



## 9.9 TOWNSHIP OF HARRISON

This section presents the jurisdictional annex for the Township of Harrison and includes resources and information to assist public and private sectors with reducing losses from future hazard events. This annex is not intended as guidance for actions to take during a disaster. Rather, this annex provides actions that can be implemented prior to a disaster to reduce or eliminate damage to property and people. The annex includes a general overview of the municipality and who in the Township participated in the planning process, an assessment of the Township of Harrison’s risk and vulnerability, the different capabilities used in the Township, and an action plan that will be implemented to achieve a more resilient community.

### 9.9.1 Hazard Mitigation Planning Team

The Township of Harrison followed the planning process described in Section 2 (Planning Process) in Volume I of this plan update and developed the annex over the course of several months with input from many Township departments as summarized in the table below. The primary and alternate points of contact represented the community on the Planning Partnership and supported the local planning process requirements by securing input from persons with specific knowledge to enhance the plan. All departments were asked to contribute to the annex development through reviewing and contributing to the capability assessment, reporting on the status of previously identified actions, and participating in action identification and prioritization.

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 municipal officials that participated in the development of the annex and in what capacity, including the Township of Harrison’s hazard mitigation plan primary and alternate points of contact. 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: Brian Bartholomew, Emergency Management Coordinator Address: 114 Bridgeton Pike, Mullica Hill, NJ Phone Number: 609-685-1643 Email: <a href="mailto:harrisonwp@harrisonwp.us">harrisonwp@harrisonwp.us</a> NFIP Floodplain Administrator	Name/Title: Frank Rodgers, Deputy Emergency Management Coordinator Address: 114 Bridgeton Pike, Mullica Hill, NJ Phone Number: 856-974-2668 Email: <a href="mailto:frankrodgers233@gmail.com">frankrodgers233@gmail.com</a>



Name/Title: Dennis McNulty, PE, Remington & Vernick, Township Engineer  
Address: 114 Bridgeton Pike, Mullica Hill, NJ  
Phone Number: 609-410-7711  
Email: [dennis.mculty@rve.com](mailto:dennis.mculty@rve.com)

Name	Title	Method of Participation

## 9.9.2 Municipal Profile

Harrison Township traces its history as a farm and mill community to the early 18th century when members of the Mullica family settled the north side of the Raccoon Creek. Recent research of the land deeds and titles of the period show that it was probably William Mullica, one of three sons of Erick Mullica, that was the first family member to purchase land in the area. During the 18th century, the three other villages, Jefferson, Ewan, and Richwood were established.

Harrison Township, New Jersey is 19.84 square miles and is located in the central portion of Gloucester County, approximately 25 miles south of Camden, New Jersey. Harrison Township is bordered by the municipalities of East Greenwich Township, Mantua Township, the Borough of Glassboro, Elk Township, South Harrison Township, and Woolwich Township. Exit two of the New Jersey Turnpike is located just outside the northeast corner of the Township and provides for easy access to both metropolitan Philadelphia, Pennsylvania and Wilmington, Delaware. Unincorporated communities, localities and place names located partially or completely within the township include Mullica Hill, Richwood, Ewan, Ewans Mills, Heritage, Jefferson and Sherwin.

The municipality is governed under the township form of municipal government. The Township Committee is comprised of five members, who are elected directly by the voters at-large in partisan elections. At an annual reorganization meeting, the Township Committee selects one of its members to serve as Mayor and another as Deputy Mayor.

According to the U.S. Census, the 2010 population for the Township of Harrison was 12,417. The estimated 2019 population was 12,995, a 4.5 percent increase from the 2010 Census. Data from the 2019 U.S. Census American Community Survey indicate that 5.8 percent of the population is 5 years of age or younger and 10.3 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.

## 9.9.3 Jurisdictional Capability Assessment and Integration

The Township of Harrison performed an inventory and analysis of existing capabilities, plans, programs, and policies that enhance its ability to implement mitigation strategies. Section 5 (Capability Assessment) describes



the components included in the capability assessment and their significance for hazard mitigation planning. This section summarizes the following findings of the assessment:

- An assessment of 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 to withstand hazard events.

For a community to succeed in reducing long-term risk, hazard mitigation must be integrated into the day-to-day local government operations. Annex development included reviewing planning and policy documents and surveying each jurisdiction to obtain a better understanding of their progress in plan integration and how risk reduction is supported. Areas with current mitigation integration are summarized in this jurisdictional Capability Assessment (Section 9.9.3). The updated mitigation strategy includes opportunities the Township of Harrison identified for integration of mitigation concepts to be incorporated into municipal procedures.

### 9.9.3.1 Planning, Legal, and Regulatory Capability

Section 5 (Capability Assessment) provides an overview of the planning, legal, and regulatory capabilities. The table below summarizes the regulatory tools that are available to the Township of Harrison, what is present in the jurisdiction, and code citation and date.

*Table 9.9-2. Planning, Legal, and Regulatory Capability*

	Jurisdiction has this? (Yes/No)	Required by State? (Yes/No)	Code Citation and Date (code chapter, name of plan, date of plan)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
<b>Codes, Ordinances, &amp; Regulations</b>					
<b>Building Code</b>	Yes	Yes	Chapter 97 – Uniform Construction Codes, 6/21/2021	State and Local	Construction Official
<i>How does this reduce risk?</i>					
<b>Zoning Code</b>	Yes	Yes, if the jurisdiction has a planning board	Chapter 225 – Zoning, 10/17/1978	Local	Joint Land Use Board (JLUB)
<i>How does this reduce risk?</i> The Municipal Code of the Township of Harrison includes provisions to reduce the risk of flood damage by restricting development within flood hazard areas of the Township					
<b>Subdivision Ordinance</b>	Yes	Yes, if the jurisdiction has a planning board	Chapter 192 – Subdivision of Land, Municipal Code, adopted 12/29/1975	Local	Joint Land Use Board (JLUB)
<i>How does this reduce risk?</i> The purpose of this chapter shall be to provide rules, regulations and standards to guide land subdivision in the Township of Harrison in order to promote the public health, safety, convenience and general welfare of the municipality. It shall be administered to insure the orderly growth and development, the conservation, protection and proper use of land and adequate provision for circulation, utilities, and services.					



	Jurisdiction has this? (Yes/No)	Required by State? (Yes/No)	Code Citation and Date (code chapter, name of plan, date of plan)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
<b>Stormwater Management Ordinance</b>	Yes	Yes	Chapter 188 –Stormwater Management, 6/07/21	Local	Harrison Township
<i>How does this reduce risk?</i> The Stormwater Management ordinance of the Township of Harrison requires major development to meet or exceed the State requirements of the New Jersey Stormwater Regulations (N.J.A.C. 9:8) in order to reduce the risk of flooding by requiring control of stormwater runoff through best management practices for stormwater management including green infrastructure, retention and groundwater recharge.					
<b>Post-Disaster Recovery/ Reconstruction Ordinance</b>	No	No	-	-	-
<i>How does this reduce risk?</i>					
<b>Real Estate Disclosure</b>	No	-	-	-	-
<i>How does this reduce risk?</i>					
<b>Growth Management</b>	No	-	-	-	-
<i>How does this reduce risk?</i>					
<b>Site Plan Ordinances</b>	Yes	Yes	Chapter 174 – Site Plans, Major, 6/01/1981 Chapter 176 – Site Plans, Minor, 12/20/1993	Local	Harrison Township Joint Land Use Board (JLUB)
<i>How does this reduce risk?</i> The combined Zoning and Planning Boards of the Township of Harrison make up the Joint Land Use Board (JLUB) which reduces the risk of hazards by controlling land development within the Township including restricting development and redevelopment within areas prone to hazardous conditions including flood hazard areas and locations where existing topographic conditions could result in landslides from removal of existing vegetation. Design standards of the site plan code also prevent new land grading from creating steep slopes and require new stormwater basins to contain emergency spillways that will direct overflow stormwater toward areas that will not directly impact nearby homes and property.					
<b>Environmental Protection Ordinance</b>	Yes	Yes	Chapter 20 – Environmental Commission, 11/04/1974	Local	Construction Code Official
<i>How does this reduce risk?</i> The Commission was established for the protection, development or use of natural resources, including water resources. The Commission has power to conduct research into the use and possible use of the open land areas of the Township and may coordinate the activities of unofficial bodies organized for similar purposes, and may advertise, prepare, print and distribute books, maps, charts, plans and pamphlets which in its judgment it deems necessary for its purposes. It keeps an index of all open areas, publicly or privately owned, including open marshlands, swamps and other wetlands, in order to obtain information on the proper use of such areas; and may from time to time recommend to the Planning Board plans and programs for inclusion in the Master Plan and the development and use of such areas. The Environmental Commission reduces risk by ensuring that environmentally sensitive areas are protected and that any development within these areas will be context-sensitive to limit the disturbances.  Chapter 188 definition of environmentally sensitive areas including wellhead protection and groundwater recharge areas. This reduces the risk of development in wellhead protection areas by restricting development in these sensitive areas of the Township.					
<b>Flood Damage Prevention Ordinance</b>	Yes	Yes	Chapter 123 – Flood Damage Prevention, 12/07/2009	Local	Construction Code Official
<i>How does this reduce risk?</i> The Township code contains floodplain management regulations to reduce the risk of flood damage resulting from development within the Township. Floodplain management in the Township is accomplished by a combination of zoning ordinances, subdivision regulations, building codes, health regulations, special-purpose ordinances, and other applications of police power for the purpose of flood damage prevention and reduction. The Construction Official is the appointed floodplain administrator for the Township, conducting permit reviews, maintain information, and interpreting flood maps. The ordinance requires all new construction and substantial improvements of structures in the floodplain must have their lowest floor elevated to or above the BFE.					
<b>Wellhead Protection</b>	No	-	-	-	-
<i>How does this reduce risk?</i>					



