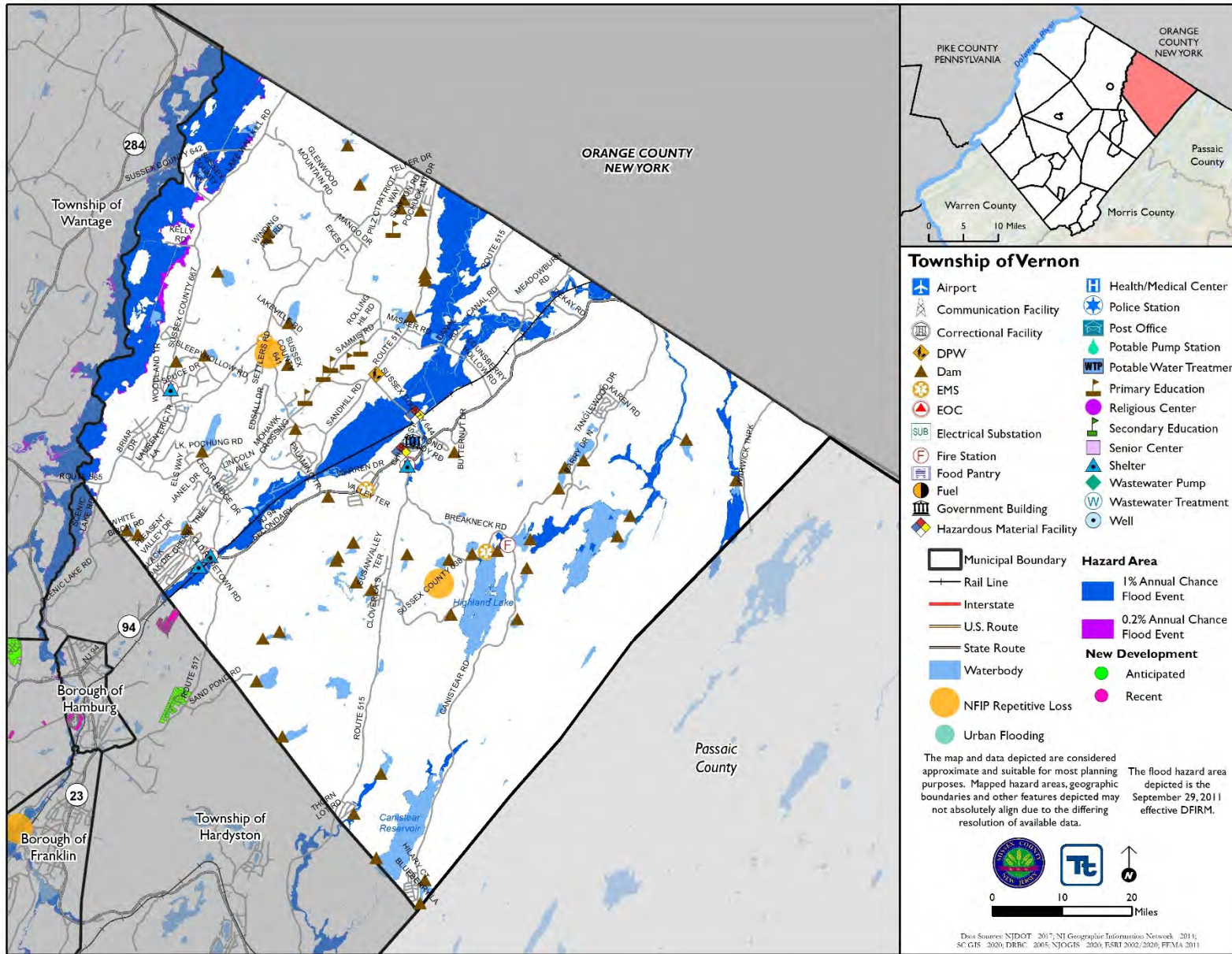




Figure 9.23-2. Township of Vernon Hazard Area Extent and Location Map 2

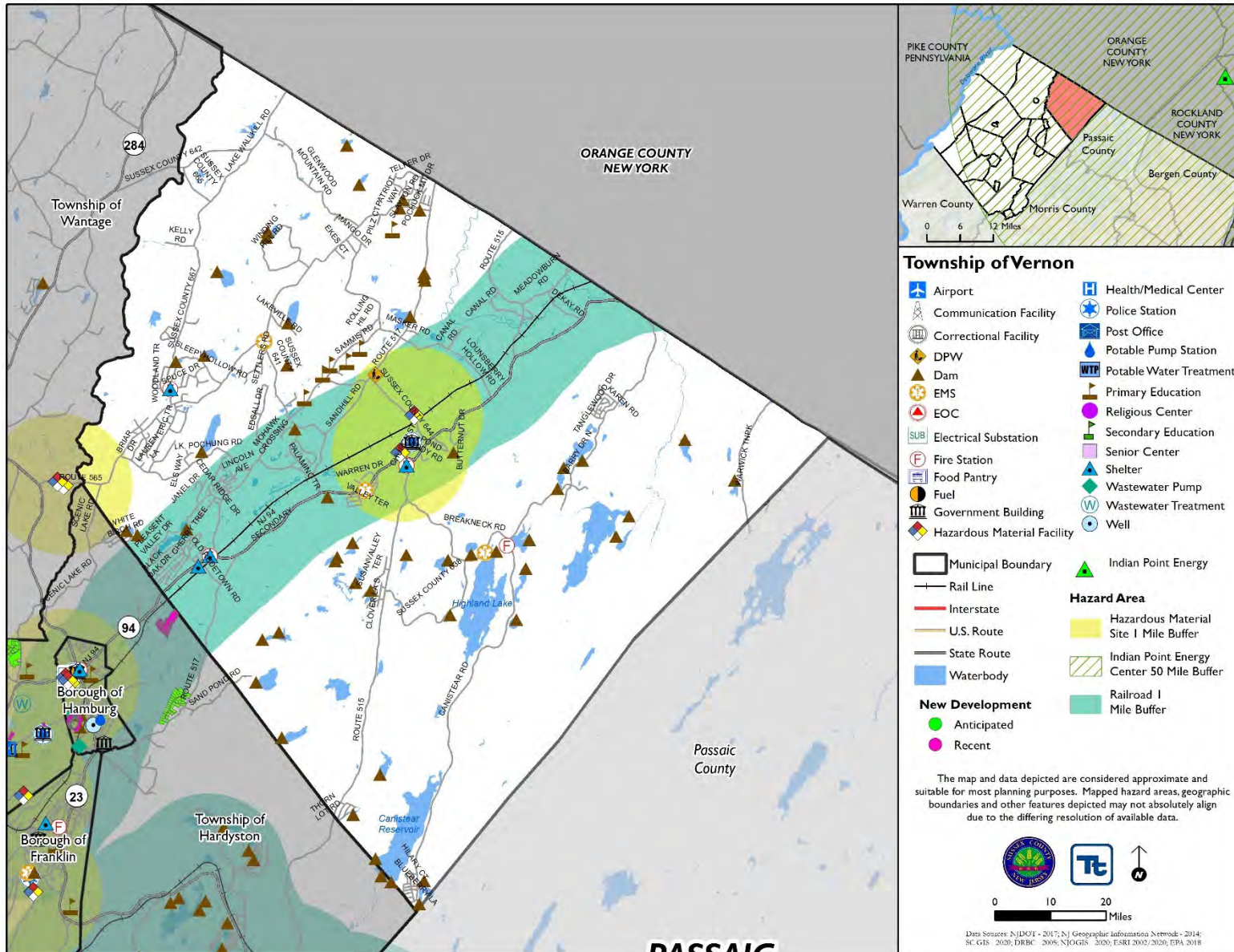
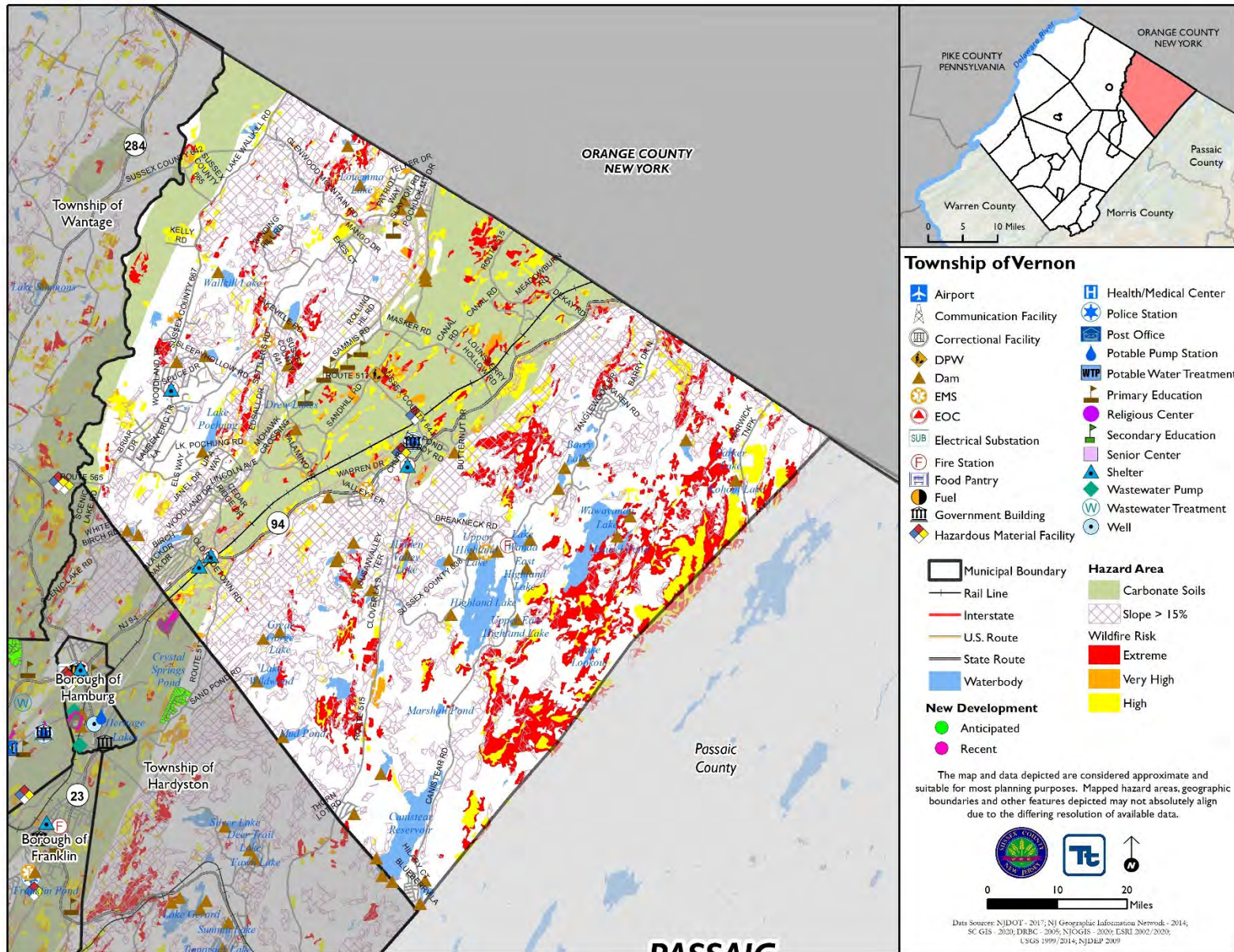




