



## SECTION 9. JURISDICTIONAL ANNEXES

### 9.31 TOWNSHIP OF RIVERSIDE

This section presents the jurisdictional annex for the Township of Riverside that provides resources and information to assist public and private sectors to reduce losses from future hazard events. This annex is not guidance of what to do when a disaster occurs. Rather, this annex concentrates on actions to reduce or eliminate damage to property and people that can be implemented prior to a disaster. Information presented includes a general overview of the municipality, who in the Township of Riverside participated in the planning process, an assessment of the Township of Riverside's risk and vulnerability, the different capabilities used in the Township of Riverside, and an action plan that will be implemented to achieve a more resilient community.

#### 9.31.1 Hazard Mitigation Planning Team

The Township of Riverside identified the hazard mitigation plan primary and alternate points of contact and developed this plan over the course of several months with input from Township of Riverside departments, including Administration, Construction, and the Clerk. The Township Administrator represented the community on the Burlington County Hazard Mitigation 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 following table summarizes municipal officials that participated in the development of the annex and in what capacity. Additional documentation on the municipality's planning process through Planning Partnership meetings is included in Volume 1, Section 2 (Planning Process) and Appendix C (Meeting Documentation).

Table 9.31-1. Hazard Mitigation Planning Team

Primary Point of Contact		Alternate Point of Contact	
Name/Title:	Meghan Jack, Township Administrator	Name/Title:	Susan Dydek, Clerk
Address:	237 S. Pavilion Avenue Riverside, NJ 08075	Address:	237 S. Pavilion Avenue Riverside, NJ 08075
Phone Number:	(856) 461-1460 ext. 4	Phone Number:	(856) 431-1460 ext. 2
Email:	mjack@riversidetwp.org	Email:	sdydek@riversidetwp.org
NFIP Floodplain Administrator			
Name/Title:	Meghan Jack, Township Administrator		
Address:	237 S. Pavilion Avenue Riverside, NJ 08075		
Phone Number:	(856) 461-1460 ext. 4		
Email:	meghanjack@comcast.net		
Additional Contributors:			
Name/Title:	Meghan Jack, Township Administrator		



Method of Participation:	Provided information on capabilities, hazard event history, problem areas, NFIP administration. Reviewed draft annex and provided feedback.
Name/Title: Method of Participation:	Hugh McCurley, Construction Code Official/Building Subcode Official, Building Inspector, Zoning Officer Provided information on permitting and new development. Reviewed draft annex and provided feedback.
Name/Title: Method of Participation:	Susan Dydek, Clerk Reviewed draft annex and provided feedback.
Name/Title: Method of Participation:	Dave Jaensch, Police Chief Reviewed draft annex.
Name/Title: Method of Participation:	Hugh Dougherty, Township Engineer Reviewed draft annex.
Name/Title: Method of Participation:	Corey Kimble, Mayor Reviewed draft annex.
Name/Title: Method of Participation:	Andrew Holt, Public Works Coordinator Reviewed draft annex.
Name/Title: Method of Participation:	Ed Fox, Township Planner Reviewed draft annex.
Name/Title: Method of Participation:	Rakesh Darji, Assistant Planner Reviewed draft annex.

### 9.31.2 Municipal Profile

The Township of Riverside is located in the north-west portion of Burlington County along the Delaware River. The Township is bordered by the Rancocas River and the Township of Delanco to the east and the Township of Delran to the west and south. To the north across the Delaware River, the Township is bordered by the City of Philadelphia, Pennsylvania. The Township encompasses one square mile. The Township has a total area of 1.6 square miles, including 1.5 square miles of land and 0.1 square miles of water.

The Township of Riverside is governed under the Township form of government with a five-member Township Committee. The Township Committee is elected directly by the voters in partisan elections to serve three-year terms of office on a staggered basis, with one or two seats coming up for election each year. At an annual reorganization meeting, the Township Committee selects one of its members to serve as Mayor and another as Deputy Mayor.

Under the Township form, all legislative powers are concentrated in the committee. The committee also has all executive powers not placed in the mayor either by general law or the revised Township act. Additionally, all municipalities under the traditional form may appoint, including the township form, may appoint a municipal administration and “delegate to him all or a portion of the executive responsibilities of the municipality.”

According to the U.S. Census, the 2020 population for the Township of Riverside was 8,003, a 0.9 percent decrease from the 2010 Census. Data from the 2021 American Community Survey 5-Year Population Estimates indicate that 13.0 percent is 65 years of age or older, 4.4 percent of the population is 5 years of



age or younger, 9.4 percent is non-English speaking, 12.1 percent has a disability, and 15.7 percent is below the poverty level.

The Steering Committee also identified households that are above the Federal Poverty Level, but earn less than the basic cost of living as socially vulnerable. For the Township of Riverside, 50 percent of households earn less than the basic cost of living and are considered socially vulnerable.

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

### 9.31.3 Jurisdictional Capability Assessment and Integration

The Township of Riverside performed an inventory and analysis of existing capabilities, plans, programs, and policies that enhance its ability to implement mitigation strategies. Volume 1, Section 5 (Capability Assessment) describes the components included in the capability assessment and their significance for hazard mitigation planning. The jurisdictional assessment includes the following analyses:

- An assessment of 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. As part of the hazard mitigation analysis, planning/policy documents were reviewed, and each jurisdiction was surveyed to obtain a better understanding of their progress toward plan integration. The updated mitigation strategy provided an opportunity for the Township of Riverside to identify opportunities for integration of mitigation concepts that can be incorporated into municipal procedures.

### Planning, Legal, and Regulatory Capability and Integration

The table below summarizes the regulatory tools that are available to the Township of Riverside. The comment field provides information as to how the capability integrates hazard mitigation and risk reduction.

Table 9.31-2. Planning, Legal, and Regulatory Capability and Integration

	Jurisdiction has this? (Yes/No)	Code Citation and Date (code chapter, name of plan, date of plan)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
Codes, Ordinances, & Regulations				