	Jurisdiction has this? (Yes/No)	Required by State? (Yes/No)	Code Citation and Date (code chapter, name of plan, date of plan)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
<b>Emergency Management Ordinance</b>	No	-	-	-	-
<i>How does this reduce risk?</i>					
<b>Climate Change Ordinance</b>	No	-	-	-	-
<i>How does this reduce risk?</i>					
<b>Other</b>	Yes	No	-	Local	-
Four contiguous southern New Jersey Counties of Camden, Cumberland, Gloucester, and Salem initiated a project in April 2014 to update four Multi-Jurisdictional Hazard Mitigation Plans that were approved by the Federal Emergency Management Agency (FEMA) in 2010 and 2011. The hazard mitigation plan update effort was led by the respective Offices of Emergency Management for the four counties with the assistance of Stuart Wallace, LLC, mitigation planning consultants. Draft documents were submitted to FEMA in 2015 and FEMA issued approvals for all four counties and the participating municipalities in 2016. The Regional Hazard Mitigation Plan reduces risk by ensuring that natural disasters are met with a coordinated response effort to provide a swift and effective recovery that will facilitate reconstruction of critical infrastructure.					
<b>Codes, Ordinances, &amp; Regulations Connection to Mitigation and Safe Growth</b>					
<ul style="list-style-type: none"> <li>• Prior to, zoning changes, or development permitting, does the jurisdiction review the hazard mitigation plan and other hazard analyses to ensure consistent and compatible land use? <b>Yes/No</b></li> <li>• Does the zoning ordinance discourage development or redevelopment within natural areas including wetlands, floodways, and floodplains? <b>Yes/No</b></li> <li>• Does it contain natural overlay zones that set conditions? <b>Yes/No</b></li> <li>• Does the ordinance require developers to take additional actions to mitigate natural hazard risk? <b>Yes/No</b></li> <li>• Do rezoning procedures recognize natural hazard areas as limits on zoning changes that allow greater intensity or density of use? <b>Yes/No</b></li> <li>• Do the ordinances prohibit development within, of filling of, wetlands, floodways, and floodplains? <b>Yes/No</b></li> <li>• Do the subdivision regulations restrict the subdivision of land within or adjacent to natural hazard areas? <b>Yes/No</b></li> <li>• Do the regulations provide for conservation subdivisions or cluster subdivisions in order to conserve environmental resources? <b>Yes/No</b></li> <li>• Do the regulations allow density transfers where hazard areas exist? <b>Yes/No</b></li> <li>• When updating ordinances, is hazard mitigation considered? <b>Yes/No</b></li> </ul>					
<b>Planning Documents</b>					
<b>Master Plan</b>	Yes	Yes	Chapter 225 – Zoning, 10/17/1978	Local	Joint Land Use Board (JLUB)
<i>How does this reduce risk?</i>					
During reexaminations of the Master Plan of the Township of Harrison, updates to the zoning areas are reviewed with GIS mapping layers that are updated by the County for environmentally sensitive issues. This reduces risk by restricting development within wetlands, floodways, riparian area, and floodplains. Any development within these areas would require permitting and mitigation measures through State regulatory agencies such as the New Jersey Department of Environmental Protection to reduce risks associated with development in these areas.					
<b>Capital Improvement Plan</b>	No	-	-	-	-
<i>How does this reduce risk?</i>					
<b>Disaster Debris Management Plan</b>	No	-	-	-	-
<i>How does this reduce risk?</i>					
<b>Floodplain Management or Watershed Plan</b>	No	-	-	-	-
<i>How does this reduce risk?</i>					
<b>Stormwater Management Plan</b>	Yes	Yes	Watershed Based Municipal Stormwater Management Plan, 2/2006	Local	Public Works
<i>How does this reduce risk?</i>					



	Jurisdiction has this? (Yes/No)	Required by State? (Yes/No)	Code Citation and Date (code chapter, name of plan, date of plan)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
The Harrison Township Watershed Based Municipal Stormwater Management Plan reduces the risk of hazard associated with stormwater runoff resulting from development of land within the Township.					
<b>Stormwater Pollution Prevention Plan</b>	Yes	Yes	Stormwater Pollution Prevention	Local	Stormwater Program Coordinator
<i>How does this reduce risk?</i>					
<b>Urban Water Management Plan</b>	No	-	-	-	-
<i>How does this reduce risk?</i>					
<b>Habitat Conservation Plan</b>	No	-	-	-	-
<i>How does this reduce risk?</i>					
<b>Economic Development Plan</b>	No	-	-	-	-
<i>How does this reduce risk?</i>					
<b>Shoreline Management Plan</b>	No	-	-	-	-
<i>How does this reduce risk?</i>					
<b>Community Wildfire Protection Plan</b>	No	-	-	-	-
<i>How does this reduce risk?</i>					
<b>Community Forest Management Plan</b>	No	-	-	-	-
<i>How does this reduce risk?</i>					
<b>Transportation Plan</b>	No	-	-	-	-
<i>How does this reduce risk?</i>					
<b>Agriculture Plan</b>	No	-	-	-	-
<i>How does this reduce risk?</i>					
<b>Climate Action/ Resiliency Plan</b>	No	-	-	-	-
<i>How does this reduce risk?</i>					
<b>Tourism Plan</b>	No	-	-	-	-
<i>How does this reduce risk?</i>					
<b>Business/ Downtown Development Plan</b>	No	-	-	-	-
<i>How does this reduce risk?</i>					
<b>Other</b>	No	-	-	-	-
<b>Planning Connection to Mitigation and Safe Growth</b>					
<ul style="list-style-type: none"> <li>Do budgets limit expenditures on projects that would encourage development in areas vulnerable to natural hazards? <b>Yes/No</b></li> <li>Do infrastructure policies limit extension of existing facilities and services that would encourage development in areas vulnerable to natural hazards? <b>Yes/No</b></li> <li>Do budgets provide funding for hazard mitigation projects identified in the County HMP? <b>Yes/No</b></li> <li>Does the future land use map clearly identify natural hazard areas? <b>Yes/No</b></li> <li>Do the land use policies discourage development or redevelopment with natural hazard areas? <b>Yes/No</b></li> <li>Does the plan provide adequate space for expected future growth in areas located outside natural hazard areas? <b>Yes/No</b></li> <li>Does the transportation plan limit access to hazard areas? <b>Yes/No</b></li> <li>Is transportation policy used to guide growth to safe locations? <b>Yes/No</b></li> <li>Are transportation systems designed to function under disaster conditions (e.g., evacuation)? <b>Yes/No</b></li> </ul>					



	Jurisdiction has this? (Yes/No)	Required by State? (Yes/No)	Code Citation and Date (code chapter, name of plan, date of plan)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
<ul style="list-style-type: none"> <li>Are environmental systems that protect development from hazards identified and mapped? <b>Yes/No</b></li> <li>Do environmental policies maintain and restore protective ecosystems? <b>Yes/No</b></li> <li>Do environmental policies provide incentives to development that is located outside protective ecosystems? <b>Yes/No</b></li> </ul>					
<b>Response/Recovery Planning</b>					
<b>Emergency Operations Plan</b>		Yes			
<i>How does this reduce risk?</i>					
<b>Strategic Recovery Planning Report</b>	No	-	-	-	-
<i>How does this reduce risk?</i>					
<b>Threat &amp; Hazard Identification &amp; Risk Assessment (THIRA)</b>	No	-	-	-	-
<i>How does this reduce risk?</i>					
<b>Post-Disaster Recovery Plan</b>	No	-	-	-	-
<i>How does this reduce risk?</i>					
<b>Continuity of Operations Plan</b>	No	-	-	-	-
<i>How does this reduce risk?</i>					
<b>Public Health Plan</b>	No	-	-	-	-
<i>How does this reduce risk?</i>					
<b>Other</b>	No	-	-	-	-
<b>Response/Recovery Planning Connection to Mitigation and Safe Growth</b>					
<ul style="list-style-type: none"> <li>Does your EOP cover short-term response and long-term recovery to address communications, evacuation, and housing necessary for identified hazards? <b>Yes/No</b></li> </ul>					

### 9.9.3.2 Development and Permitting Capability

The table below summarizes the capabilities of the Township of Harrison to oversee and track development.

*Table 9.9-3. Development and Permitting Capability*

Indicate if your jurisdiction implements the following	Yes/No	Comment
Do you issue development permits? <ul style="list-style-type: none"> <li>If yes, what department is responsible?</li> <li>If no, what is your process for development?</li> </ul>	Yes	Zoning and Construction Department
Are permits tracked by hazard area? (For example, floodplain development permits.)	No	
Do you have a buildable land inventory? <ul style="list-style-type: none"> <li>If yes, describe.</li> <li>If no, quantitatively describe the level of buildout in the jurisdiction.</li> </ul>	No	

### 9.9.3.3 Administrative and Technical Capability

The table below summarizes potential staff and personnel resources available to the Township of Harrison and their current responsibilities which contribute to hazard mitigation.