Figure 9.23-3 Township of Vernon Hazard Area Extent and Location Map 3





Action Worksheet			
<b>Project Name:</b>	PPE Stockpile		
<b>Project Number:</b>	2021-Vernon-001		
Risk / Vulnerability			
<b>Hazard(s) of Concern:</b>	Disease Outbreak		
<b>Description of the Problem:</b>	During the current COVID-19 pandemic, the Township did not have an adequate supply of personal protective equipment (PPE) for municipal staff. Without proper PPE, it puts municipal staff and residents at risk to the spread of infectious diseases. This equipment can be used for the COVID-19 pandemic response as well as future infectious disease outbreaks, such as pandemic influenza.		
Action or Project Intended for Implementation			
<b>Description of the Solution:</b>	The Township will purchase PPE to create a stockpile for municipal staff. This will include gloves, masks, gowns, antibacterial handwash, antiviral cleaning solutions, sanitizers, and misters.		
<b>Is this project related to a Critical Facility or Lifeline?</b>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
<b>Level of Protection:</b>	PPE	<b>Estimated Benefits (losses avoided):</b>	Increase protection from diseases; decrease risk of spread
<b>Useful Life:</b>	Supply needs to be replaced after use	<b>Goals Met:</b>	1, 2, 3, 6
<b>Estimated Cost:</b>	\$50,000	<b>Mitigation Action Type:</b>	Local Plans and Regulations
Plan for Implementation			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	Within 2 years
<b>Estimated Time Required for Project Implementation:</b>	1 year	<b>Potential Funding Sources:</b>	BRIC, NJDCA, Township Budget, FEMA Assistance to Firefighters Grant
<b>Responsible Organization:</b>	Township OEM	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard Mitigation, Emergency Management
Three Alternatives Considered (including No Action)			
<b>Alternatives:</b>	<b>Action</b>	<b>Estimated Cost</b>	<b>Evaluation</b>
	No Action	\$0	Current problem continues
	Shut down during disease outbreak events	N/A	Loss of continuity of operations
	Rely on county/state/federal distribution	\$0	Supply not guaranteed
Progress Report (for plan maintenance)			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			



Action Worksheet		
<b>Project Name:</b>	PPE Stockpile	
<b>Project Number:</b>	2021-Vernon-001	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Protects life from disease outbreak
Property Protection	0	
Cost-Effectiveness	1	Cost-effective project
Technical	1	Technically feasible project
Political	1	
Legal	1	The Township has the legal authority to conduct the project.
Fiscal	0	Project will require funding support.
Environmental	1	
Social	1	Project would help protect families from disease outbreak events
Administrative	1	
Multi-Hazard	1	Disease Outbreak
Timeline	1	
Agency Champion	1	OEM
Other Community Objectives	1	
<b>Total</b>	12	
<b>Priority (High/Med/Low)</b>	High	



Action Worksheet			
<b>Project Name:</b>	Vegetation Management Planning and Implementation		
<b>Project Number:</b>	2021-Vernon-002		
Risk / Vulnerability			
<b>Hazard(s) of Concern:</b>	Hurricane and Tropical Storm; Nor'easter; Severe Storm; Severe Winter Storm; Wildfire		
<b>Description of the Problem:</b>	Vernon experiences frequent storm damage from downed trees. The Township's roads are surrounded by vegetation over-growth throughout the Township's 68 square miles. County Route 515, one of the Township's busiest roads, is particularly impacted by downed trees. The Township has identified that 14 miles of vegetation management is needed to reduce impacts from trees to utility and vehicle right-of-ways. During storm events, delays of up to six hours are reported due to trees in the road.		
Action or Project Intended for Implementation			
<b>Description of the Solution:</b>	The Township proposes to develop a proactive vegetation management plan and contract with a vegetation management company to prioritize vegetation removal, implement best practices, and cutback overgrown and dead vegetation to reduce impacts of downed trees. Funding will be sought to hire a contractor to remove high hazard trees that are beyond the Township's capabilities.		
<b>Is this project related to a Critical Facility or Lifeline?</b>		Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
<b>Level of Protection:</b>	PPE	<b>Estimated Benefits (losses avoided):</b>	Enhanced utility of roads and decreased frequency of power outage following hazard events
<b>Useful Life:</b>	Supply needs to be replaced after use	<b>Goals Met:</b>	1, 2, 3, 6
<b>Estimated Cost:</b>	\$2 million	<b>Mitigation Action Type:</b>	Local Plans and Regulations
Plan for Implementation			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	Within 3 years
<b>Estimated Time Required for Project Implementation:</b>	1 year	<b>Potential Funding Sources:</b>	BRIC; HMGP; Township Funds
<b>Responsible Organization:</b>	Township DPW/Contractor	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard Mitigation, Emergency Management
Three Alternatives Considered (including No Action)			
<b>Alternatives:</b>	<b>Action</b>	<b>Estimated Cost</b>	<b>Evaluation</b>
	No Action	\$0	Current problem continues
	Ad-hoc vegetation management	High	Continued damage/less efficient use of resources
	Vegetation management plan/implementation	\$2 million	Proactive management
Progress Report (for plan maintenance)			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			



Action Worksheet		
<b>Project Name:</b>	Vegetation Management Planning and Implementation	
<b>Project Number:</b>	2021-Vernon-002	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Protects life from disease outbreak
Property Protection	1	
Cost-Effectiveness	1	Cost-effective project
Technical	1	Technically feasible project
Political	1	
Legal	1	The Township has the legal authority to conduct the project.
Fiscal	0	Project will require funding support.
Environmental	0	
Social	1	Project would help protect families from disease outbreak events
Administrative	1	
Multi-Hazard	1	Multiple types of storm/wind events
Timeline	1	
Agency Champion	1	County; Township OEM/PW
Other Community Objectives	1	
<b>Total</b>	10	
<b>Priority (High/Med/Low)</b>	High	





## 9.24 TOWNSHIP OF WALPACK

This section presents the jurisdictional annex for the Township of Walpack. The annex includes a general overview of the Township of Walpack; an assessment of the Township of Walpack’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.

### 9.24.1 Hazard Mitigation Planning Team

The Township of Walpack 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 9.24-1. Hazard Mitigation Planning Team**

Primary Point of Contact		Alternate Point of Contact
Name / Title: Victor Maglio, Mayor Address: 9 Main Street, Walpack Center, NJ 07881 Phone Number: 973-479-6976 Email: walpackmayor@gmail.com		Name / Title: Michael Vreeland, Township Engineer, Van Cleef Engineering Address: 111 Howard Blvd Suite 101, Mt Arlington, NJ 07856 Phone Number: 862-284-1100 Email: mvreeland@vancleefengineering.com
NFIP Floodplain Administrator		
Name / Title: Michael Vreeland, Township Engineer, Van Cleef Engineering Address: 111 Howard Blvd Suite 101, Mt Arlington, NJ 07856 Phone Number: 862-284-1100 Email: mvreeland@vancleefengineering.com		
Name	Title	Method of Participation
Victor Maglio, Mayor	Victor Maglio, Mayor	Primary point of contact, attended meetings, provided data and information on past impacts, contributed to the mitigation strategy; reviewed annex*
Michael Vreeland	Township Engineer, Van Cleef Engineering	Alternate point of contact, NFIP floodplain administrator

\*Refer to Jurisdictional Annex Review Sign-Off Sheet in Appendix B.

### 9.24.2 Jurisdiction Profile

The Township of Walpack is located in western Sussex County and has a total area of 24.7 square miles. It is the oldest municipality in Sussex County. The following unincorporated communities are located within the Township: Walpack Center, Haneys Mill, Smith Ferry, Flatbrookville, and Donkeys Corners. The Township is bordered to the north by Sandyston Township, to the east by Stillwater and Hampton Townships, to the south by Warren County, and to the west by Pennsylvania. The Delaware River forms the western border of the Township. Other streams flow through the Township and include: Flat Brook and its tributaries and Vancampens





Brook and its tributaries. There are also several lakes and ponds that include Crater Lake, Lake Success, Long Pine Pond, and Hemlock Lake.

A majority of the land in the Township is under the jurisdiction of the National Park Service. The National Park Service also has jurisdiction over the Township’s roadways.

According to the U.S. Census, the 2010 population for the Township of Walpack was 16. The estimated 2018 population was 6, a 37.5 percent decrease from the 2010 Census. Data from the 2018 U.S. Census American Community Survey indicate that 0.0 percent of the population is 5 years of age or younger and 100.0 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.

### 9.24.3 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 9.23-2 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 9.24-2. Recent and Expected Future Development**

Type of Development	2015		2016		2017		2018		2019	
<b>Number of Building Permits for New Construction Issued Since the Previous HMP</b>										
	<b>Total</b>	<b>Within SFHA</b>	<b>Total</b>	<b>Within SFHA</b>	<b>Total</b>	<b>Within SFHA</b>	<b>Total</b>	<b>Within SFHA</b>	<b>Total</b>	<b>Within SFHA</b>
Single and Two-Family Units	0	0	0	0	0	0	0	0	0	0
Multi-Family	0	0	0	0	0	0	0	0	0	0
Other (commercial, mixed-use, etc.)	0	0	0	0	0	0	0	0	0	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		
<b>Recent Major Development and Infrastructure from 2015 to Present</b>										
None identified										
<b>Known or Anticipated Major Development and Infrastructure in the Next Five (5) Years</b>										
None anticipated										

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

### 9.24.4 Capability Assessment

Section 5 (Capability Assessment) describes the components included in the capability assessment and their significance for hazard mitigation planning. The Township of Walpack 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 Walpack 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 Walpack and where hazard mitigation has been integrated.

**Table 9.24-3. Planning, Legal and Regulatory Capability**

	Do you have this? (Yes/No)	Authority that enforces (Federal, State, Regional, County, Local)	Have aspects of the HMP been integrated into your codes/ordinances/plans?		
			Is this State Mandated?	If yes- how? Describe in comments.	If no - add Mitigation Action #, if applicable.
<b>Codes, Ordinances, &amp; Requirements</b>					
<b>Building Code</b>	Yes	State & Local	Yes	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>• 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</li> </ul>					
<b>Zoning Code</b>	Yes	State & Local	Yes – if municipality has a Planning Board	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>• 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.</li> </ul>					
<b>Subdivisions</b>	Yes	County & Local	Yes – if municipality has a Planning Board	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>• 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.</li> </ul>					



	Do you have this? (Yes/No)	Authority that enforces (Federal, State, Regional, County, Local)	Have aspects of the HMP been integrated into your codes/ordinances/plans?		
			Is this State Mandated?	If yes- how? Describe in comments.	If no - add Mitigation Action #, if applicable.
<b>Stormwater Management</b>	Yes	State & Local	Yes	Yes	-
<b>Comment:</b>					
<ul style="list-style-type: none"> <li>See Title 7 of the NJ Administrative Code, N.J.A.C. 7:8</li> </ul>					
<b>Post-Disaster Recovery</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Real Estate Disclosure</b>	Yes	State, Division of Consumer Affairs	Yes	No	-
<b>Comment:</b> 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.					
<b>Growth Management</b>	No	-	Yes - if municipality has a Planning Board	-	-
<b>Comment:</b>					
<ul style="list-style-type: none"> <li>State Mandated on a municipal level. See Zoning Ordinance; Also - Plan Endorsement Process via the State Development &amp; 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.</li> </ul>					
<b>Site Plan Review</b>	Yes	County & Local	Yes - if municipality has a Planning Board	Yes	-
<b>Comment:</b>					
<ul style="list-style-type: none"> <li>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 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.</li> </ul>					
<b>Environmental Protection</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Flood Damage Prevention</b>	Yes	State & Local	Yes	Yes	-
<b>Comment:</b>					
<ul style="list-style-type: none"> <li>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.</li> <li>Regulations for the Flood Control Hazards Act were adopted in 2007 and amended effective June 20, 2016.</li> </ul>					
<b>Wellhead Protection</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Emergency Management</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Climate Change</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Disaster Recovery Ordinance</b>	No	-	No	-	-





	Do you have this? (Yes/No)	Authority that enforces (Federal, State, Regional, County, Local)	Have aspects of the HMP been integrated into your codes/ordinances/plans?		
			Is this State Mandated?	If yes- how? Describe in comments.	If no - add Mitigation Action #, if applicable.
<i>Comment:</i>					
<b>Disaster Reconstruction Ordinance</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Other</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Planning Documents</b>					
<b>Comprehensive / Master Plan</b>	No	State & Local	Yes	No	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>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.</li> </ul>					
<b>Capital Improvement Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Disaster Debris Management Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Floodplain or Watershed Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Stormwater Management Plan</b>	No	State & Local	Yes	-	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>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.</li> </ul>					
<b>Stormwater Pollution Prevention Plan</b>	No	-	Yes	-	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>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</li> </ul>					



	Do you have this? (Yes/No)	Authority that enforces (Federal, State, Regional, County, Local)	Have aspects of the HMP been integrated into your codes/ordinances/plans?		
			Is this State Mandated?	If yes- how? Describe in comments.	If no - add Mitigation Action #, if applicable.
<i>basin cleaning); implementing solids and floatables control; locating discharge points and stenciling catch basins; and a public education component.</i>					
<b>Urban Water Management Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Habitat Conservation Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Economic Development Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Shoreline Management Plan</b>	No	-	Yes – if located in a coastal zone	-	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>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.</li> </ul>					
<b>Community Wildfire Protection Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Community Forest Management Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Transportation Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Agriculture Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Climate Action Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Tourism Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Business Development Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Other</b>	No	-	No	-	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li></li> </ul>					
<b>Response/Recovery Planning</b>					
<b>Comprehensive Emergency Management Plan (CEMP) / Emergency Operations Plan (EOP)</b>	No	-	Yes	-	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>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.</li> </ul>					
<b>Threat &amp; Hazard Identification &amp; Risk Assessment (THIRA)</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Post-Disaster Recovery Plan</b>	No	-	No	-	-
<i>Comment:</i>					



	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.
<b>Continuity of Operations Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Public Health Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Other</b>	No	-	No	-	-
<i>Comment:</i>					

**Table 9.24-4. Development and Permitting Capability**

Criterion	Response
Does your jurisdiction issue development permits? - If no, who does? If yes, which department?	Yes, Township Engineer. However, development has occurred in recent years.
Does your jurisdiction have the ability to track permits by hazard area?	Yes
Does your jurisdiction have a buildable lands inventory? -If yes, please describe briefly. -If no, please quantitatively describe the level of buildout in the jurisdiction.	Because the National Park Service owns the majority of land in the Township, opportunities for developing land are incredibly rare.