	Jurisdiction has this? (Yes/No)	Code Citation and Date (code chapter, name of plan, date of plan)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
<b>Building Code</b>	Yes	Chapter 174 Construction Codes, Uniform	State, Local	Construction Code Official
<i>How does this reduce risk?</i> This chapter and the Building Code shall be enforced and administered by the Construction Official as appointed by the Township. This code ensures all buildings are in line with the Uniform Construction Code, as adopted by the Township and the State of New Jersey.				
<b>Zoning/Land Use Code</b>	Yes	Chapter 255 Land Development	Local	Zoning Officer
<i>How does this reduce risk?</i> The code enables where appropriate, flexibility of design and development of land in such a manner as to preserve its natural and scenic qualities, protect areas of meaningful ecological value, reduce flood hazards, facilitate the adequate and economical provision of streets and utilities, minimize negative environmental impacts, improve the aesthetic quality of new residential developments, encourage the conservation of energy, increase recreational opportunities, and otherwise promote the planned and environmentally desirable use of land.				
<b>Subdivision Ordinance</b>	Yes	Chapter 255 Land Development, Article XV Subdivision/Site Layout	State, Local	Zoning Officer
<i>How does this reduce risk?</i> It is declared to be the policy of the Township to consider land subdivisions as part of a plan for the orderly, efficient, and economical development of the Township. Land to be subdivided shall be of such character that it can be used safely for building or development purposes without danger to health or peril from fire, flood, or other menace, and without resulting in significant damage to the ecology of the area in which it is located. Land subject to fire, flood or other hazards shall not be subdivided nor developed for residential purposes, nor for such other uses as may increase danger to health, life, or property, or aggravate a flood hazard, but such land may be set aside for uses as shall not involve such danger nor produce unsatisfactory living conditions.				
<b>Site Plan Ordinance</b>	Yes	Chapter 255 Land Development, Article XV Subdivision/Site Layout	State, Local	Zoning Officer
<i>How does this reduce risk?</i> Approval of a site plan is required for a) the development or redevelopment of any building, structure or lot or portion thereof for a new use; b) the expansion or relocation of any existing use; or c) any change of use of a building, structure or lot or portion thereof. The Planning Board sets forth appropriate conditions and safeguards which are in harmony with several identified purposes, including drainage. Per the ordinance, a proposed stormwater drainage system shall be adequate to prevent any increase in the rate of surface runoff or otherwise contribute to downstream flooding during a storm of any magnitude, up to and including a one-hundred-year frequency storm.				
<b>Stormwater Management Ordinance</b>	Yes	Chapter 378 Stormwater Control	State, Local	Police Department, other Municipal Officials
<i>How does this reduce risk?</i> The purpose of this article is to establish minimum stormwater management requirements and controls to protect and safeguard the general health, safety, and welfare of the public residing within this jurisdiction. An identified objective of this ordinance is to minimize increases in the volumes and rates of stormwater runoff from land development activities in order to reduce flooding and streambank erosion.				
<b>Post-Disaster Recovery/ Reconstruction Ordinance</b>	No	-	-	-
<i>How does this reduce risk?</i>				
<b>Real Estate Disclosure</b>	Yes	Senate Bill 3110; P. L. 2023, c. 93, July 3, 2023	State	Sellers and Landlords of commercial or residential property



	Jurisdiction has this? (Yes/No)	Code Citation and Date (code chapter, name of plan, date of plan)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
<i>How does this reduce risk?</i> For leases, the law amends the New Jersey Truth-in-Renting Act, N.J.S.A. 46:8-43 et seq., to require every landlord to notify in writing each of the landlord's tenants, prior to lease signing or renewal, whether the property is located in the Federal Emergency Management Agency (FEMA) Special Flood Hazard Area ("100-year floodplain") or Moderate Risk Flood Hazard Area ("500-year floodplain") and if the landlord has actual knowledge that the rental premises or any portion of the parking areas of the real property containing the rental premises has been subjected to flooding. The law does not apply to (1) landlords who lease commercial space or residential dwellings for less than one month, (2) residential dwellings in a premises containing not more than two units, (3) owner-occupied premises containing not more than three units, or (4) hotels, motels, or other guest houses serving transient or seasonal guests for a period of less than 120 days.  The model notice is to contain the heading "Flood Risk" and questions for the landlord to answer regarding the landlord's actual knowledge of past flooding of the property. The questions regarding the property being in a FEMA Special or Moderate Risk Flood Hazard Area shall not contain the option for "unknown." To determine how the questions are to be answered, FEMA's current flood insurance rate maps for the leased premises area must be consulted. The landlord will be required to answer whether the rental premises or any portions of the parking areas of the real property containing the rental premises ever experienced any flood damage, water seepage, or pooled water due to a natural flood event and, if so, the number of times that has occurred.  The notice to residential tenants must also indicate that flood insurance may be available to renters through FEMA's National Flood Insurance Program to cover their personal property and contents in the event of a flood and that standard renter's insurance does not typically cover flood damage.  For sales, the law also amends the New Jersey Consumer Fraud Act, N.J.S.A. 56:8-1 et seq., to require sellers of real property to disclose, on the property condition disclosure statement, whether the property is located in the FEMA Special or Moderate Risk Flood Hazard Area and any actual knowledge of the seller concerning flood risks of the property to the purchaser before the purchaser becomes obligated under any contract for the purchase of the property.  The disclosure statement must contain the heading "Flood Risk" and ask the seller the following questions: <ul style="list-style-type: none"><li>• Is any or all of the property in the Special Flood Hazard Area ("100-year floodplain") or a Moderate Risk Flood Hazard Area ("500-year floodplain") according to FEMA's current flood insurance rate maps?</li><li>• Is the property subject to any requirement under federal law to obtain and maintain flood insurance on the property? Properties in the Special Flood Hazard Area with mortgages from federally regulated or insured lenders are required to obtain and maintain flood insurance.</li><li>• Have you ever received assistance from, or are you aware of any previous owners receiving assistance from FEMA, the U.S. Small Business Administration, or any other federal disaster flood assistance for flood damage on the property? For properties that have received flood disaster assistance, the requirement to obtain flood insurance passes down to all future owners.</li><li>• Is there flood insurance on the property? A standard homeowner's insurance policy typically does not cover flood damage.</li><li>• Is there a FEMA elevation certificate available for the property? If so, it must be shared with the buyer. An elevation certificate is a FEMA form, completed by a licensed surveyor or engineer, that provides critical information about the flood risk of the property and is used by flood insurance providers to determine the appropriate insurance rating for the property.</li><li>• Have you ever filed a claim for flood damage to the property with any insurance provider? If the claim was approved, what was the amount received?</li><li>• Has the property experienced any flood damage, water seepage, or pooled water due to a natural flood event, such as heavy rainfall, coastal storm surge, tidal inundation, or river overflow? If so, how many times?</li></ul> Not all provisions of this law have become effective at the time of the writing of this plan.				
<b>Growth Management</b>	No	-	-	-
<i>How does this reduce risk?</i>				
<b>Environmental Protection Ordinance</b>	No	-	-	-
<i>How does this reduce risk?</i>				
<b>Flood Damage Prevention Ordinance</b>	Yes	Chapter 225 Flood Damage Prevention	Federal, State, Local	Township Administrator
<i>How does this reduce risk?</i>				