Table 9.9-4. Administrative and Technical Capabilities

Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
<b>Administrative Capability</b>		
Planning Board	Yes	The Joint Land Use Board (JLUB) is a combined Zoning Board of Adjustment and Planning Board that implements the Land Use ordinances and oversees land use policies and procedures including review of development applications, and development of the Master Plan and planning for growth within the Township.
Zoning Board of Adjustments	Yes	See Above
Planning Department	Yes	See Above
Mitigation Planning Committee	No	-
Environmental Board/Commission	Yes	The Environmental Commission fosters environmental awareness, understanding, and appreciation to protect and sustain natural resources within the Township. The Commission advocated for the long-term protection of natural resources, promotes public interest in environmental issues and provides educational resources for residents.
Open Space Board/Committee	No	-
Economic Development Commission/Committee	No	-
Public Works/Highway Department	Yes	The Public Works Department maintains township owned roads, parks, open spaces, and properties, including overseeing stormwater management and assures proper working order of inlets and catch basins.
Construction/Building/Code Enforcement Department	Yes	The Township has a Construction Department with a construction official, zoning officer, electrical subcode, housing official, and fire inspector.
Emergency Management/Public Safety Department	Yes	The Office of Emergency Management provides hazard mitigation plan information including supporting COVID-19 assistance and services.
Warning Systems / Services (mass notification system, outdoor warning signals)	Yes	Gloucester County Alert
Maintenance programs to reduce risk (stormwater maintenance, tree trimming, etc.)	Yes	Harrison Township Stormwater Pollution and Prevention Plan (SPPP) incorporates provisions, details and schedules for regular maintenance of stormwater system infrastructure components throughout the Township as required by the State
Mutual aid agreements	No	-
Human Resources Manual - Do any job descriptions specifically include identifying or implementing mitigation projects or other efforts to reduce natural hazard risk?	No	-
Other	Yes	The Green Team oversees sustainable initiatives of the Township and works to improve quality of life through the Sustainable Jersey Program. The Township is a Bronze certified applicant as of 12/20/2017.
<b>Technical/Staffing Capability</b>		



Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
Planners or engineers with knowledge of land development and land management practices	Yes	Harrison Township maintains annual professional service agreements with consulting engineers and planners with extensive knowledge of land development and land management practices
Engineers or professionals trained in building or infrastructure construction practices	Yes	Harrison Township maintains annual professional service agreements with consulting engineers including professionals trained in building and infrastructure construction practice
Planners or engineers with an understanding of natural hazards	Yes	Harrison Township maintains annual professional service agreements with consulting planners and engineers with an extensive understanding of natural hazards
Staff with expertise or training in benefit/cost analysis	No	-
Professionals trained in conducting damage assessments	Yes	Harrison Township maintains annual professional service agreements with engineers including professionals trained in conducting damage assessments
Personnel skilled or trained in GIS and/or Hazards United States (HAZUS) – Multi-Hazards (MH) applications	Yes	Harrison Township maintains annual professional service agreements with engineers including skilled professionals trained in GIS applications
Scientist familiar with natural hazards	Yes	Harrison Township maintains annual professional service agreements with engineers and professionals who have degrees with scientific knowledge of natural hazards
Surveyor(s)	Yes	Harrison Township maintains annual professional service agreements with engineering consultants who have licensed Land Surveyors on staff
Emergency Manager	Yes	Harrison Township has a dedicated coordinator and two deputy coordinators who manage coordinating emergency planning and response actions with the OEM
Grant writer(s)	No	-
Resilience Officer	No	-
Other (this could include stormwater engineer, environmental specialist, etc.)		Harrison Township maintains annual professional service agreements with engineers and professionals which include stormwater engineers and environmental scientists who specialize in various scientific areas including hazardous materials
<b>How do your administrative/technical capabilities contribute to risk reduction in your community?</b> <ul style="list-style-type: none"> <li>• <a href="#">Yes/No</a></li> </ul>		

### 9.9.3.4 Fiscal Capability

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



Table 9.9-5. Fiscal Capabilities

Financial Resources	Are these accessible or eligible to use for mitigation? (Yes/No) If yes, please describe. If no, can this be used to support in the future?
Community development Block Grants (CDBG, CDBG-DR)	No
Capital improvements project funding	Yes, capital improvements project funding is accessible and used for hazard risk mitigation purposes
Authority to levy taxes for specific purposes	No, taxes to support these efforts in the future cannot be used due to State-mandated cap on property taxes
User fees for water, sewer, gas or electric service	Yes, wastewater connection fees are accessible to use for mitigation
Impact fees for homebuyers or developers of new development/homes	No, would require adoption of an amended zoning ordinance to collect and use impact fees to support this purpose in the future
Stormwater utility fee	No, would require adoption of a new stormwater utility ordinance to establish fees
Incur debt through general obligation bonds	No, would require local government approval in order to support this use in the future
Incur debt through special tax bonds	No, would require local government approval in order to support this use in the future
Incur debt through private activity bonds	No, would require local government approval in order to support this use in the future
Withhold public expenditures in hazard-prone areas	Yes, public expenditures in hazard-prone areas can be withheld in the form of capital expenditures allocation for public works projects
Other federal or state funding programs	Yes, state aid funded programs such as municipal aid grants can be used for mitigation of hazards if they are within the scope and limits of funded project areas
Open Space Acquisition funding programs	Yes, Green Acres funding can be used to acquire land for new parks and open scape which may contain hazardous features or conditions
Other (for example, Clean Water Act 319 Grants [Nonpoint Source Pollution])	No, Township does not own their water utility system so these cannot be used to support in the future
<b>Fiscal Connection to Mitigation and Safe Growth</b>	
<ul style="list-style-type: none"> <li>How do your fiscal capabilities contribute to risk reduction in your community? <b>NEED</b></li> <li>Do budgets limit expenditures on projects that would encourage development in areas vulnerable to natural hazards? <b>NEED</b></li> <li>Do infrastructure policies limit extension of existing facilities and services that would encourage development in areas vulnerable to natural hazards? <b>NEED</b></li> <li>Do budgets provide funding for hazard mitigation projects identified in the County HMP? <b>NEED</b></li> </ul>	

### 9.9.3.5 Education and Outreach Capability

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



Table 9.9-6. Education and Outreach Capabilities

Outreach Resources	Available? (Yes/No)	Comments (available staff, responsibilities, etc.)
Public information officer or communications office	No	-
Personnel skilled or trained in website development	No	-
Hazard mitigation information available on your website	Yes	The Office of Emergency Management webpage links to the previous HMP.
Social media for hazard mitigation education and outreach	No	-
Citizen boards or commissions that address issues related to hazard mitigation	No	-
Other programs already in place that could be used to communicate hazard-related information	No	-
Warning systems for hazard events	No	-
Natural disaster/safety programs in place for schools	No	-
Other	No	-
<b>Does the jurisdiction have any public outreach mechanisms / programs in place to inform citizens on natural hazards, risk, and ways to protect themselves during such events? If yes, please describe.</b> <ul style="list-style-type: none"> <li>• <b>NEED</b></li> </ul>		

### 9.9.3.6 Community Classifications

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

Table 9.9-7. Community Classifications

Program	Participating? (Yes/No)	Classification (if applicable)	Date Classified (if applicable)
Community Rating System (CRS)	No	NP	N/A
Building Code Effectiveness Grading Schedule (BCEGS)	No	NP	N/A
Public Protection (ISO Fire Protection Classes 1 to 10)	No	NP	N/A
Sustainable Jersey	Yes	Bronze	12/20/2017
StormReady Certification	No	NP	N/A
Firewise Communities classification	No	NP	N/A

Note:

N/A Not applicable

NP Not participating

- Unavailable

### 9.9.3.7 Adaptive Capacity

Adaptive capacity is defined as “the ability of systems, institutions, humans and other organisms to adjust to potential damage, to take advantage of opportunities, or respond to consequences” (IPCC 2014). In other



words, it describes a jurisdiction’s current capabilities to adjust to, protect from, or withstand a future hazard event, future conditions, and changing risk. The table below summarizes the adaptive capacity for each hazard of concern and the jurisdiction’s rating.

Table 9.9-8. Adaptive Capacity

Hazard	Adaptive Capacity - Strong/Moderate/Weak*
Coastal Erosion/Sea Level Rise	Moderate
Dam Failure/Levee Failure	Moderate
Disease Outbreak/Pandemic	Moderate
Drought	Moderate
Earthquake	Moderate
Extreme Temperatures	Moderate
Flood	Moderate
Geological Hazards	Moderate
Hazardous Materials	Moderate
Hurricane/Tropical Storm	Moderate
Invasive Species/Harmful Algal Bloom	Moderate
Nor’Easter	Moderate
Severe Weather	Moderate
Severe Winter Weather	Strong
Wildfire	Moderate
Utility Failure	Moderate

\*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.

## 9.9.4 National Flood Insurance Program (NFIP) Compliance

The table below provides specific information on the management and regulation of the regulatory floodplain, including current and future compliance with the NFIP.