**ADMINISTRATIVE AND TECHNICAL CAPABILITY**

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

**Table 9.24-5. Administrative and Technical Capabilities**

Staff/Personnel Resource	Available?	Department/Agency/Position
<b>Administrative Capability</b>		
Planning Board	No	-
Mitigation Planning Committee	No	-
Environmental Board / Commission	No	-
Open Space Board / Committee	No	-
Economic Development Commission / Committee	No	-
Warning Systems / Services (reverse 911, outdoor warning signals)	Yes	County 911 System
Maintenance program to reduce risk	Yes	Emergency Operations Plan
Mutual aid agreements	Yes	With surrounding communities and State Police: EMS – Blue Ridge for north end and Blairstown Rescue Squad for south end; participation in the County 911 system; firefighting services by shared agreement with Sandyston Township Volunteer Fire Department
<b>Technical/Staffing Capability</b>		
Planners or engineers with knowledge of land development and land management practices	Yes	Township Engineer and work with County engineering when necessary
Engineers or professionals trained in building or infrastructure construction practices	Yes	Township Construction Official in cooperation with the County
Planners or engineers with an understanding of natural hazards	Yes	Township Engineer





Staff/Personnel Resource	Available?	Department/Agency/Position
Staff with training in benefit/cost analysis	Yes	Township Engineer
Staff with training in green infrastructure	No	-
Staff with education/knowledge/training in low impact development	Yes	Township Engineer
Surveyor	No	-
Stormwater engineer	Yes	Township Engineer
Personnel skilled or trained in GIS applications	No	-
Local or state water quality professional	Yes	Township. Engineer
Scientist familiar with natural hazards in local area	No	-
Emergency manager	Yes	Victor Maglio, Mayor/Emergency Operations Coordinator
Watershed planner	No	-
Environmental specialist	No	-
Grant writers	No	-
Resilience Officer	No	-
Other: NFIP Floodplain Administrator	Yes	Township Engineer
Other: Professionals trained in conducting damage assessments	Yes	Construction Official and Township Engineer

**FISCAL CAPABILITY**

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

**Table 9.24-6. Fiscal Capabilities**

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

**EDUCATION AND OUTREACH CAPABILITY**

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

**Table 9.24-7. Education and Outreach Capabilities**

Criterion	Response
Do you have a public information officer or communications office?	Yes – Mayor and Clerk
Do you have personnel skilled or trained in website development?	Yes – Contracted Individual







Criterion	Response
Do you have hazard mitigation information available on your website? -If yes, briefly describe.	Yes – Community Notifications such as COVID-19
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.	No
Do you have any other programs already in place that could be used to communicate hazard-related information? If yes, briefly describe.	No

**COMMUNITY CLASSIFICATIONS**

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

**Table 9.24-8. Community Classifications**

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

**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 9.24-9. 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



Hazard	Adaptive Capacity (Capabilities) - Strong/Moderate/Weak
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 has access to resources found in the public domain to determine the possible impacts of climate change upon the municipality. To date, integrating climate change in policies or actions has not yet been considered by the Township Committee.

**NATIONAL FLOOD INSURANCE PROGRAM**

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

**Table 9.24-10. National Flood Insurance Program Compliance**

Criterion	Response
What local department is responsible for floodplain management?	Township Engineer
Who is your floodplain administrator? (name, department/position)	Michael Vreeland, Township Engineer
Are any certified floodplain managers on staff in your jurisdiction?	No
What is the date that your flood damage prevention ordinance was last amended?	2006
Does your floodplain management program meet or exceed minimum requirements? -If exceeds, in what ways?	Meets, however the flood damage prevention ordinance requires update.
When was the most recent Community Assistance Visit or Community Assistance Contact?	July 31, 2006
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.	No
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?	Yes, additional training for a new floodplain administrator would be useful.
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
How many flood insurance policies are in force in your jurisdiction?*	0 policies
-What is the insurance in force?	\$0 insurance in force
-What is the premium in force?	\$0 premium in force
How many total loss claims have been filed in your jurisdiction?*	1 claim
-How many claims are still open or were closed without payment?	\$7,076 payments
-What were the total payments for losses?	
Do you maintain a list of properties that have been damaged by flooding?	No properties have been damaged in the past.





Criterion	Response
Do you maintain a list of property owners interested in flood mitigation?	No property owners are currently interested.

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

**ADDITIONAL AREAS OF EXISTING INTEGRATION**

- **National Park Service:** The National Park Service has jurisdiction over the roadways in the Township and conducts upkeep and clearing during storm events.

**9.24.5 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 Walpack’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 9.23-11 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 9.24-11. 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 23 <sup>rd</sup> and 24 <sup>th</sup> .	Predominantly tree damage and power outages
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.	Economic impacts on local businesses (i.e. The Walpack Inn)

Source: FEMA 2020, NOAA NCEI 2020

**9.24.6 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 Walpack 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 Walpack 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 Walpack has significant exposure.

**REPETITIVE FLOOD LOSSES**





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

- 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: NFIP 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 9.24-12. Critical Facilities and Lifelines Flood Exposure**

Name	Type	Exposure	
		1% Event	0.2% Event
Haneys Mill Dam (No Dam)	Dam	X	X
No Name #59 Dam	Dam	X	X

Source: Sussex County Planning Partnership 2020

Note: \*Identified lifeline

**IDENTIFIED ISSUES AND PROBLEM AREAS**

The jurisdiction has identified the following vulnerabilities within their community:

- The Township experiences isolated low-lying roadway flooding not directly associated with floodplain (mainly at Old Mine Road and National Park Service Route 615 near the Flat Brook Bridge).
  - The roadways are under the jurisdiction of the National Park Service.
- Downed trees often result in power loss in the Township during storm events.
  - The Park Service is responsible for clearing of downed trees.
  - JCP&L has been trying to relocate lines out to the main road. Old powerlines run through woods that are hard to access.

**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 Walpack 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 Walpack. The Township of Walpack 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 Walpack indicated the following reasons why hazard rankings have changed since the 2016 HMP:





- The Township agreed with the calculated hazard rankings.
- The Township changed the risk ranking for geologic hazards from high to medium based on low occurrence and low development.
- The Township changed the risk ranking for wildfire from high to medium due to lower occurrence of events and mitigation actions such as prescribed burns taken by the state and the National Park Service.

**Table 9.24-13. Township of Walpack Hazard Ranking**

Dam Failure	Disease Outbreak	Drought	Earthquake	Flood	Geologic	
Low	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	Medium

### 9.24.7 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 9.23-15 and Table 9.23-16 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 9.24-14. 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	Enter 2021 HMP Action #
Walpack-1 (new)	Ensure continuity of operations in the Township. At this time, purchase and install a generator at municipal building that serves as EOC, shelter, etc.	Township	Personal generators purchased by residents and businesses mitigated Still require Township Municipal Building generator.	X	2020-Walpack-001
Walpack-2 (new)	Continue to maintain and enhance mutual aid and shared services agreements with surrounding municipalities.	Township with support of the County and surrounding municipalities	Ongoing Capability		
Walpack-3 (old #2)	Implement Fire Wise Program throughout the Township.	Township	No Progress		
Walpack-4 (old #3)	Conduct all-hazards public education and outreach program for hazard mitigation and preparedness.	Township	Ongoing Capability		



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

- The Parks Service has made some roadway improvements near Mill Brook to reduce flooding of the roadway.

### PROPOSED HAZARD MITIGATION INITIATIVES FOR THE PLAN UPDATE

The Township of Walpack 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 Walpack 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 9.23-15 summarizes the comprehensive-range of specific mitigation initiatives the Township of Walpack 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 9.23-16 provides a summary of the prioritization of all proposed mitigation initiatives for this HMP update.



Table 9.24-15. 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
2020-Walpack-001	Municipal Building Backup Power	<p><b>Problem:</b> Backup power sources are necessary to maintain critical services for critical facilities. The Township Municipal Building requires a backup power source.</p> <p><b>Solution:</b> The Engineer will research what size generator is needed to power the Township Municipal Building. The Township will then purchase and install the selected generator and necessary electrical components to supply backup power to the Municipal Building.</p>	Existing	Severe Storm, Severe Winter Storm, Hurricane, Nor'Easter	1, 2, 6	Engineer, Emergency Manager	FEMA HMGP and BRIC, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Municipal Budget	Continuity of operations	\$50,000	Within 5 years	High	SIP	ES
2020-Walpack-002	Relocate Power Lines	<p><b>Problem:</b> Downed trees often result in power loss in the Township during storm events.</p> <p><b>Solution:</b> The Township will support JCP&amp;L efforts to relocate power lines out of wooded areas to areas along roadways. This will reduce likelihood of falling trees resulting in power loss and increased capability for tree trimming.</p>	Existing	Severe Storm, Severe Winter Storm, Hurricane, Nor'Easter	2	JCP&L, Township Administration, National Park Service	HMGP, BRIC, JCP&L	Reduction in power loss	High	Within 5 years	High	SIP	PP
2020-Walpack-003	Low-lying Roadway Flooding	<p><b>Problem:</b> The Township experiences isolated areas of roadway flooding not directly associated with flood plain (mainly at Old Mine Road and National Park Service Route 615 near thee Flat Brook Bridge).</p> <p><b>Solution:</b> The Township will work with the National Park Service to identify flooding of low-lying roadways. An engineering study will be conducted to determine cost-effective mitigation actions. The National Park Service will then implement the identified actions when funding is available. The Township will partner on grant applications where feasible.</p>	Existing	Severe Storm, Flood	2	National Park Service, Township Administration	HMGP, BRIC, National Park Service budget	Reduction in flood risk of roadways	TBD by engineering study	Within 5 years	High	SIP	SP, PP





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
2020-Walpack-004	Update Flood Damage Prevention Ordinance	<b>Problem:</b> The Township’s Flood Damage Prevention Ordinance is outdated and requires update.	New	Flood	2, 5	Administration	Township budget	Meet NFIP standards	Staff time	Within 6 months	High	LPR	PR
		<b>Solution:</b> The Township will update and adopt a new Ordinance to meet current standards. The Ordinance will also change the floodplain administrator from the clerk to the engineer.											
2020-Walpack-005	Floodplain Administrator Training	<b>Problem:</b> The Township Engineer is new to the role of Floodplain Administrator.	N/A	Flood	5	Administration	Township budget	Increased capability of FPA	Staff time	1 year	High	LPR	PR
		<b>Solution:</b> The Engineer will attend training for floodplain administration offered by FEMA and NJ DEP.											