	Jurisdiction has this? (Yes/No)	Code Citation and Date (code chapter, name of plan, date of plan)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
<p>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:</p> <ul style="list-style-type: none"> <li>A. Protect human life and health.</li> <li>B. Minimize the 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.</li> <li>H. Ensure that those who occupy the areas of special flood hazard assume responsibility for their actions.</li> </ul> <p>The Township has not adopted NJDEP's Model Code Coordinated Ordinance. The ordinance will need to be updated.</p>				
<b>Wellhead Protection</b>	No	-	-	-
<i>How does this reduce risk?</i>				
<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>	No	-	-	-
<i>How does this reduce risk?</i>				
<b>Planning Documents</b>				
<b>Comprehensive/Master Plan</b>	Yes	Riverside Township Master Plan (1997), Re-examined 2022	Local	Planning Board
<i>How does this reduce risk?</i> The analysis and recommendations of the Master Plan formed the basis for the Township's zoning code and other land development codes that set limits on development intensity for areas of environmental concern. The purpose of the plan is to direct growth and development to the lands that are suitable and provide protections for the lands deemed unsuitable due to environmental considerations.				
<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	Municipal Stormwater Management Plan, April 2005; Revised July 2006	Local	Township Administrator
<i>How does this reduce risk?</i>				



	Jurisdiction has this? (Yes/No)	Code Citation and Date (code chapter, name of plan, date of plan)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
<p>The Municipal Stormwater Management Plan documents the Township's strategy for addressing stormwater management and stormwater-related impacts related to land development. This plan addresses the impacts of land development on groundwater recharge, stormwater quality, and stormwater quantity. The impacts are addressed by incorporating stormwater design and performance standards for new major development, defined as projects that disturb one of more acre of land or projects that would result in 0.25 acres or more of additional impervious coverage. These standards are intended to minimize the adverse impact of stormwater runoff on water quality and water quantity and the loss of groundwater recharge that provide base flow in receiving water bodies, The plan describes long-term operation and maintenance measures for existing and future stormwater facilities.</p>				
<b>Stormwater Pollution Prevention Plan</b>	Yes	Stormwater Pollution Prevention Plan, October 2018	Local	Township Administrator
<p><i>How does this reduce risk?</i></p> <p>The Stormwater Pollution Prevention Plan is used to identify all potential pollution sources that could come into contact with stormwater leaving a site. This plan includes the following elements:</p> <ul style="list-style-type: none"> <li>• Site map and description</li> <li>• Descriptions of activities that could cause pollution</li> <li>• Best Management Practices &amp; control measures for preventing pollution</li> <li>• Procedures for conducting inspections and monitoring</li> <li>• Plans for keeping your SWPPP up to date</li> </ul>				
<b>Open Space Plan</b>	No	-	-	-
<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/Sustainability Plan</b>	No	-	-	-
<i>How does this reduce risk?</i>				
<b>Tourism Plan</b>	No	-	-	-





	Jurisdiction has this? (Yes/No)	Code Citation and Date (code chapter, name of plan, date of plan)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
<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	-	-	-
<i>How does this reduce risk?</i>				
<b>Response/Recovery Planning</b>				
<b>Emergency Operations Plan</b>	Yes	Riverside Township Emergency Operations Plan, April 2022	Local	OEM
<i>How does this reduce risk?</i> The Emergency Operations Plan aims to assess the Township's ability to respond to emergency and identifies recommendations to improve its capacity to prepare and respond to future events. The plan address both short- and long-term recovery.				
<b>Continuity of Operations Plan</b>	No	-	-	-
<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>Public Health Plan</b>	No	-	-	-
<i>How does this reduce risk?</i>				
<b>Other</b>	No	-	-	-
<i>How does this reduce risk?</i>				

## Development and Permitting Capability

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

Table 9.31-3. Development and Permitting Capability

Indicate if your jurisdiction implements the following	Yes/No	Comment:
Do you issue development permits? • If yes, what department is responsible?	Yes	Construction and Zoning Office





Indicate if your jurisdiction implements the following	Yes/No	Comment:
If you do not issue development permits, what is your process for tracking new development?	N/A	-
Are permits tracked by hazard area? (For example, floodplain development permits.)	Yes	Floodplain
Do you have a buildable land inventory? • If yes, please describe	Yes	In the Master Plan Re-examination, a build-out analysis has been conducted
Describe the level of build-out in your jurisdiction.	N/A	The Township is mostly built-out. There are areas designated for redevelopment, and proposed areas to rezone as open space, environmentally sensitive, and CES (habitat and flooding).

## Administrative and Technical Capability

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

Table 9.31-4. 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 Planning Board (Planning Board) has the powers and duties of a Planning Board and a Zoning Board of Adjustment.
Zoning Board of Adjustment	No	See above
Planning Department	No	-
Mitigation Planning Committee	No	-
Environmental Board/Commission	No	-
Open Space Board/Committee	No	-
Economic Development Commission/Committee	Yes	The Riverside Business Association has a mission is to promote and support the economic energy and community spirit within the Township of Riverside. The association looks within and outside of Riverside to keep businesses connected with each other, the township and to promote the township to customers and clients.
Public Works/Highway Department	Yes	The Riverside Township Public Works Department provides year-round services to the residents of Riverside. Some of the various responsibilities of Public Works include pothole repair, leaf/branch pickup, snow removal, clearing and repairing of storm drains, painting crosswalks, maintaining irrigation, maintaining all parks in common areas, and repairing or replacing road signs. Public Works also maintains and operates a compost facility and have a fully equipped automotive garage in which all police vehicles, Township heavy equipment and vehicles, and sewer department



Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
		vehicles are repaired. The public works department also provides a drop off facility for recycling.
Construction/Building/Code Enforcement Department	Yes	<p>The Construction and Zoning Office issues construction and zoning permits, as required in accordance with the New Jersey State Uniform Construction Code (UCC) and/or the Codes of the Township.</p> <p>The Department of Code Enforcement is responsible for preserving the quality and value of public and private property, and maintaining a high quality of living for residents of the Township of Riverside by eliminating conditions that threaten the health, safety, and general welfare of the public. Code Enforcement administers the Property Maintenance Code of the Township of Riverside to ensure that property owners, landlords and tenants all comply with Township Codes and that properties are maintained accordingly.</p>
Emergency Management/Public Safety Department	Yes	The Township of Riverside Office of Emergency Management exists to serve the emergency needs of the community whether it be a natural disaster, major storm system, long-term power outages, chemical or hazardous material incident or terrorist threat.
Warning Systems / Services (mass notification system, outdoor warning signals, etc.)	Yes	Nixle, social media, Township website
Maintenance programs to reduce risk (stormwater maintenance, tree trimming, etc.)	Yes	Public Works maintains roadways and the stormwater system.
Mutual aid agreements	Yes	County Mutual Aid agreements for response grids
Human Resources Manual <i>e.g., Do any job descriptions specifically include identifying or implementing mitigation projects or other efforts to reduce natural hazard risk?</i>	Yes	No job descriptions specifically include identifying or implementing mitigation projects or other efforts to reduce natural hazard risk.
Other: Shade Tree Committee	Yes	<p>The Shade Tree Committee consists of five members. The Committee has the following responsibilities:</p> <ul style="list-style-type: none"> <li>Review all matters relating to shade trees, ornamental trees and shrubbery within the Township of Riverside now located or which may hereafter be planted in/on any public highway, park, parkway, or easement.</li> <li>Review and make recommendations regarding the care and use of ground surrounding shade trees and related vegetation as previously described, to assist in their proper growth, care, and protection.</li> <li>Recommend that any tree or part thereof which is dangerous to public safety be moved or removed.</li> <li>Make recommendations for the care and control of Township parks and parkways.</li> </ul>



Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
		<ul style="list-style-type: none"> <li>Take direct action to encourage arboriculture within the Township.</li> <li>Review and recommend the administration of treatment to or removal of any trees situated on private property which are believed to harbor a disease or insects which may be communicable to neighboring healthy trees in the care of the Township.</li> </ul>
<b>Technical/Staffing Capability</b>		
Planners or engineers with knowledge of land development and land management practices	Yes	Contracted annually
Engineers or professionals trained in building or infrastructure construction practices	Yes	Contracted annually
Planners or engineers with an understanding of natural hazards	Yes	Contracted annually
Staff with expertise or training in benefit/cost analysis	Yes	Township Administrator
Professionals trained in conducting damage assessments	Yes	Contracted annually
Personnel skilled or trained in GIS and/or Hazards United States (HAZUS) – Multi-Hazards (MH) applications	Yes	Contracted annually
Environmental scientist familiar with natural hazards	Yes	Contracted annually
Surveyor(s)	Yes	Contracted annually
Emergency Manager	Yes	The Township of Riverside Office of Emergency Management exists to serve the emergency needs of the community whether it be a natural disaster, major storm system, long-term power outages, chemical or hazardous material incident or terrorist threat.
Grant writer(s) <i>Consider the following - Are data and maps from the HMP used to support documentation in grant applications?</i>	Yes	Contracted annually
Resilience Officer	Yes	NJDEP Contact
Other (this could include stormwater engineer, environmental specialist, etc.)	No	-

## Fiscal Capability

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

Table 9.31-5. Fiscal Capabilities

Financial Resources	Accessible or Eligible to Use? (Yes/No)
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



Financial Resources	Accessible or Eligible to Use? (Yes/No)
Impact fees for homebuyers or developers of new development/homes	No
Stormwater utility fee	Yes
Incur debt through general obligation bonds	Yes
Incur debt through special tax bonds	Yes
Incur debt through private activity bonds	No
Withhold public expenditures in hazard-prone areas	Yes
Other federal or state Funding Programs	Yes
Open Space Acquisition funding programs	Yes
Other (for example, Clean Water Act 319 Grants [Nonpoint Source Pollution])	No

## Education and Outreach Capability

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

Table 9.31-6. Education and Outreach Capabilities

Outreach Resources	Available? (Yes/No)	Comment:
Public information officer or communications office	Yes	Administrator
Personnel skilled or trained in website development	Yes	Contracted
Hazard mitigation information available on your website	No	-
Social media for hazard mitigation education and outreach	Yes	The Township has a Facebook page which can be used to share hazard mitigation education and outreach.
Citizen boards or commissions that address issues related to hazard mitigation	No	-
Warning systems for hazard events	Yes	Nixle, social media, Township website
Natural disaster/safety programs in place for schools	No	-
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.	Yes	Township events can also be used for outreach and education to inform citizens on natural hazards, risk, and ways to protect themselves during such events.

## Community Classifications

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

Table 9.31-7. Community Classifications

Program	Participating? (Yes/No)	Classification (if applicable)	Date Classified (if applicable)
Community Rating System (CRS)	No	-	-
Building Code Effectiveness Grading Schedule (BCEGS)	No	-	-



Program	Participating? (Yes/No)	Classification (if applicable)	Date Classified (if applicable)
Public Protection (ISO Fire Protection Classes 1 to 10)	No	-	-
Storm Ready Certification	No	-	-
Firewise Communities classification	No	-	-
New Jersey Sustainable Jersey Community	Yes	None	July 3, 2018
Other	No	-	-

Note:

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

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

Table 9.31-8. Adaptive Capacity

Hazard	Adaptive Capacity – Strong/Moderate/Weak
Dam Failure	Moderate
Disease Outbreak	Strong
Drought	Moderate
Earthquake	Moderate
Extreme Temperatures	Strong
Flood	Moderate
Severe Weather	Moderate
Severe Winter Weather	Strong
Wildfire	Moderate

The Township of Riverside indicated the adaptive capacity rankings were accurate.

### 9.31.4 National Flood Insurance Program (NFIP) Compliance

This section provides specific information on the management and regulation of the regulatory floodplain, including current and future compliance with the NFIP.

#### NFIP Floodplain Administrator (FPA)

Meghan Jack, Township Administrator



## National Flood Insurance Program (NFIP) Summary

The following table summarizes the NFIP statistics for the Township of Riverside.

Table 9.31-9. NFIP Summary

Active Policies	Total Premium + Policy Fee	Number of Losses	Total Net Payment	Repetitive Loss Properties
40	\$56,409	53	\$532,674.79	4

Source: NFIP 2023

Notes: Data current as of October 2023

RL Repetitive Loss

SRL Severe Repetitive Loss

RL FMA Definition Any insurable building that has incurred flood-related damage on two occasions, in which the cost of the repair, on the average, equaled or exceeded 25 percent of the market value of the structure at the time of each such flood event.

RL NFIP Definition Any insurable building for which two or more claims of more than \$1,000 were paid by the National Flood Insurance Program (NFIP) within any rolling ten-year period, since 1978.

## Flood Vulnerability Summary

The following table provides a summary of the NFIP program in the Township of Riverside.