Table 9.9-9. NFIP Summary

NFIP Topic	Comments
<b>Flood Vulnerability Summary</b>	
<ul style="list-style-type: none"> <li># NFIP Policies: 16</li> <li># RL properties: 0</li> <li># SRL properties: 0</li> <li>#RL/SRL mitigated: 0</li> </ul>	<ul style="list-style-type: none"> <li>Total premium in force: \$6,673.00</li> <li># claims filed: 2</li> <li>Total loss payments: \$18,338.06</li> </ul>
Describe areas prone to flooding in your jurisdiction.	Typically along areas of parcels located along the following: Racoon Creek; South Branch Racoon Creek; Racoon Creek Tributaries; South Branch Racoon Creek Tributary; Rattling Run; Mullica Hill Pond; Hess Pond;



NFIP Topic	Comments
	Miery Run; Clems Run; Clems Run Tributary; Kincaid Lake (drained); Edwards Run; Edwards Run Tributary; Ewan Lake
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, and if so, how many are interested in (elevation or acquisition)?	No
<ul style="list-style-type: none"> <li>How do you make Substantial Damage determinations?</li> <li>How many were declared for recent flood events in your jurisdiction?</li> </ul>	<ul style="list-style-type: none"> <li>N/A</li> <li>N/A</li> </ul>
Detail any RiskMAP projects currently underway in your jurisdiction.	None
Do your flood hazard maps adequately address the flood risk within your jurisdiction? If not, state why.	Yes
<b>NFIP Administration</b>	
What local department is responsible for floodplain management?	Construction
Are any staff certified floodplain managers (CFMs) or is a consultant retained?	Consultant retained
Provide an explanation of who in your municipality provides NFIP administration services (permit review, GIS, education/outreach, inspections, engineering capability).	None (consultant retained as needed)
What specific training or support does your floodplain management staff need to support its floodplain management program?	E0273: Managing Floodplain Development through the National Flood Insurance Program (and) E0274: Understanding Floodplain Data through Geographic Information Systems (GIS)
How do you determine if proposed development on an existing structure would qualify as a substantial improvement?	Engineering review by Harrison Township's Joint Land Use Board Engineer consultant
Do you have access to resources to determine possible future flooding conditions from climate change?	No
<b>NFIP Compliance</b>	
List any outstanding NFIP compliance violations.	None
When was the most recent Community Assistance Visit (CAV) or Community Assistance Contact (CAC)?	11/30/1994
<ul style="list-style-type: none"> <li>What is the local law number or municipal code of your flood damage prevention ordinance?</li> <li>What is the date that your flood damage prevention ordinance was last amended?</li> </ul>	<ul style="list-style-type: none"> <li>Chapter 123</li> <li>December 7, 2009</li> </ul>
Does your floodplain management program meet or exceed minimum requirements? If exceeds, in what ways?	No
Are there other local ordinances, plans, or programs (site plan review, consideration of flood risk reduction when granting height variances) that support floodplain management and meeting the NFIP requirements?	Site Plan review by Joint Land Use Board
<ul style="list-style-type: none"> <li>Does your jurisdiction participate in CRS?</li> <li>If yes, is your jurisdiction interested in improving its CRS Classification?</li> <li>If no, is your jurisdiction interested in joining the CRS program?</li> </ul>	<ul style="list-style-type: none"> <li>No</li> <li>N/A</li> <li>Yes</li> </ul>



NFIP Topic	Comments
<b>Additional Information</b>	
If you have repetitive loss properties in your community, what residential streets/neighborhoods are most floodprone and likely to incur flood damage?	N/A
Does your municipality's flood damage prevention ordinance follow the NJDEP model ordinance language ( <a href="https://www.nj.gov/dep/floodcontrol/modelord.htm">https://www.nj.gov/dep/floodcontrol/modelord.htm</a> ) including the state mandated one-foot freeboard requirement?	No

Source: FEMA September 16, 2019; NJDEP - 2021

Notes:

RL—Repetitive Loss; SRL—Severe Repetitive Loss; NA—Not applicable

## 9.9.5 Growth/Development Trends

Understanding how past, current, and projected development patterns have or are likely to increase or decrease risk in hazard areas is a key component to understanding a jurisdiction's overall risk to its hazards of concern. The table below summarizes recent and expected future development trends, including major residential/commercial development and major infrastructure development.

Table 9.9-10. Recent and Expected Future Development

Type of Development	2016		2017		2018		2019		2020		2021	
Number of Building Permits for New Construction Issued Since the Previous HMP* (within regulatory floodplain/ outside regulatory floodplain)												
	<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>	<b>Total</b>	<b>Within SFHA</b>
<b>Single Family</b>	29	-	28	-	23	-	17	-	9	-	3	-
<b>Multi-Family</b>	0	-	0	-	0	-	0	-	0	-	0	-
<b>Other (commercial, mixed-use, etc.)</b>	0	-	7	-	8	-	1	-	0	-	0	-
<b>Total Permits Issued</b>	29	-	35	-	31	-	18	-	9	-	3	-
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 identified												

SFHA Special Flood Hazard Area (1% annual chance flood event)

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



## 9.9.6 Jurisdictional Risk Assessment

The hazard profiles in Section 4 (Risk Assessment) provide detailed information regarding each plan participant's vulnerability to the identified hazards. Section 4.1 (Identification of Hazards of Concern), Section 4.2 (Methodology and Tools), and Section 4.4 (Hazard Ranking) provide a detailed summary for the Township of Harrison's risk assessment results, and data used to determine the hazard ranking are discussed later in this section.

Hazard area extent and location maps provided below illustrate the probable areas impacted within the jurisdiction. 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 were only generated for those hazards that can be clearly identified using mapping techniques and technologies and for which the Township of Harrison has significant exposure. The maps also show the location of potential new development, where available.

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Figure 9.9-1. Township of Harrison Hazard Area Extent and Location Map 1