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

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 9.24-16. 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
2020-Walpack-001	Municipal Building Backup Power	1	1	1	1	1	1	0	1	1	1	1	0	1	1	12	High 
2020-Walpack-002	Relocate Power Lines	1	1	1	1	1	0	0	1	1	1	1	0	1	1	11	High
2020-Walpack-003	Low-lying Roadway Flooding	1	1	1	1	1	0	0	1	1	1	1	0	1	1	11	High
2020-Walpack-004	Update Flood Damage Prevention Ordinance	0	1	1	1	1	1	1	1	1	1	0	1	1	1	12	High
2020-Walpack-005	Floodplain Administrator Training	1	1	1	1	1	1	1	1	1	1	0	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 9.24-17. 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								
Disease Outbreak								
Drought								
Earthquake								
Flood	X	X				X	X	X
Geologic								
Hazardous Materials								
Hurricane and Tropical Storm		X			X	X		
Invasive Species								
Nor'Easter		X			X	X		
Severe Weather		X			X	X		
Severe Winter Weather		X			X	X		
Wildfire								

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

- RED** high ranked hazard
- ORANGE** medium ranked hazard
- YELLOW** low ranked hazard



Figure 9.24-1. Township of Walpack Hazard Area Extent and Location Map 1

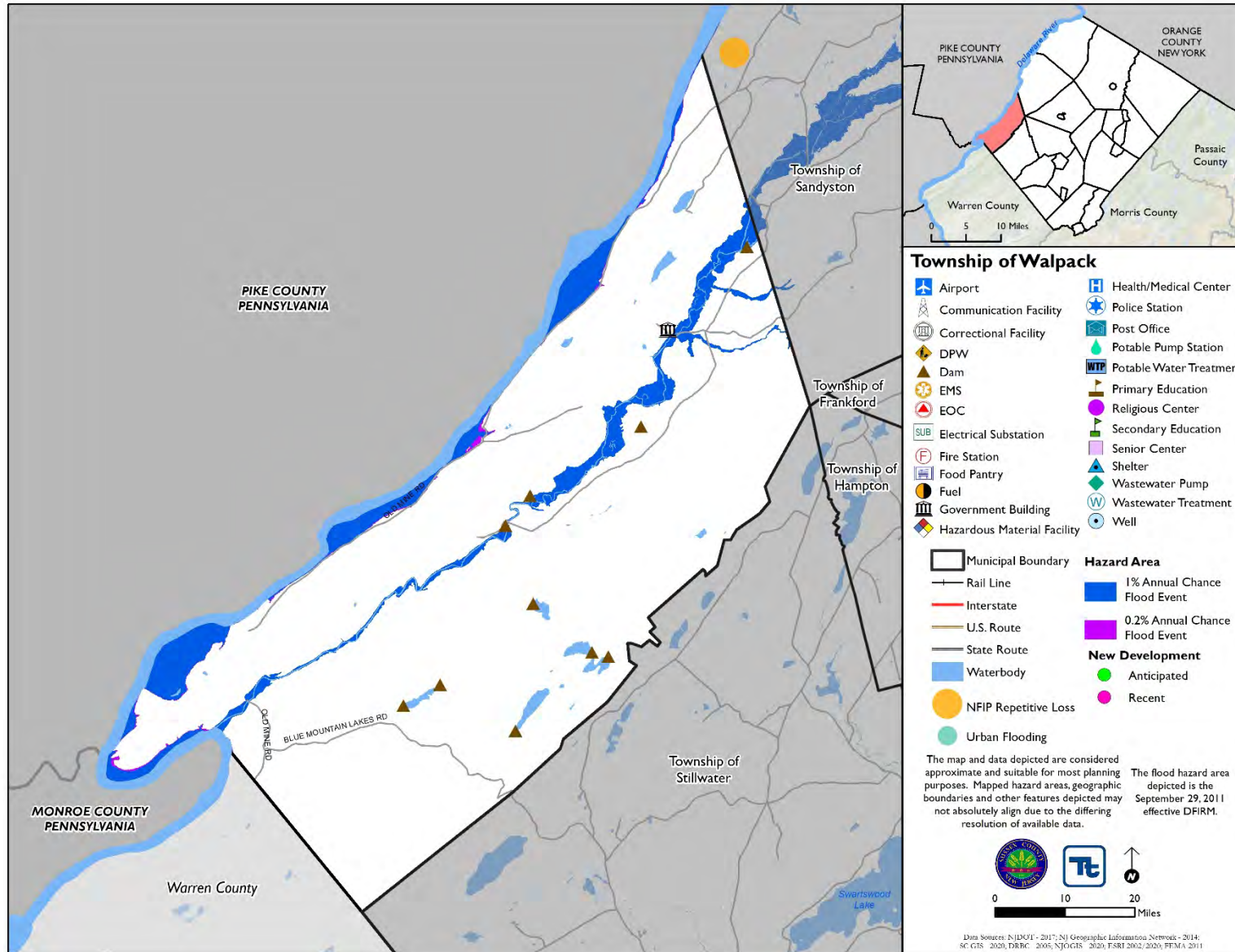




Figure 9.24-2. Township of Walpack Hazard Area Extent and Location Map 2

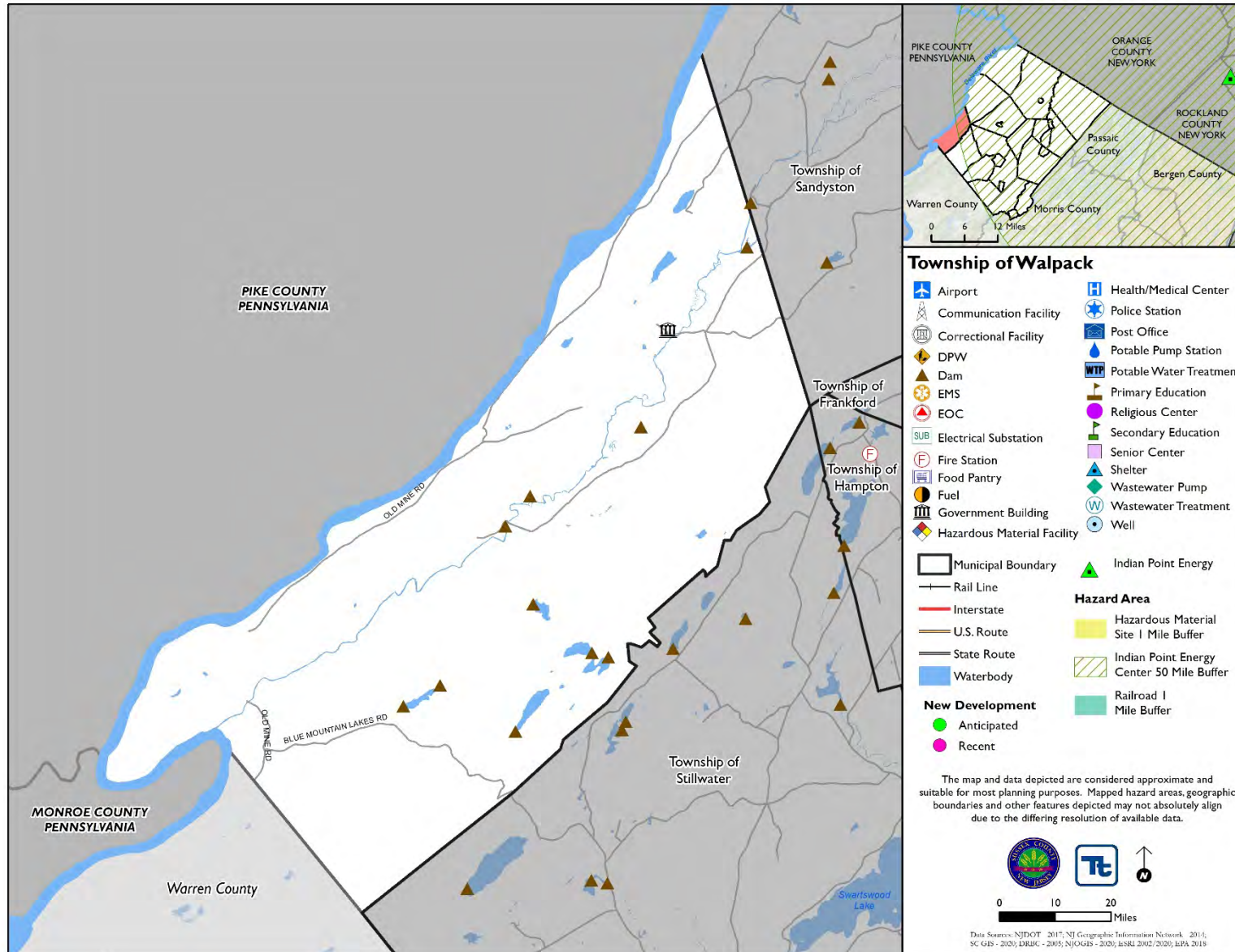
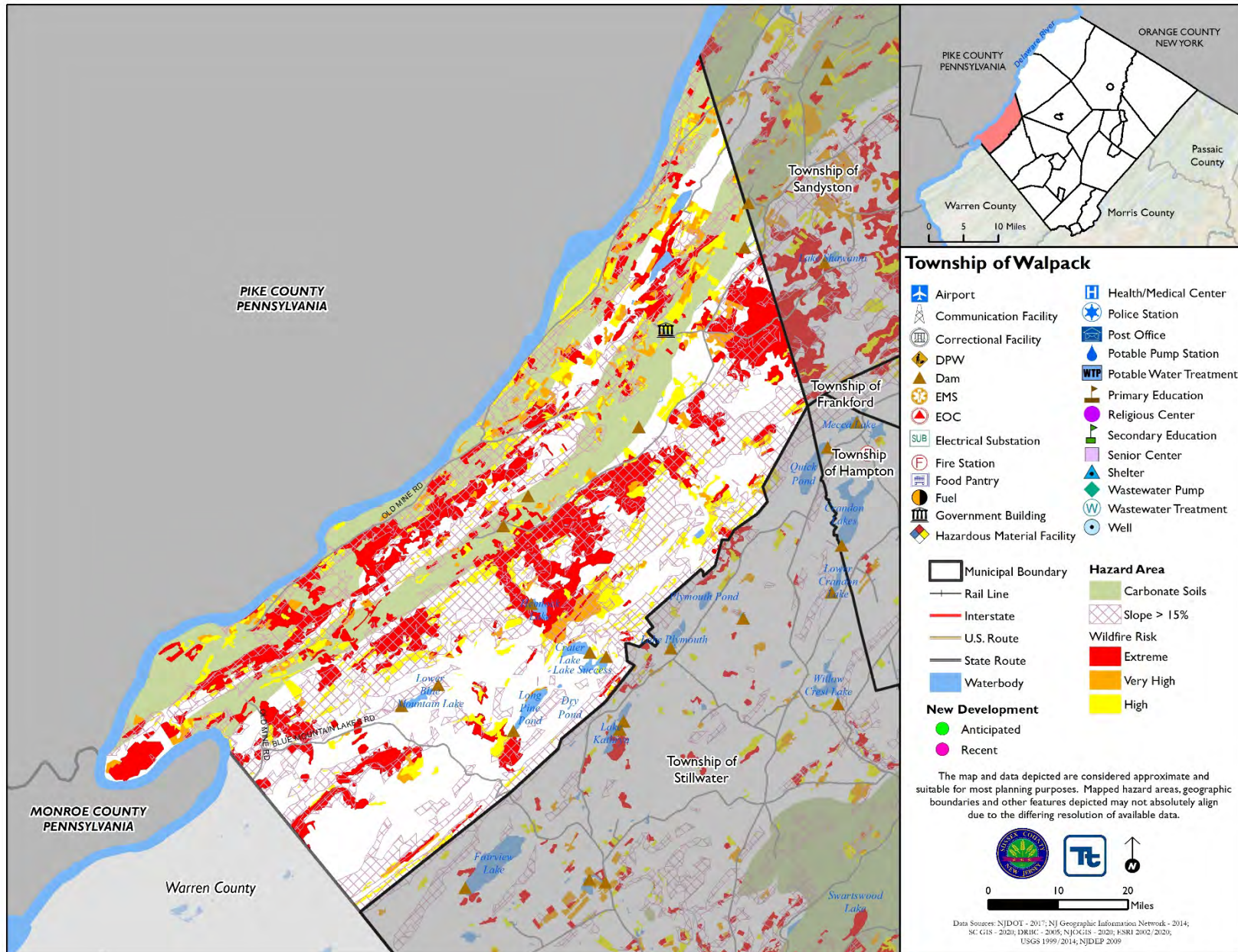