Table 9.31-10. NFIP Summary

NFIP Topic	Comments
<b>Flood Vulnerability Summary</b>	
Describe areas prone to flooding in your jurisdiction. <ul style="list-style-type: none"><li>Do you maintain a list of properties that have been damaged by flooding?</li></ul>	Areas along the Rancocas Creek are prone to flooding. The Township maintains a list.
Do you maintain a list of property owners interested in flood mitigation? <ul style="list-style-type: none"><li>How many homeowners and/or business owners are interested in mitigation (elevation or acquisition)?</li></ul>	Yes. No properties on the list at present.
Are any RiskMAP projects currently underway in your jurisdiction? <ul style="list-style-type: none"><li>If so, state what projects are underway.</li></ul>	No
How do you make Substantial Damage determinations? <ul style="list-style-type: none"><li>How many were declared for recent flood events in your jurisdiction?</li></ul>	The Township Engineer and/or Construction Code Official make Substantial Damage determinations.
How many properties have been mitigated (elevation or acquisition) in your jurisdiction? <ul style="list-style-type: none"><li>If there are mitigated properties, how were the projects funded?</li></ul>	One property has been elevated. The property owner funded the project.
Do your flood hazard maps adequately address the flood risk within your jurisdiction? <ul style="list-style-type: none"><li>If not, state why.</li></ul>	Yes
<b>NFIP Compliance</b>	
What local department is responsible for floodplain management?	Administration.
Are any certified floodplain managers on staff in your jurisdiction?	No, but the Municipal Engineer is certified.
Do you have access to resources to determine possible future flooding conditions from climate change?	Yes



NFIP Topic	Comments
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?	Not at present.
Provide an explanation of NFIP administration services you provide (e.g. permit review, GIS, education/outreach, inspections, engineering capability)	No services are currently provided.
How do you determine if proposed development on an existing structure would qualify as a substantial improvement?	The Municipal Engineer would make this determination.
What are the barriers to running an effective NFIP program in the community, if any?	Staff and expense.
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? • If so, state the violations.	No
When was the most recent Community Assistance Visit (CAV) or Community Assistance Contact (CAC)?	September 14, 1993 was the most recent CAV.
What is the local law number or municipal code of your flood damage prevention ordinance? • Have you adopted NJDEP's Model Code Coordinated Ordinance? • What is the date that your flood damage prevention ordinance was last amended?	Chapter 225. No October 16, 2017
Does your floodplain management program meet or exceed minimum requirements? • If exceeds, in what ways?	Meets minimum requirements
Are there other local ordinances, plans or programs (e.g., site plan review) that support floodplain management and meeting the NFIP requirements? For instance, does the planning board or zoning board consider efforts to reduce flood risk when reviewing variances such as height restrictions?	The Joint Land Use Board considers flooding and stormwater on each major site plan application.
Does your community plan to join the CRS program or is your community interested in improving your CRS classification?	Unknown

### 9.31.5 Growth/Development Trends

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

Table 9.31-11. Number of Building Permits for New Construction

Type of Development	2018		2019		2020		2021		2022	
Number of Building Permits for New Construction Issued Since the previous HMP* (total/within regulatory floodplain)										
	Total	Within SFHA	Total	Within SFHA	Total	Within SFHA	Total	Within SFHA	Total	Within SFHA
Single Family	0	0	0	0	2	0	0	0	1	0
Multi-Family	2	0	0	0	0	0	0	0	9	2





Type of Development	2018		2019		2020		2021		2022	
Other (commercial, mixed-use, etc.)	0	0	0	0	2	0	0	0	0	0
Total Permits Issued	2	0	0	0	4	0	0	0	10	2

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

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

Table 9.31-12. Recent and Expected Future Development

Property or Development Name	Type (e.g., Res., Comm.)	# of Units / Structures	Address and Parcel ID	Known Hazard Zone(s)	Description/Status of Development
Recent Major Development from 2019 to Present					
The Mill at Riverside	Residential	190	105 Delaware Ave	None	Townhouse and Apartment Complex $\frac{3}{4}$ constructed
Known or Anticipated Major Development in the Next Five (5) Years					
Watchcase	Mixed	64+	101 N. Pavilion Ave	None	Apartments – Design Phase
Camelot @ Riverside	Residential	150	515 N. Pavilion Ave	Flooding	Apartments – Awaiting Construction

## 9.31.6 Jurisdictional Risk Assessment

The hazard profiles in Volume 1, Section 4 (Risk Assessment) provide detailed information regarding each plan participant’s vulnerability to the identified hazards. Section 4.2 (Methodology) and Section 4.4 (Hazard Ranking) provide detailed summaries for the Township of Riverside’s risk assessment results and data used to determine the hazard ranking discussed later in this section.

Hazard area extent and location maps provided below illustrate the probable areas impacted within the jurisdiction based on the best available data at the time of the preparation of this plan and are adequate for planning purposes. Maps were generated only for those hazards that can be identified clearly using mapping techniques and technologies and for which the Township of Riverside has significant exposure. The maps also show the location of potential new development, where available.



Figure 9.31-1. Township of Riverside Flood and Sea Level Rise Hazard Area Extent and Location Map