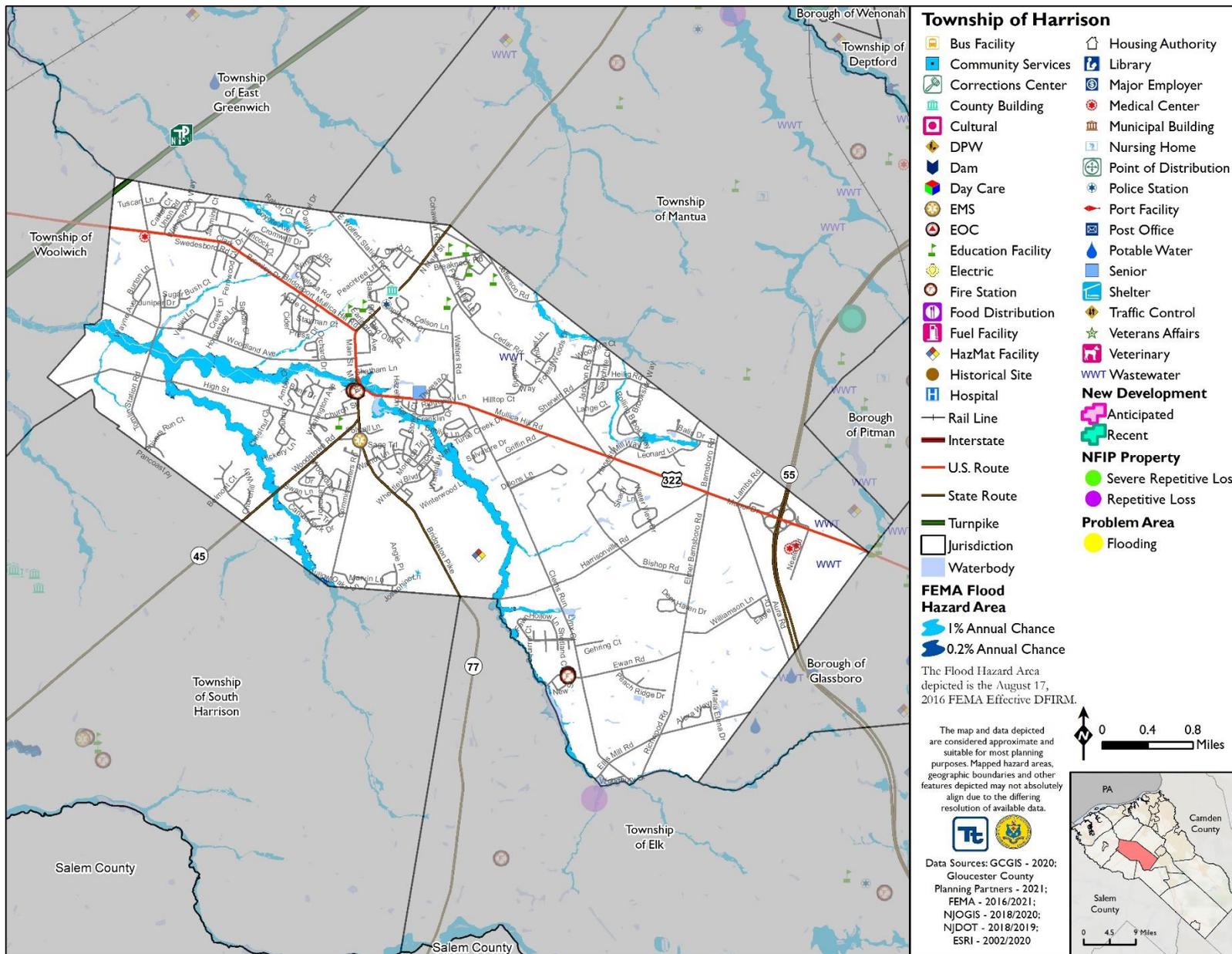




Figure 9.9-2. Township of Harrison Hazard Area Extent and Location Map 2

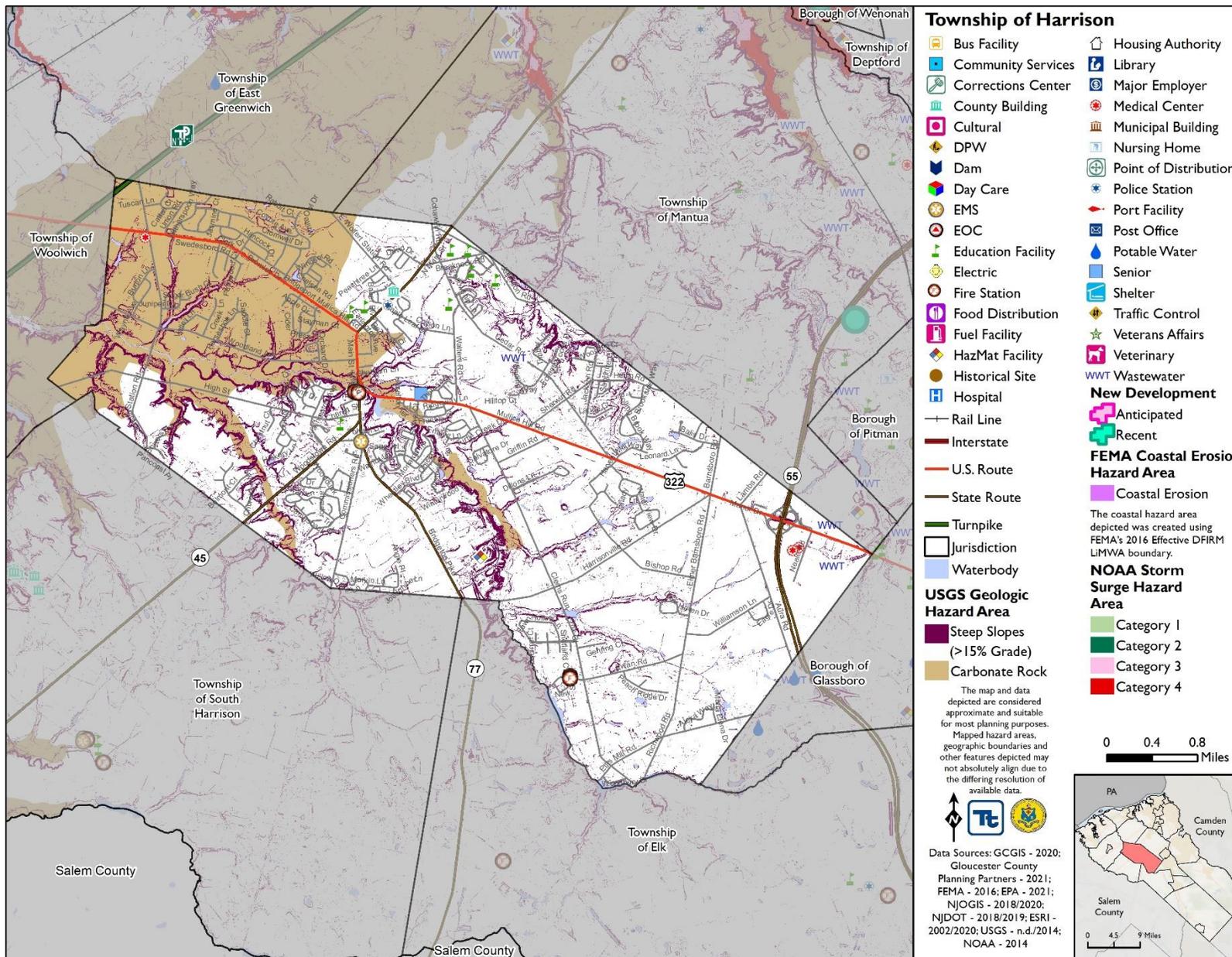




Figure 9.9-3. Township of Harrison Hazard Area Extent and Location Map 3

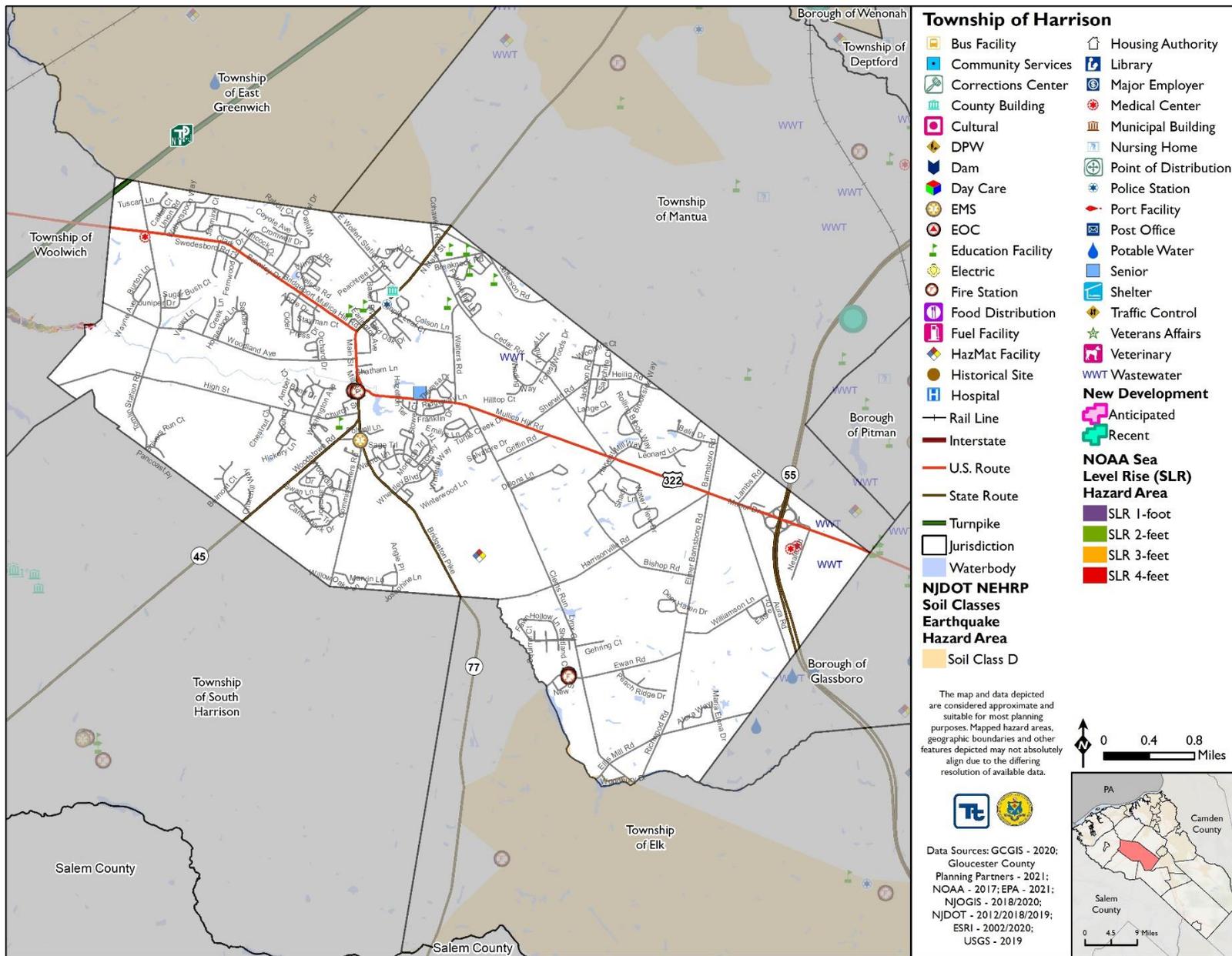
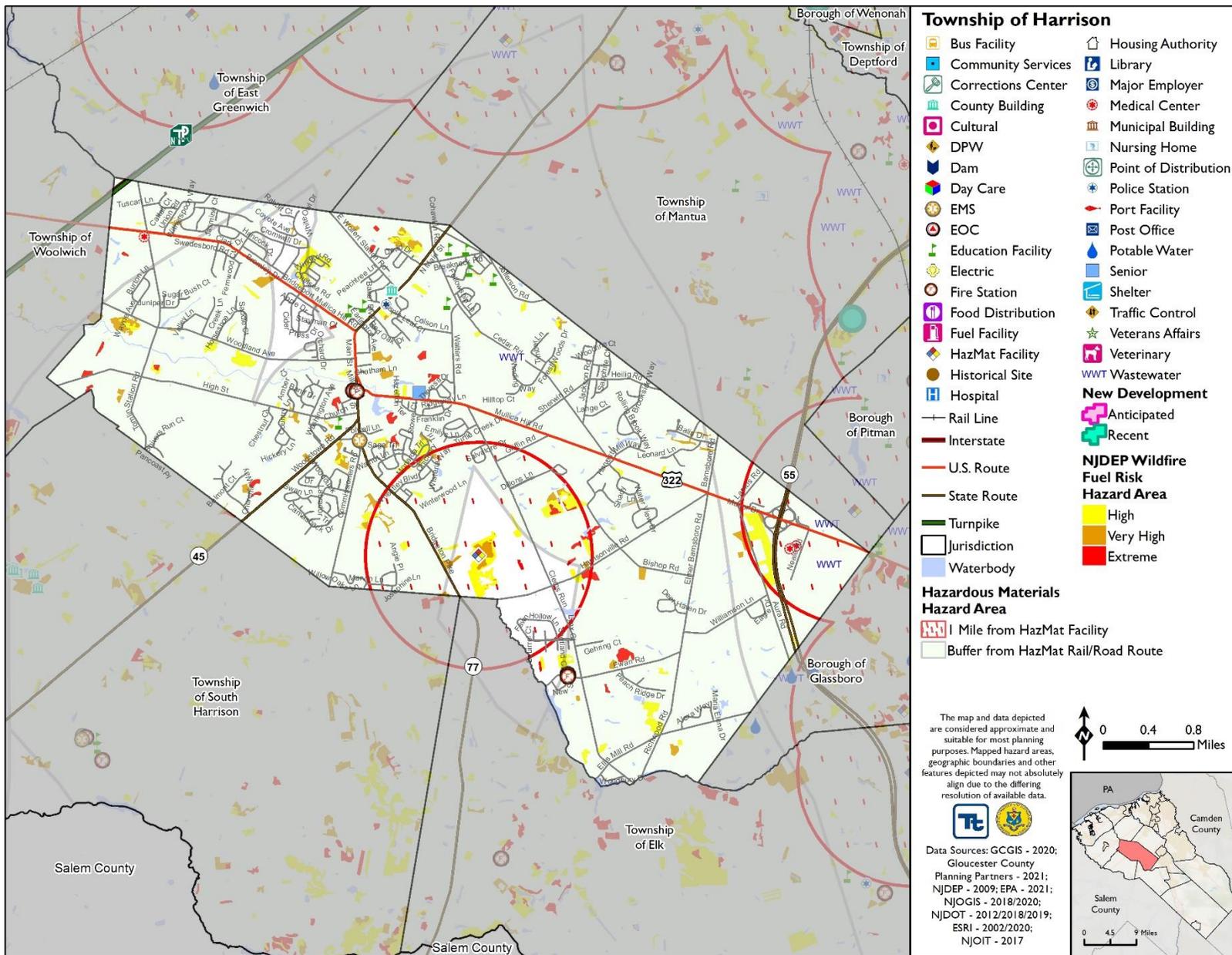