Figure 9.24-3 Township of Walpack Hazard Area Extent and Location Map 3





Action Worksheet			
<b>Project Name:</b>	Municipal Building Backup Power		
<b>Project Number:</b>	2020-Walpack-001		
<b>Risk / Vulnerability</b>			
<b>Hazard(s) of Concern:</b>	Severe Storm, Severe Winter Storm, Hurricane, Nor'Easter		
<b>Description of the Problem:</b>	Backup power sources are necessary to maintain critical services for critical facilities. The Township Municipal Building requires a backup power source.		
<b>Action or Project Intended for Implementation</b>			
<b>Description of the Solution:</b>	The Engineer will research what size generator is needed to power the Township Municipal Building. The Township will then purchase and install the selected generator and necessary electrical components to supply backup power to the Municipal Building.		
<b>Is this project related to a Critical Facility?</b>	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
<b>Level of Protection:</b>	N/A	<b>Estimated Benefits (losses avoided):</b>	Ensures continuity of operations of DPW building
<b>Useful Life:</b>	20 years	<b>Goals Met:</b>	1, 2, 6
<b>Estimated Cost:</b>	\$50,000	<b>Mitigation Action Type:</b>	Structure and Infrastructure Projects (SIP)
<b>Plan for Implementation</b>			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	Within 5 years
<b>Estimated Time Required for Project Implementation:</b>	1 year	<b>Potential Funding Sources:</b>	FEMA HMGP and BRIC, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Municipal Budget
<b>Responsible Organization:</b>	Public Works	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard Mitigation, Emergency Management
<b>Three Alternatives Considered (including No Action)</b>			
<b>Alternatives:</b>	<b>Action</b>	<b>Estimated Cost</b>	<b>Evaluation</b>
	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
<b>Progress Report (for plan maintenance)</b>			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			



Action Worksheet		
<b>Project Name:</b>	Municipal Building Backup Power	
<b>Project Number:</b>	2020-Walpack-001	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Project will protect critical services of Township Municipal 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	Severe Storm, Severe Winter Storm, Hurricane, Nor'Easter
Timeline	0	Within 5 years
Agency Champion	1	Engineer, Emergency Manager
Other Community Objectives	1	
<b>Total</b>	12	
<b>Priority (High/Med/Low)</b>	High	





Action Worksheet			
<b>Project Name:</b>	Low-lying Roadway Flooding		
<b>Project Number:</b>	2020-Walpack-003		
Risk / Vulnerability			
<b>Hazard(s) of Concern:</b>	Flood, Severe Storm		
<b>Description of the Problem:</b>	The Township experiences isolated areas of roadway flooding not directly associated with flood plain (mainly at Old Mine Road and National Park Service Route 615 near the Flat Brook Bridge).		
Action or Project Intended for Implementation			
<b>Description of the Solution:</b>	The Township will work with the National Park Service to identify flooding of low-lying roadways. An engineering study will be conducted to determine cost-effective mitigation actions. The National Park Service will then implement the identified actions when funding is available. The Township will partner on grant applications where feasible.		
<b>Is this project related to a Critical Facility or Lifeline?</b>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
<b>Level of Protection:</b>	TBD by engineering study	<b>Estimated Benefits (losses avoided):</b>	Reduction in flood risk
<b>Useful Life:</b>	TBD by engineering study	<b>Goals Met:</b>	2
<b>Estimated Cost:</b>	TBD by engineering study	<b>Mitigation Action Type:</b>	Structure and Infrastructure Projects
Plan for Implementation			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	Within 5 years
<b>Estimated Time Required for Project Implementation:</b>	5 years	<b>Potential Funding Sources:</b>	HMGP, BRIC, municipal budget
<b>Responsible Organization:</b>	National Park Service, Township Administration	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard mitigation planning, stormwater planning
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues
	Elevate roadways	\$500,000	Costly and may not solve problem
	Relocate roadways	N/A	Not possible
Progress Report (for plan maintenance)			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			



Action Worksheet		
<b>Project Name:</b>	Low-lying Roadway Flooding	
<b>Project Number:</b>	2020-Walpack-003	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	.
Property Protection	1	Reduction in flooding risk
Cost-Effectiveness	1	
Technical	1	Technically feasible project
Political	1	
Legal	0	The Township does not have the legal authority to conduct the project on its own. The roadways are under the jurisdiction of the National Park Service.
Fiscal	0	Project will require grant funding.
Environmental	1	
Social	1	Project would reduce flooding impacts.
Administrative	1	
Multi-Hazard	1	Flood, Severe Storm
Timeline	0	
Agency Champion	1	National Park Service, Township Administration
Other Community Objectives	1	
<b>Total</b>	11	
<b>Priority (High/Med/Low)</b>	High	



## 9.25 TOWNSHIP OF WANTAGE

This section presents the jurisdictional annex for the Township of Wantage. The annex includes a general overview of the Township of Wantage; an assessment of the Township of Wantage’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.

### 9.25.1 Hazard Mitigation Planning Team

The Township of Wantage 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 9.25-1. Hazard Mitigation Planning Team**

Primary Point of Contact		Alternate Point of Contact
Name / Title: Joseph Konopinski, OEM Coordinator Address: 888 State Route 23, Wantage, NJ 07461 Phone Number: (973) 222-7269 Email: OEM@wantage-nj.org		Name / Title: Michael Restel, Administrator Address: 888 State Route 23, Wantage, NJ 07461 Phone Number: (973) 647-5015 Email: mike@wantagewp-nj.org
NFIP Floodplain Administrator		
Name / Title: Harold Pellow, Engineer Address: 17 Plains Road, Augusta, NJ 07822 Phone Number: (973) 948-6463 Email: hpellow@hpellow.com		
Name	Title	Method of Participation
Joe Konopinski	OEM Coordinator	Primary point of contact, capability assessment completion; mitigation strategy development; provision of data and input on hazard rankings; member of the Steering Committee; attended the kickoff meeting, risk assessment meeting, annex training and mitigation strategy workshop; reviewed annex*
Michael Restel	Township Administrator	Alternate point of contact, capability assessment completion; mitigation strategy development; provision of data and input on hazard rankings; reviewed annex*
Harold Pellow	Engineer	NFIP Floodplain Administrator; reviewed annex*
Ashley Wilson	CFO	Reviewed annex*
Joseph Butto	Construction Official	Reviewed annex*
Claude R Wagner	Public Works Director	Reviewed annex*
Mark Snook	Fire Chief	Reviewed annex*

*\*Refer to Jurisdictional Annex Review Sign-Off Sheet in Appendix B*





### 9.25.2 Jurisdiction Profile

Wantage Township is located in northern Sussex County. The Township fully surrounds the Borough of Sussex. New York State is located to the north, the Townships of Lafayette and Hardyston are located to the south, Vernon Township is located to the east and Montague and Frankford Townships are located to the west. It has a total area of 67.5 square miles. The following unincorporated communities are located within the Township: Mount Salem, Rockport, Hanford, Colesville, Van Syckles, Quarryville, Libertyville, Plumbsock, Beemerville, Woodbourne, McCoys Corner, Lewisburg, Martins, Papakating, and Roys. The Wallkill River forms the eastern border of the Township and its tributaries flow through the Township as well. Other streams, ponds and lakes in the Township include, but not limited to: Hanfrod Brook, Clove Brook, West Branch Papakating Creek and its tributaries, Papakating Creek, Clove Acres Lake, Lake Windsor, Lake Neepaulin, Herzenberg Lake, and Lake Rutherford.

According to the U.S. Census, the 2010 population for the Township of Wantage was 11,358. The estimated 2018 population was 11,902 a 4.4 percent decrease from the 2010 Census. Data from the 2018 U.S. Census American Community Survey indicate that 4.2 percent of the population is 5 years of age or younger and 18.2 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.

### 9.25.3 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 9.24-2 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 9.25-2. Recent and Expected Future Development**

Type of Development	2015		2016		2017		2018		2019	
<b>Number of Building Permits for New Construction Issued Since the Previous HMP</b>										
	<b>Total</b>	<b>Within SFHA</b>	<b>Total</b>	<b>Within SFHA</b>	<b>Total</b>	<b>Within SFHA</b>	<b>Total</b>	<b>Within SFHA</b>	<b>Total</b>	<b>Within SFHA</b>
Single and Two-Family Units	7	-	3	-	2	-	3	-	8	-
Multi-Family	0	-	1	-	60	-	0	-	0	-
Other (commercial, mixed-use, etc.)	1	-	0	-	0	-	0	-	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		
<b>Recent Major Development and Infrastructure from 2015 to Present</b>										
Wantage Emergency Operations Center	Emergency Operations Center	1		888 Route 23 Wantage, NJ		Nuclear Incident Hazard Area		Complete		
<b>Known or Anticipated Major Development and Infrastructure in the Next Five (5) Years</b>										
None Anticipated										

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





### 9.25.4 Capability Assessment

Section 5 (Capability Assessment) describes the components included in the capability assessment and their significance for hazard mitigation planning. The Township of Wantage 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 planning, legal and regulatory capabilities
- Development and permitting capabilities
- An assessment of administrative and technical capabilities
- An assessment of fiscal capabilities
- An assessment of education and outreach capabilities
- Information on NFIP compliance
- The community’s adaptive capacity for the impacts of climate change
- Classification under various community mitigation programs

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 Wantage 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 Wantage and where hazard mitigation has been integrated.

**Table 9.25-3. 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.
<b>Codes, Ordinances, &amp; Requirements</b>					
<b>Building Code</b>	Yes	State & Local	Yes	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>• 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</li> <li>• The Township’s code (Chapter 8) follows State Uniform Construction Code Act (N.J.S. 52:27D-119 Et Seq.). The code includes maintenance standards that requires buildings to be kept free from hazards.</li> </ul>					
<b>Zoning Code</b>	Yes	Local	Yes – if municipality has a Planning Board	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>• 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.</li> <li>• This code is found in Chapter 13 of the municipal code and was adopted in 1979.</li> <li>• The general intent of the code is to establish a precise and detailed plan for the use of land in the township based on the master plan for Wantage Township and enacted in order to promote and to protect the public health, safety, morals, comfort, convenience</li> </ul>					



	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.
<p><i>and the general welfare. This chapter is intended to regulate the use of land within zoning districts, promote orderly development, regulate intensity of use and the location of buildings, establish standards of development, prohibit incompatible uses, regulate the alteration of existing buildings, limit congestion in the roads, protect against hazards, and conserve the taxable value of land, and generally to promote the purposes of zoning as set forth.</i></p> <ul style="list-style-type: none"> <li><i>The Township has a floodplain district that prohibits filling, draining, constructing levees and bulkheads, or improving land to eliminate or reduce flooding or erosion.</i></li> <li><i>When updating the Zoning Ordinance, the Township will recognize hazard areas as limits on changes to zoning within the municipality.</i></li> </ul>					
<b>Subdivisions</b>	Yes	Local – Land Use Board	Yes – if municipality has a Planning Board	Yes	-
<p><b>Comment:</b></p> <ul style="list-style-type: none"> <li><i>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.</i></li> <li><i>The land subdivision code (Chapter 12) provides the rules, regulations and standards to guide land subdivision in the township in order to promote the public health, safety, convenience and general welfare of the township. When reviewing subdivision applications, the Land Use Board will look for floodplains and wetlands. When submitting an application, the property owner must show flood hazard areas, steep slopes, and natural terrain features.</i></li> </ul>					
<b>Stormwater Management</b>	Yes	Local	Yes	Yes	-
<p><b>Comment:</b></p> <ul style="list-style-type: none"> <li><i>See Title 7 of the NJ Administrative Code, N.J.A.C. 7:8</i></li> <li><i>This ordinance was adopted in 3/30/06 and is found in Chapter 14a of the municipal code. The purpose of the code is to establish minimum stormwater management requirements and controls for major development.</i></li> </ul>					
<b>Post-Disaster Recovery</b>	No	-	No	-	-
<p><b>Comment:</b></p>					
<b>Real Estate Disclosure</b>	Yes	State, Division of Consumer Affairs	Yes	Yes	-
<p><b>Comment:</b></p> <ul style="list-style-type: none"> <li><i>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.</i></li> </ul>					
<b>Growth Management</b>	Yes	Local	Yes – if municipality has a Planning Board	No	-
<p><b>Comment:</b></p> <ul style="list-style-type: none"> <li><i>State Mandated on a municipal level. See Zoning Ordinance ; Also - Plan Endorsement Process via the State Development &amp; Redevelopment Plan provides for the delineation of Growth Areas and Environs; Use of the endorsed plans in the implementation of state environmental regulations makes the Plan Endorsement process a growth management strategy.</i></li> <li><i>These ordinances were adopted in 1979 and found in Chapter 13 (Zoning) of the municipal code.</i></li> <li><i>The Governing Body is responsible for these ordinances in compliance with the Zoning Ordinance.</i></li> </ul>					
<b>Site Plan Review</b>	Yes	Local – Land Use Board	Yes – if municipality has a Planning Board	Yes	-
<p><b>Comment:</b></p>					