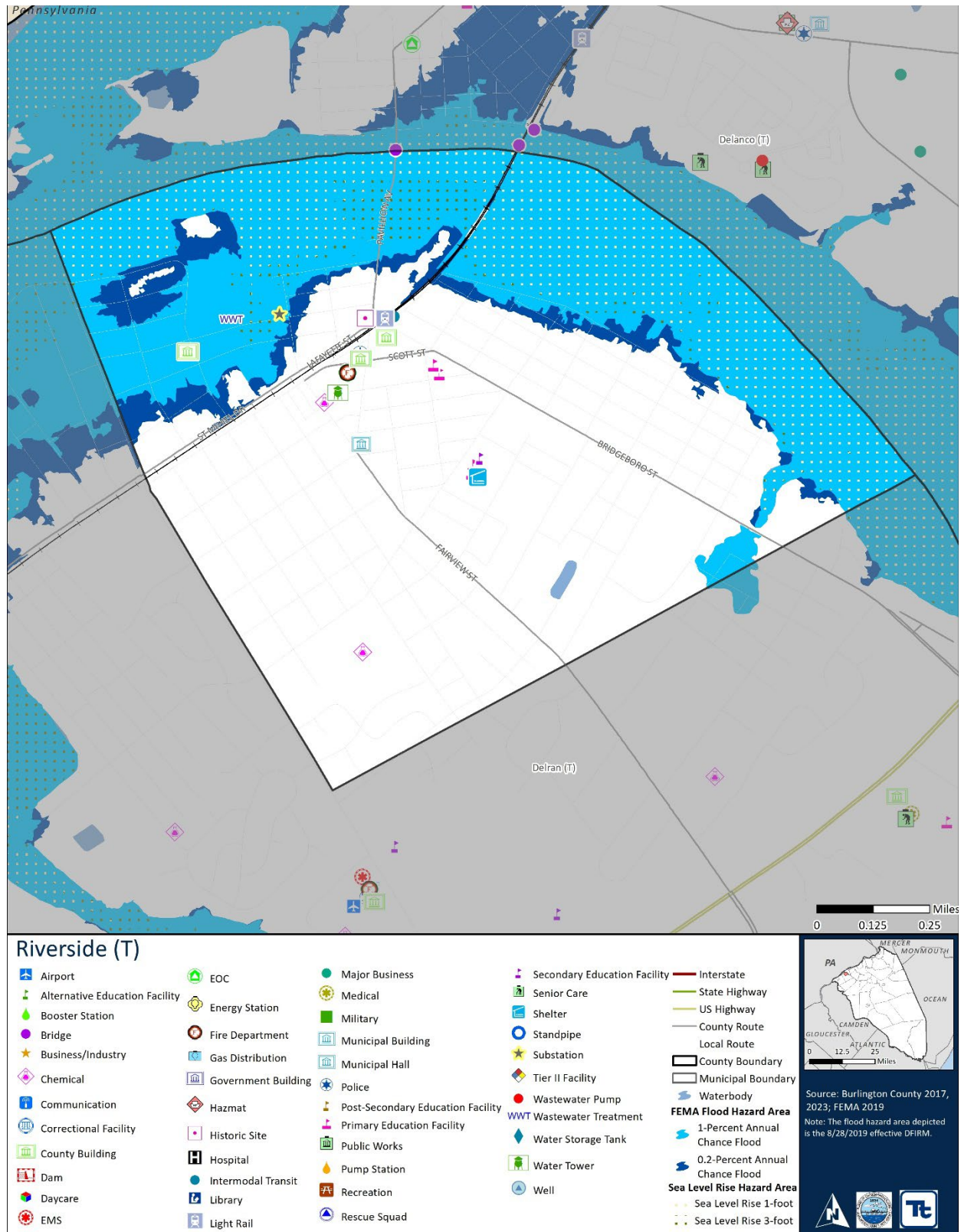
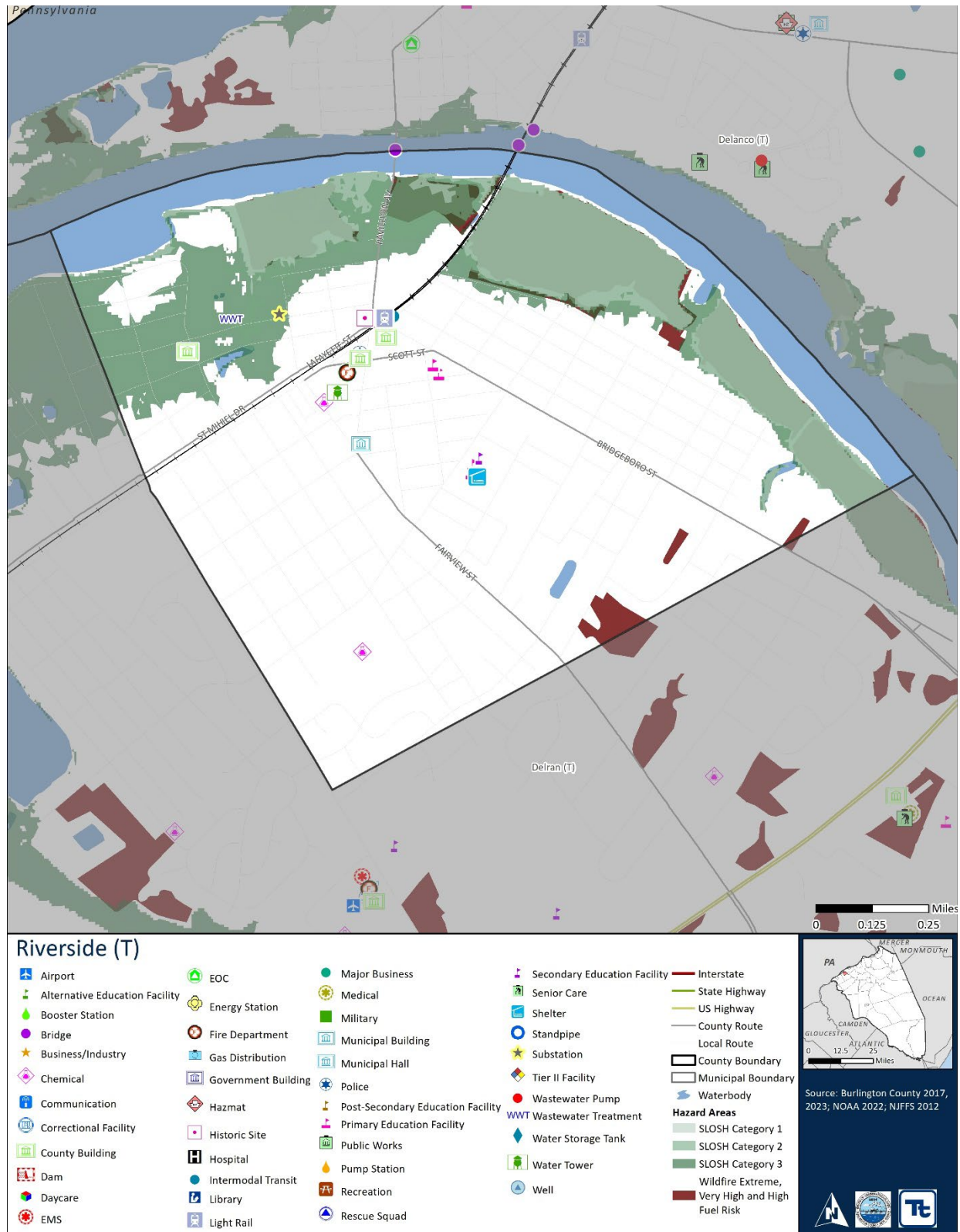




Figure 9.31-2. Township of Riverside SLOSH and Wildfire Hazard Area Extent and Location Map







## Hazard Event History

Burlington County has a history of natural and non-natural hazard events, as detailed in Volume I, Section 4 (Risk Assessment). 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 Riverside's history of federally declared (as presented by FEMA) and significant hazard events [as presented in NOAA-National Centers for Environmental Information (NCEI)] is consistent with that of the County. The table below provides details regarding municipal-specific loss and damages the Township of Riverside 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 9.31-13. Hazard Event History Since 2019

Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	Municipal Summary of Closures, Damages, and Losses
March 6-7, 2018	Severe Winter Storm (DR-4368)	Yes	Banding and thundersnow produced pockets of heavier snow in the western sections of the area, closer to the Delaware River. The snow contained large amounts of liquid, making it heavy and wet. This resulted in downed trees, limbs, and wires, leading to numerous power outages across portions of New Jersey.	Although the County was impacted, no damages or losses were incurred for this event within the Township.
May 29, 2019	Flash Flood	No	Strong to severe thunderstorms brought heavy rain; totals of 1 to 2 inches fell in a short amount of time. Widespread roadway flooding in Riverside and Delran. Many roads were impassable.	Widespread roadway flooding took place.
January 20, 2020 – May 11, 2023	Covid-19 Pandemic (EM-3451-NJ, DR-4488-NJ)	Yes	Burlington County accounted for 115,985 positive cases of COVID-19 in the State of New Jersey, and 1,265 of the reported deaths. A total of 991,269 vaccinations were delivered in the County to both residents and non-residents.	The Township was subject to closures and masking/social distancing requirements.
June 3-4, 2020	Thunderstorm Wind	No	A derecho developed then moved rapidly. The storm produced damaging winds more than 60 miles per hour. Numerous trees were downed in Willingboro, Beverly, Delran, Riverside,	Numerous trees were downed.



Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	Municipal Summary of Closures, Damages, and Losses
			Westampton, Burlington City, and Moorestown.	
July 12, 2021	Flash Flood	No	Thunderstorms brought locally heavy rain; rainfall totals up to 5 to 8 inches occurred prompting the issuance of a Flash Flood Emergency. Widespread roadway flooding occurred in Florence Township, Burlington City, Burlington Township, Edgewater Park, Beverly, Palmyra, Delanco, and Riverside causing numerous road closures.	The event resulted in damage to one home and several vehicles.
July 30, 2020	Thunderstorm Wind	No	Scattered thunderstorms, some of which became severe, produced several reports of damaging winds. Wires were downed in Riverside, Burlington City, Mansfield, and Bordentown.	Wires were downed.
August 4, 2020	Tropical Storm Isaias (DR-4574-NJ)	Yes	Tropical Storm Isaias brought high winds and heavy rain to Burlington County; some areas of the County reported more than 6 inches over several hours. Burlington County Central Communications fielded over 400 emergency calls and 1,400 non-emergency calls, many for flooded basements and residences.	Although the County was impacted, no damages or losses were incurred for this event within the Township.
September 1-3, 2021	Remnants of Hurricane Ida (EM-3573-NJ, DR-4614-NJ)	Yes	The remnants of Hurricane Ida produced heavy rainfall, flash floods, and a tornado (EF-1) that moved through Edgewater Park, Beverly, Burlington Township and Burlington City. Rainfall totals exceed 3 inches in parts of County; 4 water rescues occurred due to flash flooding.	Although the County was impacted, no damages or losses were incurred for this event within the Township.
August 8, 2022	Flash Flooding	No	Strong to severe storms brought heavy rain; totals of 3-4 inches fell in a short amount of time. Widespread roadway flooding in Riverside.	The event damaged several vehicles and garages.



Source: FEMA 2023, NOAA NCEI 2023

Notes:

DR Major Disaster Declaration (FEMA)

EM Emergency Declaration (FEMA)

FEMA Federal Emergency Management Agency

N/A Not applicable

## Hazard Ranking and Vulnerabilities

The hazard profiles in Volume 1, Section 4 (Risk Assessment) have detailed information regarding each plan participant's vulnerability to the identified hazards. The following summarizes the Township of Riverside'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 Volume 1, Section 4 (Risk Assessment). The ranking process involves an assessment of the likelihood of occurrence for each hazard; the potential impacts of the hazard on people, property, and the economy; and community capabilities to address the hazard and changing future climate conditions. Mitigation action development uses the inputs from the evaluation to target those hazards with highest level of concern.

As discussed in Volume 1, Section 4.4 (Hazard Ranking), each participating jurisdiction has differing degrees of risk exposure and vulnerability compared with the County as a whole. Therefore, each municipality ranked the degree of risk to each hazard as it pertains to their community. The table below summarizes the hazard risk/vulnerability rankings of potential natural hazards for the Township of Riverside. The Township of Riverside reviewed the County hazard risk/vulnerability risk ranking table and individual 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 of Riverside indicated the following:

- The Township increased the flood hazard to medium, noting the flooding in the Township is limited to the areas surrounding the Rancocas Creek; however, it is too impactful to leave as a low ranking.

Table 9.31-14. Hazard Ranking Input

Hazard	Hazard Ranking – High/Medium/Low
Dam Failure	Low
Disease Outbreak	Medium
Drought	Low
Earthquake	Low
Extreme Temperatures	Medium
Flood	Medium
Severe Weather	High
Severe Winter Weather	Medium
Wildfire	Low



## Critical Facilities

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

**Table 9.31-15. Potential Flood Exposure of Critical Facilities and Community Lifelines**

Name	Type	Exposure	
		1% Event	0.2% Event
201 - Riverside American Legion Post no146-WIC	County Building	Yes	Yes
PSE&G Substation	Substation	Yes	Yes
Riverside Sewerage Treatment Plant	Wastewater Treatment	Yes	Yes

Source: Burlington County 2023; Burlington County Planning Partnership 2023; FEMA 2019

The Township noted that it had worked with the operator of the PSE&G Substation to protect the structure from future damage.

## Identified Issues

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

- A recent audit of New Jersey's model ordinances by FEMA for conformance with NFIP, resulted in a review of existing local flood damage prevention ordinances. Based upon FEMA's review, specific language related to NFIP regulations was not consistent. Additionally, it was determined that better coordination was needed between the three sets of regulations that regulate development and construction in the floodplain. These regulations are: the NFIP implemented by local floodplain administrators, the New Jersey Flood Hazard Area Control Act (FHACA) implemented at the State level by the NJDEP, and the Uniform Construction Code (UCC) implemented by the local Construction Official. NJDEP used this feedback to develop a model Code Coordinated Ordinance and continues to work with municipalities to update flood damage prevention ordinances to the Code Coordinated Ordinance.
- Major disaster events can result in large amounts of debris that overwhelm normal trash collection operations. Depending on the amount generated, temporary staging areas for debris collection may be needed. The municipality does not have a disaster debris management plan in place. During a disaster that results in debris, the municipality A plan with outlined responsibilities is needed to adequately address post-disaster cleanup operations.
- The municipality does not have a Substantial Damage Management Plan in place, nor do they have a formal process in place when conducting substantial damage determinations. The municipality is in need of a formal process and plan to provide a framework for conducting such inspections and determinations.





- The Township Hall lacks a backup power source.
- Greenwood Avenue, Grant Street, and Arndt Avenue and have been eroded due to repetitive flooding.
- Although the Township has flood exposure, the Township does not participate in the Community Rating System (CRS) program. Flood insurance premiums continue to rise.
- Residents and businesses in the Township may not be aware of how to safely prepare for or mitigate the various hazards which may impact them in the Township.
- The National Weather Service (NWS) provides a certification called StormReady to locales that adopt certain weather preparedness principles and planning. The Township does not participate in NOAA's StormReady program.
- 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 4 repetitive loss properties, but other properties may be impacted by flooding as well.
- Critical facilities located in the floodplain are not only susceptible to flood damage but also create unnecessary complications for the municipality during an emergency event and post-disaster recovery.
- The Township's flood-prone areas are along the Rancocas Creek. The Township has attempted multiple stormwater management practices to no avail. The Township recognizes it may need the assistance of the United States Army Corp of Engineers (USACE) to assist in this larger issue surrounding the Creek bed.
- The Township is unaware of the greater socially vulnerable populations in the jurisdiction.
- The Township's Emergency Operations Plan is going to expire at the end of 2024.
- The Township's Emergency Operation Plan is set to expire this year.
- The municipalities along the U.S. Route 130 corridor in Burlington County are impacted primarily by riverine flooding that may be worsened by climate change. These communities along the Delaware River and its tributaries, including the Rancocas, Assiscunk, and Pompeston creeks, are frequently impacted by severe flooding events. A joint regional climate change resilience planning effort is needed to assess future risks and identify local and regional solutions.