Figure 9.9-4. Township of Harrison Hazard Area Extent and Location Map 4





### 9.9.6.1 Hazard Event History

Gloucester County has a history of natural 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 and includes a chronology of events that have affected the county and its municipalities.

The Township of Harrison’s history of federal declarations (as presented by FEMA) and significant hazard events (as presented in NOAA-NCEI) is consistent with that of Gloucester County. The table below provides details regarding municipal-specific loss and damages the Township experienced during hazard events since the last hazard mitigation plan update. Information provided in the table below is based on reference material or local sources.

*Table 9.9-11. Hazard Event History*

Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	Municipal Summary of Damages and Losses
February 15, 2015	Cold/Wind Chill	No	The center of an arctic air mass brought some of the lowest wind chills and temperatures of the winter season to New Jersey. Wind chill factors were recorded as low as 22 degrees below zero, with actual temperatures reaching -2°F.	n/a
June 23, 2015	Severe Storm (DR-4231-NJ)	Yes	In Gloucester County, the Red Cross opened two comfort stations. Wind damage was most severe between Greenwich Township and Mantua Township. Lightning struck a refinery in Paulsboro, causing a loss of power and off-gas. In Wenonah, wind damage knocked down several massive oak trees. In Mantua, the microburst knocked down an estimated 2,800 trees and 100 poles. The Township’s Fire Department building was severely damaged. Wind also knocked down power poles in East Greenwich along Kings Highway. Roads throughout East Greenwich were impassable. Damage was estimated at \$10 million.	n/a
January 22 – 24, 2016	Severe Winter Storm and Snowstorm (DR-4264-NJ)	Yes	Snow totals in Gloucester County included 21 inches in Deptford, 20.9 inches in Pitman, 17.5 inches in Turnersville, 14.5 inches in Williamstown, and one foot in Mullica Hill.	n/a
March 6, 2018	Winter Storm	No	Gloucester County was hit with isolated heavy snow, with totals ranging from five inches in Pitman to 6.5 inches in West Deptford.	n/a
January 20, 2020 – Present	Covid-19 Pandemic (EM-3451-NJ) (DR-4488-NJ)	Yes	Between March 1, 2020 and March 15, 2021, Gloucester County reported 21,065 confirmed cases of COVID-19, and 530 total fatalities.	n/a
September 1-3, 2021	Hurricane Ida (DR-4614)	Yes	On September 1st, Gloucester County and surrounding areas received a tornado warning issued by the NWS telling people to move indoors, to stay away from windows	NEED



Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	Municipal Summary of Damages and Losses
			and avoid traveling. Shortly after, the tornado touched down in Mullica Hills, Woodbury Heights, Deptford, and West Deptford. It was a confirmed EF-3 tornado with winds of up to 150 mph. Over 90,000 residents were without power statewide. In addition to the devastating tornado, the County experienced rainfall totals ranging from 1.6 inches to 2 inches. The Delaware River at Washington Street (just north of Gloucester County) crested 9.69 feet on September 1st (moderate flood stage).	

### 9.9.6.2 Hazard Ranking and Vulnerabilities

The hazard profiles in Section 4.1 (Identification of Hazards of Concern) of this plan have detailed information regarding each plan participant’s vulnerability to the identified hazards. The following summarizes the Township of Harrison’s risk assessment results and data used to determine the hazard ranking.

#### Hazard Ranking

This section provides the community specific identification of the primary hazard concerns based on identified problems, impacts and the results of the risk assessment as presented in Section 4 (Risk Assessment) of the plan. The ranking process involves an assessment of the likelihood of occurrence for each hazard, along with its potential impacts on people, property, and the economy as well as community capability and changing future climate conditions. This input supports the mitigation action development to target those hazards with highest level of concern.

As discussed in Section 4.4 (Hazard Ranking), each participating jurisdiction can have differing degrees of risk exposure and vulnerability compared with Gloucester County as a whole. The table below summarizes the hazard risk/vulnerability rankings of potential natural hazards for the Township of Harrison. The Township of Harrison reviewed the county hazard risk/vulnerability risk ranking table, including municipal-specific results, to reflect the relative risk of the hazards of concern to the community.

During the review of the hazard/vulnerability risk ranking, the Township indicated the following:

- XXXX
- XXXX

Table 9.9-12. Hazard Ranking Input

Coastal Erosion / Sea Level Rise	Dam / Levee Failure	Disease Outbreak	Drought	Earthquake	Extreme Temperature	Flood	Geologic	Hazardous Materials
Low	Low	Low	Medium	Low	Medium	Low	Low	High



Hurricane / Tropical Storm	Invasive and Nuisance Species	Nor'Easter	Severe Weather	Severe Winter Weather	Wildfire	Utility Failure
Low	Low	Medium	High	Medium	Low	Medium

Note: The scale is based on the hazard rankings established in Section 4.4 (Hazard Ranking) and modified as appropriate during review by the jurisdiction.

## Critical Facilities

The table below identifies critical facilities in the community located in the 1-percent and 0.2-percent floodplain and presents Hazus estimates of the damage and loss of use to critical facilities as a result of a 1-percent annual chance flood event.

Table 9.9-13. Potential Flood Losses to Critical Facilities

Name	Type	Lifeline?	Exposure		Comment
			1% Event	0.2% Event	
No critical facilities in the floodplain					

Source: Gloucester County Planning Partners - 2021; HIFLD - 2020; EPA - 2021; FEMA 2016

### 9.9.6.3 Identified Issues

After review of the Township of Harrison's hazard event history, hazard rankings, jurisdiction specific vulnerabilities, hazard area extent and location, and current capabilities, the Township of Harrison has identified the following vulnerabilities within their community:

- XXXX
- XXXX
- XXXX

Specific areas of concern based on resident response to the citizen survey include:

- In my development there are several streets with potholes near sewer grates that are so bad I think they're going to cave in at some point. My street has a crack from one side of the street to the other. It seems like we lose power a lot during storms.
- 322 floods just East of the intersection of Rt 45 & 322.
- Dead tree hovering over the electric lines that service a number of homes. Electric company tagged it for take down a year ago, but despite our reminding them of the danger presented by the tree falling on the lines, they have not responded. We live on 322 and the speed with which container trucks travel on the road is very dangerous and we fear an accident that may cause a spill will endanger all the residents along the trucks path.
- 1. Vulnerable power "grid", does not take much to knock it out, long rural runs, not really a grid. This combined with the very high-water table in the area (Ewan) makes for constant anxiety about basement sump pump failure. 2. Vulnerable storm water management in the area (Ewan). There basically is no



storm water management, a few pipes to keep the county roads dry and all just dump it on the property owners land to drain to the lakes and streams.