	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.
<ul style="list-style-type: none"> <li>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 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.</li> <li>In the Township, site plan review and approval is required before any change of use, or before any excavation, removal of soil, clearing of a site or placing of any fill on lands contemplated for development, and, except as hereinafter provided, no building permit shall be issued for any building or use, or reduction or enlargement in size or other alteration of any building or change in use of any building including accessory structures unless a site plan is first submitted and approved by the reviewing board and no certificate of occupancy shall be given unless all construction and development conform to the plans as approved by the reviewing board.</li> <li>The Land Use Board is responsible for these requirements.</li> </ul>					
<b>Environmental Protection</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Flood Damage Prevention</b>	Yes	Federal, State & Local	Yes	Yes	2021- Wantage-004
<i>Comment:</i> <ul style="list-style-type: none"> <li>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.</li> <li>The Township Engineer is responsible for this ordinance in compliance with Chapter 18- Flood Damage Prevention. The code requires a development permit before any construction or development begins, including placement of manufactured homes, within any area of special flood hazard. Any new construction or substantial improvements in the SFHA must have their lowest floor elevated to or above the BFE. For non-residential construction, they can either elevate to the BFE or floodproof areas below the BFE.</li> <li>The Township's current flood damage prevention ordinance was last adopted in 2011. It currently does not have a freeboard requirement and does not meeting New Jersey's minimum requirement.</li> </ul>					
<b>Wellhead Protection</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Emergency Management</b>	Yes	Local	No	No	-
<i>Comment:</i> <ul style="list-style-type: none"> <li>Adopted February 7<sup>th</sup>, 2019- Local Plan</li> </ul>					
<b>Climate Change</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Disaster Recovery Ordinance</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Disaster Reconstruction Ordinance</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Other:</b>	No	-	-	-	-
<i>Comment:</i>					
<b>Planning Documents</b>					
<b>Comprehensive / Master Plan</b>	Yes	Local	Yes	No	-
<i>Comment:</i>					





	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.
<ul style="list-style-type: none"> <li>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.</li> <li>The Master Plan Reexamination Report for Wantage Township was adopted on October 24, 2009.</li> </ul>					
<b>Capital Improvement Plan</b>	Yes	Local	No	Yes	-
<b>Comment:</b> <ul style="list-style-type: none"> <li>The 2020 budget included the 6-year capital program (2020 to 2025) for the Township. It included line items for capital improvement funds, improvements to roads, purchase of emergency equipment, improvements to parks, and drainage improvements.</li> </ul>					
<b>Disaster Debris Management Plan</b>	Yes	Local	No	-	2021-Wantage-005
<b>Comment:</b> <ul style="list-style-type: none"> <li>A Disaster Debris Management Plan is in development.</li> </ul>					
<b>Floodplain or Watershed Plan</b>	Yes	Local	No	Yes	-
<b>Comment:</b> <ul style="list-style-type: none"> <li>The Governing Body is responsible for this plan, which was adopted on 9/8/11, in compliance with Ordinance 2011-08.</li> </ul>					
<b>Stormwater Management Plan</b>	Yes	Local	Yes	Yes	-
<b>Comment:</b> <ul style="list-style-type: none"> <li>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.</li> <li>This plan was adopted on 3/8/05.</li> <li>The Governing Body is responsible for this plan in compliance with Stormwater Management Plan.</li> </ul>					
<b>Stormwater Pollution Prevention Plan</b>	Yes	Local	Yes	Yes	-
<b>Comment:</b> <ul style="list-style-type: none"> <li>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.</li> </ul>					
<b>Urban Water Management Plan</b>	No	-	No	-	-
<b>Comment:</b>					
<b>Habitat Conservation Plan</b>	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.
<i>Comment:</i>					
<b>Economic Development Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Shoreline Management Plan</b>	No	-	Yes – if located in a coastal zone	-	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>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. 7:27E-1 et seq.</li> </ul>					
<b>Community Wildfire Protection Plan</b>	No-NJFFS	-	No	-	-
<i>Comment:</i>					
<b>Community Forest Management Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Transportation Plan</b>	Yes	Local	No	No	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>The Land Use Board is responsible for this plan, which was adopted in 2014, in compliance with the Master Plan.</li> </ul>					
<b>Agriculture Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Climate Action Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Tourism Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Business Development Plan</b>	Yes-Committee (MP)	Local	No	No	-
<i>Comment:</i>					
<b>Other: Open Space Plan</b>	Yes	Local	No	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>This plan was adopted in March of 2008.</li> <li>The Governing Body is responsible for this plan in compliance with the Open Space Plan.</li> </ul>					
<b>Response/Recovery Planning</b>					
<b>Comprehensive Emergency Management Plan (CEMP) / Emergency Operations Plan (EOP)</b>	Yes	Local	Yes	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>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.</li> <li>This plan was rewritten and adopted in 2019.</li> <li>The Office of Emergency Management is responsible for this plan in compliance with the Emergency Management Plan.</li> </ul>					
<b>Threat &amp; Hazard Identification &amp; Risk Assessment (THIRA)</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Post-Disaster Recovery Plan</b>	Yes	Local	No	Yes	-
<i>Comment:</i>					
<ul style="list-style-type: none"> <li>The Office of Emergency Management is responsible for this plan, which was adopted in 2014, in compliance with the Emergency Management Plan.</li> </ul>					



	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.
<b>Continuity of Operations Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Public Health Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Other</b>	No	-	No	-	-
<i>Comment:</i>					

**Table 9.25-4. Development and Permitting Capability**

Criterion	Response
Does your jurisdiction issue development permits? - If no, who does? If yes, which department?	Yes, Building Department
Does your jurisdiction have the ability to track permits by hazard area?	Yes
Does your jurisdiction have a buildable lands inventory? -If yes, please describe briefly. -If no, please quantitatively describe the level of buildout in the jurisdiction.	No. While there are many undeveloped areas, no large scale development is likely, limited by location.

**ADMINISTRATIVE AND TECHNICAL CAPABILITY**

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

**Table 9.25-5. Administrative and Technical Capabilities**

Staff/Personnel Resource	Available?	Department/Agency/Position
<b>Administrative Capability</b>		
Planning Board	Yes	The Township’s Land Use Board considers the impact on the community when development of land is proposed. The board will make recommendations to stay in compliance with the existing township ordinances.
Mitigation Planning Committee	No	-
Environmental Board / Commission	Yes	Wantage Township Clean Communities Program
Open Space Board / Committee	Yes	The Township has an Open Space Committee that is made up of six committee members.
Economic Development Commission / Committee	No	Currently inactive
Warning Systems / Services (mass notification system, outdoor warning signals)	Yes	The Township utilizes their website to post news and announcements. The Township also uses Facebook to post weather alerts and news. Wantage Township OEM also uses Facebook to post weather alert and emergency notifications. The Township also has an electronic message board outside of municipal hall. Through County OEM, residents can use Swift911 to sign up for emergency alerts.
Maintenance program to reduce risk	No	-
Mutual aid agreements	Yes	Public Safety
<b>Technical/Staffing Capability</b>		





Staff/Personnel Resource	Available?	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	Yes	Land Use Board
Engineers or professionals trained in building or infrastructure construction practices	Yes	Land Use Board
Planners or engineers with an understanding of natural hazards	Yes	Land Use Board
Staff with training in benefit/cost analysis	Yes	Finance
Staff with training in green infrastructure	Yes	Harold Pellow
Staff with education/knowledge/training in low impact development	Yes	Harold Pellow
Surveyor	No	-
Stormwater engineer	Yes	Contract- Pellow and Associates
Personnel skilled or trained in GIS applications	No	-
Local or state water quality professional	Yes	County
Scientist familiar with natural hazards in local area	No	-
Emergency manager	Yes	Emergency Management
Watershed planner	Yes	Contract- Pellow and Associates
Environmental specialist	Yes	Harold Pellow (wetlands)
Grant writers	No	-
Resilience Officer	No	-
Other: NFIP Floodplain Administrator	Yes	Township Engineer
Other: Professionals trained in conducting damage assessments	Yes	Administration

**FISCAL CAPABILITY**

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

**Table 9.25-6. Fiscal Capabilities**

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

**EDUCATION AND OUTREACH CAPABILITY**

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





**Table 9.25-7. 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.	Yes – both the Township and the Township OEM use Facebook to provide weather updates and emergency alerts.
Do you have any citizen boards or commissions that address issues related to hazard mitigation? -If yes, briefly describe.	No
Do you have any other programs already in place that could be used to communicate hazard-related information? If yes, briefly describe.	No

**COMMUNITY CLASSIFICATIONS**

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

**Table 9.25-8. Community Classifications**

Program	Participating?	Classification	Date Classified
Community Rating System	No	-	-
Building Code Effectiveness Grading Schedule (BCEGS)	No	-	-
Public Protection (Fire ISO Protection Class)	No	-	-
Storm Ready Certification	No	-	-
Firewise Community Classification	No	-	-
Sustainable Jersey	Yes	Not certified	Joined program on November 11, 2010

**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 9.25-9. Adaptive Capacity**

Hazard	Adaptive Capacity (Capabilities) - Strong/Moderate/Weak
Dam Failure	Weak
Disease Outbreak	Weak
Drought	Moderate
Earthquake	Moderate
Flood	Weak
Geologic	Weak





Hazard	Adaptive Capacity (Capabilities) - Strong/Moderate/Weak
Hazardous Materials	Moderate
Hurricane and Tropical Storm	Moderate
Invasive Species	Strong
Nor’Easter	Strong
Severe Weather	Strong
Severe Winter Weather	Strong
Wildfire	Strong

**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.*

**NATIONAL FLOOD INSURANCE PROGRAM**

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

**Table 9.25-10. National Flood Insurance Program Compliance**

Criterion	Response
What local department is responsible for floodplain management?	Engineering
Who is your floodplain administrator? (name, department/position)	Harold Pellow, Engineer
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 set by FEMA and the State. §18-5.2 of the municipal code lists specific standards for residential and non-residential construction. For residential, new construction or substantial improvements in the SFHA must have the lowest floor elevated at or above the BFE. Non-residential construction (new or substantial improvements) must be elevated to the BFE or be floodproofed.
When was the most recent Community Assistance Visit or Community Assistance Contact?	December 14, 1993
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.	No
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 consider attending continuing education and/or certification trainings on floodplain management if it were offered in the County.
Does your jurisdiction participate in the Community Rating System (CRS)?	No





Criterion	Response
-If yes, is your jurisdiction interested in improving its CRS Classification? -If no, is your jurisdiction interested in joining the CRS program?	
How many flood insurance policies are in force in your jurisdiction?*	14 policies
-What is the insurance in force?	\$2,833,200 insurance in force
-What is the premium in force?	\$16,373 premium in force
How many total loss claims have been filed in your jurisdiction?*	10 claims
-How many claims are still open or were closed without payment?	\$180,963 in payments
-What were the total payments for losses?	
Do you maintain a list of properties that have been damaged by flooding?	No, but if there were flood damages, the community would maintain lists/inventories.
Do you maintain a list of property owners interested in flood mitigation?	No

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

**ADDITIONAL AREAS OF EXISTING INTEGRATION**

- The Township conducts all-hazards public education and outreach program for their residents. This is done through their website and Facebook page.
- The Township completes site plan reviews and design guidelines and has development review procedures for new construction, replacement, relocation and substantial improvement in hazard areas within the Township.
- The Township incorporates the HMP risk assessment and hazard mitigation principles into comprehensive planning efforts and day-to-day operations of the Township.

**OPPORTUNITIES FOR FUTURE INTEGRATION**

- **Firewise Program:** 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 application will be completed online (2021-Wantage-003).
- **Flood Damage Prevention Ordinance Update:** The Township will update its flood damage prevention ordinance to meet the New Jersey requirement of one foot of freeboard (2021-Wantage-004).
- **Disaster Debris Management Plan:** The Township will develop a debris management plan that will assist the municipality when they need to facilitate response and recovery after a debris-causing incident. The plan will provide direction to facilitate and coordinate the management of debris following a disaster (2021-Wantage-005).

**9.25.5 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 Wantage’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 9.24-11 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 9.25-11. 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 23 <sup>rd</sup> and 24 <sup>th</sup> .	Road closure; trees down
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.	Tax revenue, permits PPE supplies
August 4, 2020	Tropical Storm Isaias (declaration number pending)	Yes	Tropical Storm Isaias brought heavy rain to western New Jersey. Rainfall totals were as high as 3 to 5.5 inches. Observations from surrounding areas suggest sustained tropical storm force winds likely occurred.	Power loss /down. FEMA application still in process. (Under \$123,000- probably \$35K). Time for tree clearance, road closures, power outages. Power out for 2-3 days. Ran generators at town and firehouses. Vehicles

Source: FEMA 2020, NOAA NCEI 2020

### 9.25.6 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 Wantage 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 Wantage 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 Wantage has significant exposure.

#### REPETITIVE FLOOD LOSSES

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

- 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 9.25-12. Critical Facilities and Lifelines Flood Exposure**

Name	Type	Exposure	
		1% Event	0.2% Event
22-166 Herzenberg Dam	Dam	X	X

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

**IDENTIFIED ISSUES AND PROBLEM AREAS**

The jurisdiction has identified the community surrounding Lake Neepaulin as an area with frequently downed trees due to severe storms.

**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 Wantage 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 Wantage. The Township of Wantage 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 Wantage indicated the following reasons why hazard rankings have changed since the 2016 HMP:

- The climate has increased the risk for wildfires in the Township since 2016.

**Table 9.25-13. Township of Wantage Hazard Ranking**

Dam Failure	Disease Outbreak	Drought	Earthquake	Flood	Geologic	
Low	Low	Medium	Medium	Low	Low	
Hazardous Materials	Hurricane and Tropical Storm	Invasive Species	Nor’Easter	Severe Weather	Severe Winter Weather	Wildfire
Medium	Medium	High	High	High	High	Medium

**9.25.7 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 9.24-15 and Table 9.24-16 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 9.25-14. 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	Enter 2021 HMP Action #
Wantage-1 (new)	Ensure continuity of operations through back up power at critical facilities: purchase and install generators.	Township OEM	Completed (2 fire companies) using a FEMA mitigation grant (\$50,000).	-	-
Wantage-2 (old #2)	Implement Fire Wise Program throughout the Township.	Township OEM	No Progress	X	2021-Wantage-003
Wantage-3 (old #3)	Conduct all-hazards public education and outreach program for hazard mitigation and preparedness. Place an article in the Municipal newsletter and update the municipal website linking to the County HMP page	Township OEM with support from County OEM	Ongoing Capability	-	-
Wantage-4 (new)	Develop specific design guidelines and development review procedures for new construction, replacement, relocation and substantial improvement in hazard areas within the Township.	Township Administrator	Ongoing Capability	-	-
Wantage-5 (new)	When updating the Zoning Ordinance, the Township will recognize hazard areas as limits on changes to zoning within the municipality.	Township Administrator	Ongoing Capability	-	-
Wantage-6 (new)	Review the county HMP during the next update of the Township Master Plan.	Township Administrator	Ongoing Capability	-	-
Wantage-7 (new)	Incorporate risk assessment and hazard mitigation principles into comprehensive planning efforts and day-to-day operations of the Township.	Township Administrator	Ongoing Capability	-	-

**PROPOSED HAZARD MITIGATION INITIATIVES FOR THE PLAN UPDATE**

The Township of Wantage 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 Wantage 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 9.24-15 summarizes the comprehensive-range of specific mitigation initiatives the Township of Wantage 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 9.24-16 provides a summary of the prioritization of all proposed mitigation initiatives for this HMP update.



Table 9.25-15. 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-Wantage-001	Backup Generator at Municipal Hall	<p><b>Problem:</b> The Wantage Township Town Hall is located at 888 State Highway 23. It serves as the town hall, EMS, and EOC. The existing generator is in need of replacement as it is reaching its life expectancy. Without a functioning generator, the town hall will not be able to function or operate during emergency situations.</p> <p><b>Solution:</b> Working with the Township Engineer, identify the proper size generator for the town hall. Once identified, purchase and install a permanent generator.</p>	Existing	All	2, 3, 6	Township Administration, OEM	FEMA HMGP and BRIC, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Township Budget	Continuity of operations to critical facilities and lifelines	\$125,000	Within 2 years	High	SIP	PP, ES
2021-Wantage-002	PPE Stockpile	<p><b>Problem:</b> During the current COVID-19 pandemic, the Township did not have an adequate supply of personal protective equipment (PPE) for municipal staff. Without proper PPE, it puts municipal staff and residents at risk to the spread of infectious diseases.</p> <p><b>Solution:</b> The Township will purchase PPE to create a stockpile for municipal staff. This will include gloves, masks, gowns, antibacterial handwash, antiviral cleaning solutions, sanitizers, and misters.</p>	N/A	Disease Outbreak	1, 2, 3, 6	Township OEM	BRIC, NJDCA, Township Budget, FEMA Assistance to Firefighters Grant	Increase protection from diseases; decrease risk of spread	\$50,000	Within 2 years	High	LPR	PR, 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
2021-Wantage-003	Firewise Program	<p><b>Problem:</b> 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. The Township is currently not part of the Firewise program.</p>	Both	Wildfire	1, 2, 3, 4, 5	Township OEM and Fire Department	Township Budget, Staff Time	Helps Township identify wildfire safety efforts; access to funding and assistance	\$10,000+	Within 5 years	Medium	LPR, EAP	PI, ES
		<p><b>Solution:</b> 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 application will be completed online.</p>											
2021-Wantage-004	Update Flood Damage Prevention Ordinance	<p><b>Problem:</b> The Township's current flood damage prevention ordinance was last adopted in 2011. It currently does not have a freeboard requirement and does not meeting New Jersey's minimum requirement.</p>	New and Existing	Flood	1, 2	Township Administration, Engineer	Township budget, FEMA BRIC	Meet state standards, reduce future flood risk	Staff time	6 months	High	LPR	PR
		<p><b>Solution:</b> The Township will update its flood damage prevention ordinance to meet the</p>											





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-Wantage-005	Develop Debris Management Plan	<p>New Jersey requirement of one foot of freeboard.</p> <p><b>Problem:</b> The Township currently does not have an adopted debris management plan. 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.</p> <p><b>Solution:</b> The Township will develop a debris management plan that will assist the municipality when they need to facilitate response and recovery after a debris-causing incident. The plan will provide direction to facilitate and coordinate the management of debris following a disaster.</p>	Existing	All hazards	3, 5, 6	OEM, Public Works	Township budget	Increased disaster capability and preparedness	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

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 9.25-16. Summary of Evaluation and Action Priorities

Initiative Number	Mitigation Initiative Name	Life Safety	Property Protection	Cost Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community Objectives	Total	High / Medium / Low
2021-Wantage-001	Backup Generator at Municipal Hall	1	1	1	1	1	1	0	0	0	1	1	1	1	0	10	High ⚠
2021-Wantage-002	PPE Stockpile	1	0	1	1	1	1	0	0	1	1	0	1	1	1	10	High
2021-Wantage-003	Firewise Program	1	1	1	1	1	0	1	0	0	1	0	1	0	0	8	Medium
2021-Wantage-004	Update Flood Damage Prevention Ordinance	1	1	1	1	1	1	1	0	0	1	0	1	0	0	9	High
2021-Wantage-005	Develop Debris Management Plan	1	1	1	1	1	1	0	0	0	1	1	1	1	0	10	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 9.25-17. 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			X	X		X
Disease Outbreak	X	X	X		X	X		X
Drought		X			X	X		X
Earthquake		X			X	X		X
Flood	X	X			X	X	X	X
Geologic		X			X	X		X
Hazardous Materials		X			X	X		X
Hurricane and Tropical Storm		X			X	X		X
Invasive Species		X			X	X		X
Nor’Easter		X			X	X		X
Severe Weather		X			X	X		X
Severe Winter Weather		X			X	X		X
Wildfire		X	X		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 9.25-1. Township of Wantage Hazard Area Extent and Location Map 1