- Haz release due to truck traffic accidents along 322.

## 9.9.7 Mitigation Strategy and Prioritization

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

### 9.9.7.1 Past Mitigation Initiative Status

The following table indicates progress on the community's mitigation strategy identified in the 2016 HMP. Actions that are carried forward as part of this plan update are included in the following subsection in its own table with prioritization. Previous actions that are now on-going programs and capabilities are indicated as such in the following table and are discussed in the 'Capability Assessment' presented previously in this annex.

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Table 9.9-14. Status of Previous Mitigation Actions

#	2016 Action Description	Responsible Party	What is the status? (e.g., In Progress, No Progress, Ongoing Capability, or Completed) If in progress or completed, please describe the funding source, cost and who is implementing.	If you did not complete the action, should the action be included in the 2022 HMP (i.e., there is still a need, this is still a priority)?		
				Yes/No	If Yes, please describe the original problem (i.e., hazard, location, historic losses)	If Yes, identify the responsible department/person to implement the project.
MJ-1	Alleviate flooding at Fire Station/EMS (Ewan Fire Company) located on 312 Ewan Road, Mullica Hill (CF-5).	Municipal OEM, Gloucester County Engineering Department	Completed	No	-	-
M-01	Identify and pursue outreach and education opportunities	Municipal OEM	Ongoing, Twp. website has been continuously updated with OEM info	No	-	-
M-02	Prioritize critical facilities and complete site and facility surveys to identify vulnerabilities and potential mitigation measures.	Municipal OEM and Facility Managers	Ongoing	No	-	-
M-03	Conduct Regular Municipal Working Group Meetings	Municipal OEM & Municipal Working Group	Ongoing, meetings held quarterly	No	-	-
M-04	Upgrade back-up emergency power generator at Township Hall.	Municipal OEM	Completed	No	-	-
M-05	Install back-up emergency power generator at Public Works Yard.	Public Works Department	In progress	No	-	-
M-06	Install permanent back-up emergency power generator at Wastewater Pump Station #5.	Wastewater Department	No progress, part of future replacement plans	Yes	Located adjacent to environmentally sensitive area (freshwater wetlands)	Michael Gonserkevis, Harrison Township Waste-water Superintendent
M-07	Install permanent back-up emergency power generator at Wastewater Pump Station #6.	Wastewater Department	Completed	No	-	-
M-08	Install permanent back-up emergency power generator at Wastewater Pump Station #12.	Wastewater Department	In progress, waiting for delivery of unit. Delayed due to COVID.	No	-	-
M-09	Install permanent back-up emergency power generator at Wastewater Pump Station #13.	Wastewater Department	Completed	No	-	-
M-10	Upgrade back-up emergency power generator at Clearview	School Board	No progress	Yes	Current emergency power generator upgrades	Steve Nicolella, Director of Facilities



#	2016 Action Description	Responsible Party	What is the status? (e.g., In Progress, No Progress, Ongoing Capability, or Completed) If in progress or completed, please describe the funding source, cost and who is implementing.	If you did not complete the action, should the action be included in the 2022 HMP (i.e., there is still a need, this is still a priority)?		
				Yes/No	If Yes, please describe the original problem (i.e., hazard, location, historic losses)	If Yes, identify the responsible department/person to implement the project.
	Regional High School located at 401 Cedar Road (CF-26).				needed to maintain security and safety of students/staff	
M-11	Upgrade back-up emergency power generator at Pleasant Valley Elementary School.	School Board	No progress	No	-	-
M-12	Support acquisition and installation of permanent back-up emergency power generator for Friends School (CF-30) (designated shelter location).	Friends School and Municipal OEM	No progress	Yes	As a designated shelter for emergencies, facility requires a permanent back-up emergency power generator to ensure shelter safety	Lori Rowe, Director of Operations, Friends School Mullica Hill
M-13	Follow-up with landowner of flood prone property at Raccoon Creek.	Floodplain Administrator	No progress	No	-	-

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### 9.9.7.2 Additional Mitigation Efforts

Other than routine maintenance activities and progress noted in Table 9.9-14, the Township did not undertake any additional mitigation efforts completed over the last five years.

### 9.9.7.3 Proposed Hazard Mitigation Initiatives for the HMP Update

A mitigation action workshop was held in August 2021 and during the meeting, participants were provided 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).

The table below indicates the range of proposed mitigation action categories.

*Table 9.9-15. Analysis of Mitigation Actions by Hazard and Category*

Hazard	FEMA				CRS					
	LPR	SIP	NSP	EAP	PR	PP	PI	NR	SP	ES
Coastal Erosion/Sea Level Rise	X									X
Dam/Levee Failure	X									X
Disease Outbreak	X									X
Drought	X									X
Earthquake	X									X
Extreme Temperature	X									X
Flood	X	X			X	X				X
Geologic	X									X
Hazardous Materials	X									X
Hurricane/Tropical Storm	X									X
Invasive and Nuisance Species	X									X
Nor'Easter	X									X
Severe Weather	X	X				X				X
Severe Winter Weather	X									X
Wildfire	X									X
Utility Failure	X	X				X				X

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

The table below (Table 9.9-16) summarizes the comprehensive range of specific mitigation initiatives the Township of Harrison would like to pursue in the future to reduce the effects of hazards. Some of these initiatives may be previous actions carried forward for this plan update. These initiatives are dependent upon available funding (grants and local match availability) and may be modified or omitted at any time based on the occurrence of new hazard events and changes in 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 your actions as 'High', 'Medium', or 'Low.' The table below summarizes the evaluation of each mitigation initiative, listed by Action Number.

Table 9.9-17 provides a summary of the prioritization of all proposed mitigation initiatives for the HMP update.

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Table 9.9-16. Proposed Hazard Mitigation Initiatives and Associated Priority

Project Number	Mitigation Initiative Name	Description of Problem and Solution	New or Existing Assets?	Hazard(s) to be Mitigated	Goals Met	Estimated Timeline	Lead and Support Agencies	Potential Funding Sources	Estimated Benefits	Estimated Costs	Priority	Mitigation Category	CRS Category
2022-Harrison-001	Flood Damage Prevention Ordinance	<p><b>Problem:</b> The current flood damage prevention ordinance does not meet the state's recommendation for a code-coordinated flood damage prevention ordinance.</p> <p><b>Solution:</b> The Township will update the flood damage prevention ordinance using the NJ DEP's model code coordinated ordinance to create better coordination between NFIP implementation by the floodplain administrator, the New Jersey Flood Hazard Area Control Act (FHACA) implemented at the State level by the NJDEP, and the Uniform Construction Code (UCC) implemented by the Construction Official.</p>	New	Flood	1, 2	6 months	Floodplain Administrator, Township Administration	Township budget	Meet state and FEMA standards for flood damage prevention, reduce flood risk on new development	Staff time	NEED	LPR	PR
2022-Harrison-002	Municipal Debris Management Plan	<p><b>Problem:</b> The Township lacks an adopted Disaster Debris Management Plan.</p> <p><b>Solution:</b> The Township will complete and adopt the in-progress Disaster Debris Management Plan.</p>	Existing	All Hazards	5	1 year	Public Works, OEM	Township budget	Increased planning for post-disaster response and cleanup.	Staff time	NEED	LPR	ES



Project Number	Mitigation Initiative Name	Description of Problem and Solution	New or Existing Assets?	Hazard(s) to be Mitigated	Goals Met	Estimated Timeline	Lead and Support Agencies	Potential Funding Sources	Estimated Benefits	Estimated Costs	Priority	Mitigation Category	CRS Category
2022-Harrison-003	RL/SRL Property Outreach	<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.</p> <p><b>Solution:</b> Conduct outreach to 16 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 years	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.	\$1 million+	NEED	SIP	PP
2022-Harrison-004	Generator at Wastewater Pump Station #5	<p><b>Problem:</b> Wastewater pump station #5 provides essential services to the Township. The pump does not have backup power and during a power outage, services can be disrupted.</p>	Existing	Utility Failure	1, 2, 6	Within 5 years	Township Wastewater Superintendent	FEMA HMGP, Municipal Budget	Continuity of operations; little to no disruption in services	NEED	NEED	SIP	ES, PP



Project Number	Mitigation Initiative Name	Description of Problem and Solution	New or Existing Assets?	Hazard(s) to be Mitigated	Goals Met	Estimated Timeline	Lead and Support Agencies	Potential Funding Sources	Estimated Benefits	Estimated Costs	Priority	Mitigation Category	CRS Category
		<b>Solution:</b> The Township will determine the proper size generator to install at the pump station. Once determined, the Township will purchase and install a generator to provide continuous power to the pump during a power outage.											
2022-Harrison-005	Generator at Clearview Regional High School	<b>Problem:</b> Current emergency power generator upgrades needed to maintain security and safety of students/staff  <b>Solution:</b> The School Board and the Township will determine the proper size generator to install at the school. Once identified, the generator will be purchased and installed at the school. This will allow the school to function properly during power outages and provide a safe environment for students and staff during power outages.	Existing	Utility Failure	1, 2, 6	Within 5 years	Township Committee, School Board	FEMA HMGP, School Budget	Continuity of operations	NEED	NEED	SIP	ES, PP
2022-Harrison-006	Generator for Friends School	<b>Problem:</b> As a designated shelter for emergencies, Friends School does not have backup power to function properly as a shelter. The Township has identified the school as a shelter. In the	Existing	Utility Failure	1, 2, 6	Within 5 years	Township Committee, School Board	FEMA HMGP, School Budget	Continuity of operations; shelter for residents	NEED	NEED	SIP	ES, PP



Project Number	Mitigation Initiative Name	Description of Problem and Solution	New or Existing Assets?	Hazard(s) to be Mitigated	Goals Met	Estimated Timeline	Lead and Support Agencies	Potential Funding Sources	Estimated Benefits	Estimated Costs	Priority	Mitigation Category	CRS Category
		<p>event of a power outage, the school cannot operate as a shelter.</p> <p><b>Solution:</b> The School Board and the Township will determine the proper size generator to install at the school. Once identified, the generator will be purchased and installed at the school. This will allow the school to function properly during power outages and provide a shelter for Township residents.</p>											

**Notes:**

Not all acronyms and abbreviations defined below are included in the table.