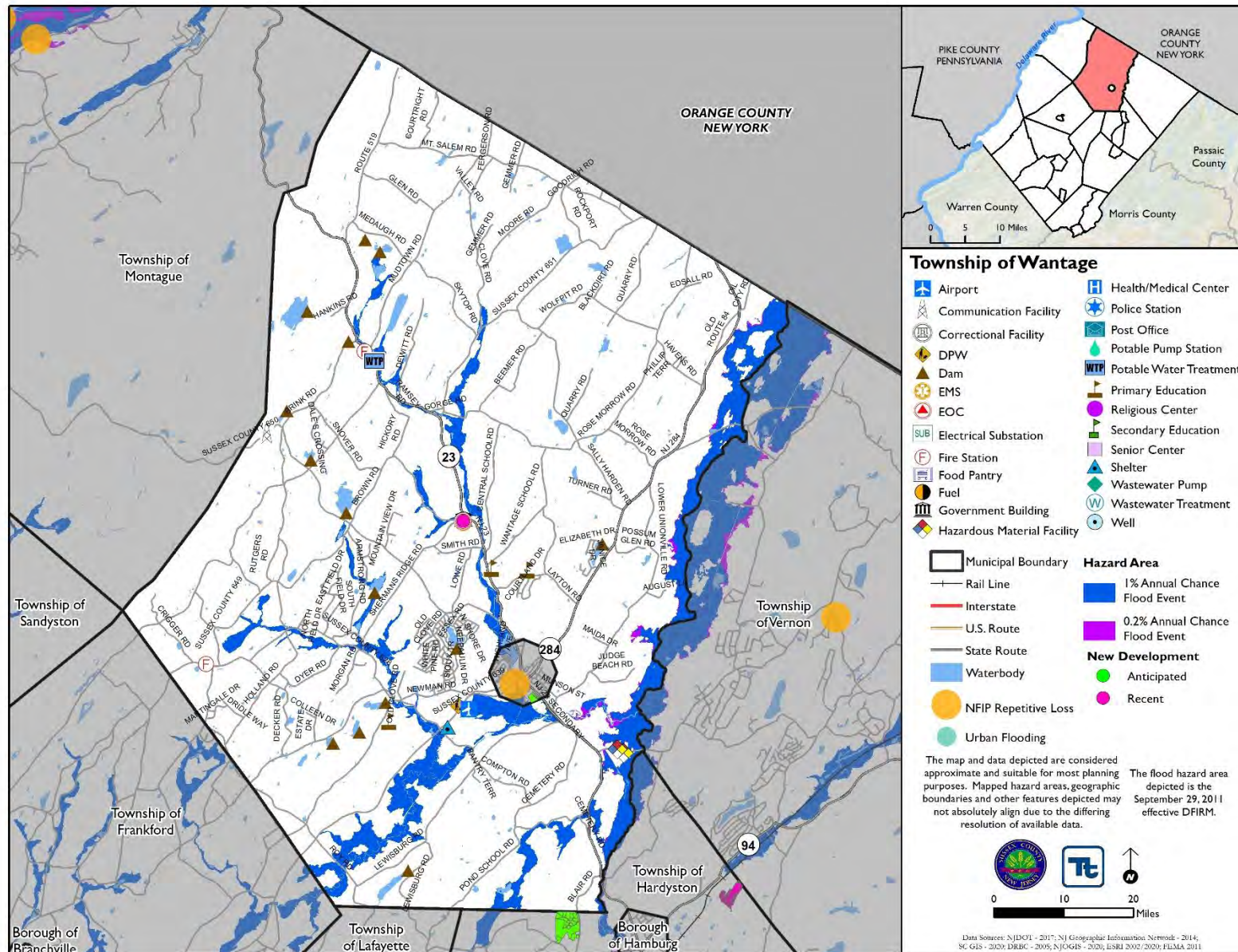




Figure 9.25-2. Township of Wantage Hazard Area Extent and Location Map 2

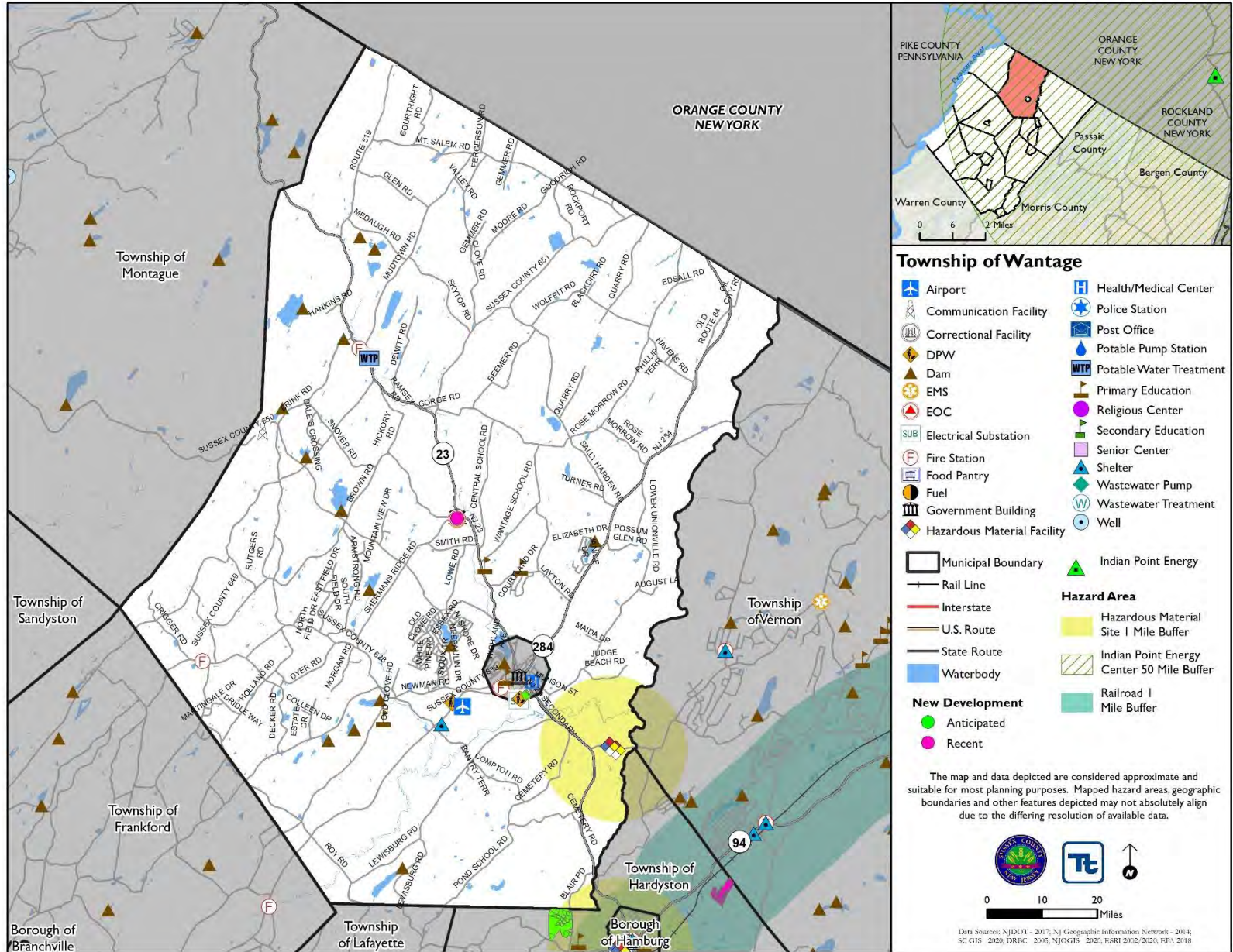
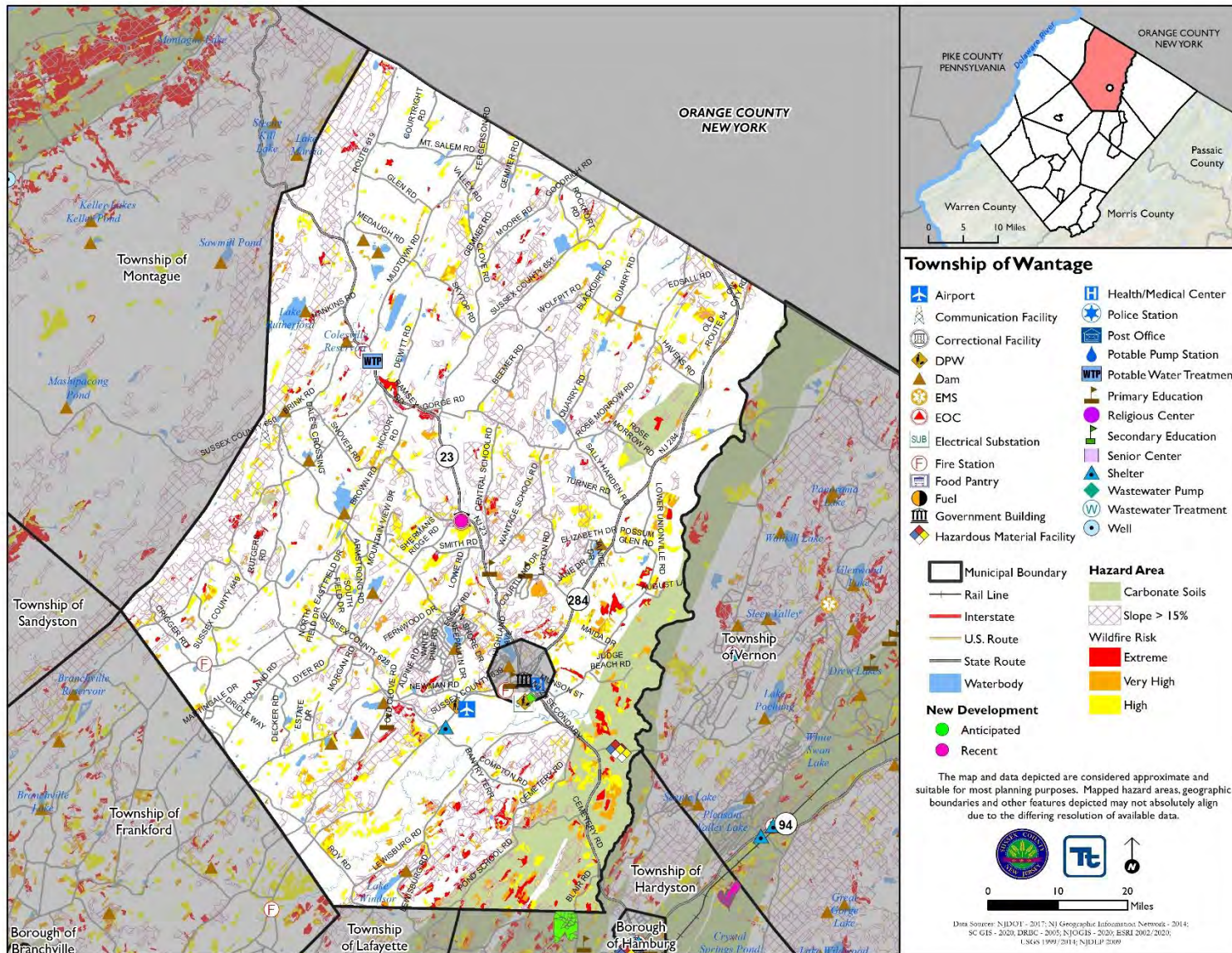




Figure 9.25-3 Township of Wantage Hazard Area Extent and Location Map 3





Action Worksheet			
<b>Project Name:</b>	Backup Generator at Municipal Hall		
<b>Project Number:</b>	2021-Wantage-001		
Risk / Vulnerability			
<b>Hazard(s) of Concern:</b>	All Hazards		
<b>Description of the Problem:</b>	The Wantage Township Town Hall is located at 888 State Highway 23. It serves as the town hall, EMS, and EOC. The existing generator is in need of replacement as it is reaching its life expectancy. Without a functioning generator, the town hall will not be able to function or operate during emergency situations.		
Action or Project Intended for Implementation			
<b>Description of the Solution:</b>	Working with the Township Engineer, identify the proper size generator for the town hall. Once identified, purchase and install a permanent generator.		
<b>Is this project related to a Critical Facility or Lifeline?</b>	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
<b>Level of Protection:</b>	N/A	<b>Estimated Benefits (losses avoided):</b>	Continuity of operations to critical facilities and lifelines
<b>Useful Life:</b>	5 years	<b>Goals Met:</b>	2, 3, 6
<b>Estimated Cost:</b>	\$125,000	<b>Mitigation Action Type:</b>	Structure and Infrastructure Project
Plan for Implementation			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	Within 2 years
<b>Estimated Time Required for Project Implementation:</b>	Within 2 years	<b>Potential Funding Sources:</b>	FEMA HMGP and BRIC, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Township Budget
<b>Responsible Organization:</b>	Township Administration, OEM	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard Mitigation
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues
	Install solar panels on roof of town hall	\$20,000+	Weather dependent; maintenance costs
	Install wind turbine	\$10,000+	Weather dependent; maintenance costs
Progress Report (for plan maintenance)			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			



Action Worksheet		
<b>Project Name:</b>	Backup Generator at Municipal Hall	
<b>Project Number:</b>	2021-Wantage-001	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
<b>Life Safety</b>	1	Provide continuity of operations and emergency services to residents
<b>Property Protection</b>	1	Protect building from damages associated with power outages; provide continuity of operations
<b>Cost-Effectiveness</b>	1	
<b>Technical</b>	1	
<b>Political</b>	1	
<b>Legal</b>	1	The Township has jurisdiction to implement this project
<b>Fiscal</b>	0	Need grant funding
<b>Environmental</b>	0	No environmental impacts
<b>Social</b>	0	No social impacts
<b>Administrative</b>	1	The Township has the administrative capabilities to implement this project
<b>Multi-Hazard</b>	1	All hazards
<b>Timeline</b>	1	To be completed within 2 years
<b>Agency Champion</b>	1	
<b>Other Community Objectives</b>	0	
<b>Total</b>	10	
<b>Priority (High/Med/Low)</b>	High	



Action Worksheet			
<b>Project Name:</b>	PPE Stockpile		
<b>Project Number:</b>	2021-Wantage-002		
Risk / Vulnerability			
<b>Hazard(s) of Concern:</b>	Disease Outbreak		
<b>Description of the Problem:</b>	During the current COVID-19 pandemic, the Township did not have an adequate supply of personal protective equipment (PPE) for municipal staff. Without proper PPE, it puts municipal staff and residents at risk to the spread of infectious diseases.		
Action or Project Intended for Implementation			
<b>Description of the Solution:</b>	The Township will purchase PPE to create a stockpile for municipal staff. This will include gloves, masks, gowns, antibacterial handwash, antiviral cleaning solutions, sanitizers, and misters.		
<b>Is this project related to a Critical Facility or Lifeline?</b>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
<b>Level of Protection:</b>	PPE	<b>Estimated Benefits (losses avoided):</b>	Increase protection from diseases; decrease risk of spread
<b>Useful Life:</b>	Supply needs to be replaced after use	<b>Goals Met:</b>	1, 2, 3, 6
<b>Estimated Cost:</b>	\$50,000	<b>Mitigation Action Type:</b>	Local Plans and Regulations
Plan for Implementation			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	Within 2 years
<b>Estimated Time Required for Project Implementation:</b>	1 year	<b>Potential Funding Sources:</b>	BRIC, NJDCA, Township Budget, FEMA Assistance to Firefighters Grant
<b>Responsible Organization:</b>	Township OEM	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard Mitigation, Emergency Management
Three Alternatives Considered (including No Action)			
<b>Alternatives:</b>	<b>Action</b>	<b>Estimated Cost</b>	<b>Evaluation</b>
	No Action	\$0	Current problem continues
	Shut down during disease outbreak events	N/A	Loss of continuity of operations
	Rely on county/state/federal distribution	\$0	Supply not guaranteed
Progress Report (for plan maintenance)			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			



Action Worksheet		
<b>Project Name:</b>	PPE Stockpile	
<b>Project Number:</b>	2021-Wantage-002	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Protects life from disease outbreak
Property Protection	0	
Cost-Effectiveness	1	Cost-effective project
Technical	1	Technically feasible project
Political	1	
Legal	1	The Township has the legal authority to conduct the project.
Fiscal	0	Project will require funding support.
Environmental	0	
Social	1	Project would help protect families from disease outbreak events
Administrative	1	
Multi-Hazard	0	Disease Outbreak
Timeline	1	
Agency Champion	1	OEM
Other Community Objectives	1	
<b>Total</b>	10	
<b>Priority (High/Med/Low)</b>	High	