*Acronyms and Abbreviations:*

- CAV Community Assistance Visit
- CRS Community Rating System
- DPW Department of Public Works
- EHP Environmental Planning and Historic Preservation
- 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 also 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. Such actions include outreach projects, real estate disclosure, hazard information centers, and educational programs for school-age children and adults.
- *Natural Resource Protection (NR)* - Actions that minimize hazard loss and also preserve or restore the functions of natural systems. These actions include sediment and erosion control, stream corridor restoration, watershed management, forest and vegetation management, and wetland restoration and preservation.
- *Structural Flood Control Projects (SP)* - Actions that involve the construction of structures to reduce the impact of a hazard. Such structures include dams, setback levees, floodwalls, retaining walls, and safe rooms.
- *Emergency Services (ES)* - Actions that protect people and property during and immediately following a disaster or hazard event. Services include warning systems, emergency response services, and the protection of essential facilities.

Table 9.9-17. Summary Evaluation and Action Priority

Project Number	Project 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
2022-Harrison-001	Flood Damage Prevention Ordinance																
2022-Harrison-002	Municipal Debris Management Plan																
2022-Harrison-003	RL/SRL Property Outreach																



Project Number	Project 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
2022-Harrison-004	Generator at Wastewater Pump Station #5																
2022-Harrison-005	Generator at Clearview Regional High School																
2022-Harrison-006	Generator for Friends School																

Note: Section 6 (Mitigation Strategy), which 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.

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## 9.9.8 Action Worksheets

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The following action worksheets have been developed by the Township of Harrison to aid in the submittal of grant applications to support the funding of high priority proposed actions. The State of New Jersey requires at least two projects be developed with action worksheets.

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Action Worksheet			
<b>Project Name:</b>	RL/SRL Property Outreach		
<b>Project Number:</b>	2022-Harrison-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.		
Action or Project Intended for Implementation			
<b>Description of the Solution:</b>	Conduct outreach to 16 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>		<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>		<b>Goals Met:</b>	1, 2
<b>Estimated Cost:</b>	\$1 million+	<b>Mitigation Action Type:</b>	Structure and Infrastructure Project
Plan for Implementation			
<b>Prioritization:</b>		<b>Desired Timeframe for Implementation:</b>	
<b>Estimated Time Required for Project Implementation:</b>	3 years	<b>Potential Funding Sources:</b>	FEMA HMGP and FMA, local cost share by homeowners
<b>Responsible Organization:</b>	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
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>	RL/SRL Property Outreach	
<b>Project Number:</b>	2022-Harrison-003	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	
Property Protection	1	
Cost-Effectiveness	1	Benefits outweigh costs
Technical	1	Project is technically feasible
Political		
Legal		
Fiscal		
Environmental		
Social		
Administrative		
Multi-Hazard		Flood, Severe Weather
Timeline		3 years
Agency Champion		
Other Community Objectives		
<b>Total</b>		
<b>Priority (High/Med/Low)</b>		



Action Worksheet			
<b>Project Name:</b>	Generator at Wastewater Pump Station #5		
<b>Project Number:</b>	2022-Harrison-004		
Risk / Vulnerability			
<b>Hazard(s) of Concern:</b>	Utility Failure		
<b>Description of the Problem:</b>	Wastewater pump station #5 provides essential services to the Township. The pump does not have backup power and during a power outage, services can be disrupted.		
Action or Project Intended for Implementation			
<b>Description of the Solution:</b>	The Township will determine the proper size generator to install at the pump station. Once determined, the Township will purchase and install a generator to provide continuous power to the pump during a power outage.		
<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>		<b>Estimated Benefits (losses avoided):</b>	Continuity of operations; little to no disruption in services
<b>Useful Life:</b>		<b>Goals Met:</b>	1, 2, 6
<b>Estimated Cost:</b>		<b>Mitigation Action Type:</b>	Structure and Infrastructure Project
Plan for Implementation			
<b>Prioritization:</b>		<b>Desired Timeframe for Implementation:</b>	
<b>Estimated Time Required for Project Implementation:</b>	Within 5 years	<b>Potential Funding Sources:</b>	FEMA HMGP, Municipal Budget
<b>Responsible Organization:</b>	Township Wastewater Superintendent	<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
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 at Wastewater Pump Station #5	
<b>Project Number:</b>	2022-Harrison-004	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	
Property Protection	1	
Cost-Effectiveness	1	Benefits outweigh costs
Technical	1	Project is technically feasible
Political		
Legal		
Fiscal		
Environmental		
Social		
Administrative		
Multi-Hazard		Utility Failure
Timeline		Within 5 years
Agency Champion		
Other Community Objectives		
<b>Total</b>		
<b>Priority (High/Med/Low)</b>		



Action Worksheet			
<b>Project Name:</b>	Generator at Clearview Regional High School		
<b>Project Number:</b>	2022-Harrison-005		
Risk / Vulnerability			
<b>Hazard(s) of Concern:</b>	Utility Failure		
<b>Description of the Problem:</b>	Current emergency power generator upgrades needed to maintain security and safety of students/staff		
Action or Project Intended for Implementation			
<b>Description of the Solution:</b>	The School Board and the Township will determine the proper size generator to install at the school. Once identified, the generator will be purchased and installed at the school. This will allow the school to function properly during power outages and provide a safe environment for students and staff during power outages.		
<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>		<b>Estimated Benefits (losses avoided):</b>	Continuity of operations
<b>Useful Life:</b>		<b>Goals Met:</b>	1, 2, 6
<b>Estimated Cost:</b>		<b>Mitigation Action Type:</b>	Structure and Infrastructure Project
Plan for Implementation			
<b>Prioritization:</b>		<b>Desired Timeframe for Implementation:</b>	
<b>Estimated Time Required for Project Implementation:</b>	Within 5 years	<b>Potential Funding Sources:</b>	FEMA HMGP, School Budget
<b>Responsible Organization:</b>	Township Committee, School Board	<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
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 at Clearview Regional High School	
<b>Project Number:</b>	2022-Harrison-005	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	
Property Protection	1	
Cost-Effectiveness	1	Benefits outweigh costs
Technical	1	Project is technically feasible
Political		
Legal		
Fiscal		
Environmental		
Social		
Administrative		
Multi-Hazard		Utility Failure
Timeline		Within 5 years
Agency Champion		
Other Community Objectives		
<b>Total</b>		
<b>Priority (High/Med/Low)</b>		



Action Worksheet			
<b>Project Name:</b>	Generator for Friends School		
<b>Project Number:</b>	2022-Harrison-006		
Risk / Vulnerability			
<b>Hazard(s) of Concern:</b>	Utility Failure		
<b>Description of the Problem:</b>	As a designated shelter for emergencies, Friends School does not have backup power to function properly as a shelter. The Township has identified the school as a shelter. In the event of a power outage, the school cannot operate as a shelter.		
Action or Project Intended for Implementation			
<b>Description of the Solution:</b>	The School Board and the Township will determine the proper size generator to install at the school. Once identified, the generator will be purchased and installed at the school. This will allow the school to function properly during power outages and provide a shelter for Township residents.		
<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>		<b>Estimated Benefits (losses avoided):</b>	Continuity of operations, shelter for residents
<b>Useful Life:</b>		<b>Goals Met:</b>	1, 2, 6
<b>Estimated Cost:</b>		<b>Mitigation Action Type:</b>	Structure and Infrastructure Project
Plan for Implementation			
<b>Prioritization:</b>		<b>Desired Timeframe for Implementation:</b>	
<b>Estimated Time Required for Project Implementation:</b>	Within 5 years	<b>Potential Funding Sources:</b>	FEMA HMGP, School Budget
<b>Responsible Organization:</b>	Township Committee, School Board	<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
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 for Friends School	
<b>Project Number:</b>	2022-Harrison-006	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	
Property Protection	1	
Cost-Effectiveness	1	Benefits outweigh costs
Technical	1	Project is technically feasible
Political		
Legal		
Fiscal		
Environmental		
Social		
Administrative		
Multi-Hazard		Utility Failure
Timeline		Within 5 years
Agency Champion		
Other Community Objectives		
<b>Total</b>		
<b>Priority (High/Med/Low)</b>		