### 9.31.7 Mitigation Strategy and Prioritization

This section discusses past mitigations actions and status, describes proposed hazard mitigation initiatives, and prioritizes actions to address over the next five years.

#### Past Mitigation Initiative Status

The following table indicates progress on the community's mitigation strategy identified in the 2019 HMP. Actions that are in progress are carried forward and combined with new actions as part of this plan update and are included in the tables with prioritization. Previous actions that are now on-going programs and capabilities are indicated as such and previously presented in the 'Capability Assessment' earlier in this annex.



Table 9.31-16. Status of Previous Mitigation Actions

Project #	Project	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 2024 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.
T. Riverside – 1 (former RS-1)	Incorporate ordinances and/or zoning restrictions to control and mitigate future development in hazard areas.	Municipality with support from County, NJOEM and FEMA	Completed  Incorporated into ordinances and restrictions.	No	-	-
T. Riverside – 2 (former RS-3)	Obtain and install backup power sources at critical facilities.	Municipality with support from County, NJOEM and FEMA	In Progress  Financial constraints have prevented this action from being completed.	Yes	The Township Hall lacks a backup power source.	Municipality with support from County, NJOEM and FEMA
T. Riverside – 3 (former RS-6)	Perform base repairs on Greenwood Avenue, Hooker Street, Grant Street, Arndt Avenue and Delaware Avenue, which have been eroded due to repetitive flooding.	Municipality (via Municipal Engineer/NFIP Floodplain Administrator) with support from NJOEM, FEMA	Greenwood In Progress Hooker Completed Grant Street In Progress Delaware Complete  Financial constraints have prevented this action from being fully completed.	Yes	Greenwood Avenue, Grant Street, and Arndt Avenue and have been eroded due to repetitive flooding.	Municipality (via Municipal Engineer/NFIP Floodplain Administrator) with support from NJOEM, FEMA
T. Riverside – 4 (former RS-7)	Obtain and archive elevation certificates	NFIP Floodplain Administrator	Ongoing Capability  Regular task for FPA	No	-	-
T. Riverside – 5 (former RS-10)	Provide public education and outreach on proper installation and/or use of backup power	Municipal Clerk	Ongoing Capability  Public education and outreach is performed regularly.	No	-	-
T. Riverside – 6 (former RS-11)	Implement, review, and enforce municipal policies and programs to prevent trees from threatening lives	Municipal Code Enforcement	Ongoing Capability	No	-	-



Project #	Project	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 2024 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.
	and impacting power availability/interruption.		Vegetation maintenance performed as needed in the Township.			
T. Riverside – 7 (former RS-12)	Evaluate benefits of participating in CRS program	Twp. Committee, Planning, OEM, Floodplain Adm.	In Progress Township is evaluating the benefits.	Yes	Although the Township has flood exposure, the Township does not participate in the Community Rating System (CRS) program. Flood insurance premiums continue to rise.	Twp. Committee, Planning, OEM, Floodplain Adm.
T. Riverside – 8 (former RS-13)	Conduct and facilitate community and public education and outreach for residents and businesses to promote natural hazard risk reduction to include: <ul style="list-style-type: none"> <li>Disaster preparedness</li> <li>Hazard mitigation</li> </ul>	Municipality with support from Planning Partners, County Planning, NJOEM, FEMA	In Progress Materials being creating for outreach.	Yes	Residents and businesses in the Township may not be aware of how to safely prepare for or mitigate the various hazards which may impact them in the Township.	Municipality with support from Planning Partners, County Planning, NJOEM, FEMA
T. Riverside – 9 (former RS-15)	Enhance community resilience to severe storms (incl. severe winter storms) by joining the NOAA “Storm Ready” program.	Municipality with support from County, NJOEM and FEMA	In Progress Township is evaluating the benefits.	Yes	The National Weather Service (NWS) provides a certification called StormReady to locales that adopt certain weather preparedness principles and planning. The Township does not participate in NOAA’s StormReady program.	Municipality with support from County, NJOEM and FEMA



Project #	Project	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 2024 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.
T. Riverside – 10	The Township will continue to promote and support non-structural flood hazard mitigation alternatives for at risk properties within the floodplain, including those that have been identified as Repetitive Loss (RL) and Severe Repetitive Loss (SRL), such as acquisition/relocation or elevation depending on feasibility. The parameters for this initiative would be funding, benefits versus cost, and willing participation of property owners	Municipality	In Progress  Township is inquiring with identified homeowners.	Yes	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 4 repetitive loss properties, but other properties may be impacted by flooding as well.	Municipality
T. Riverside – 11	Require new developments to provide mitigation to ensure that the cumulative rate of peak runoff is maintained at pre-development levels	Municipality	Ongoing Capability  Township requirement.	No	-	-
T. Riverside – 12	Coordinate with the facility manager at the Riverside American Legion Post No. 146-WIC to support the mitigation of vulnerable structures via retrofit (e.g. elevation, flood-proofing) or relocation to protect structures from future damage.  Phase 1: Identify most cost-effective mitigation option  Phase 2: Work with facility manager to implement selected action based on available funding and local match ability.	Municipality with support from American Legion	No Progress  Communications with the Legion Post have not been made.	Yes	Critical facilities located in the floodplain are not only susceptible to flood damage but also create unnecessary complications for the municipality during an emergency event and post-disaster recovery.	Municipality with support from American Legion



Project #	Project	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 2024 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.
T. Riverside - 13	Coordinate with the facilities manager at the PSE&G Substation to support the mitigation of vulnerable structures via retrofit (e.g. elevation, flood-proofing) or relocation to protect structures from future damage. Phase 1: Identify most cost-effective mitigation option Phase 2: Work with facility manager to implement selected action based on available funding and local match ability.	Municipality with support from PSE&G Substation operator	Completed  Communications with the operator has been made.	No	-	-
T. Riverside - 14	Coordinate with the facilities manager at the Riverside Sewerage Treatment Plant to support the mitigation of vulnerable structures via retrofit (e.g. elevation, flood-proofing) or relocation to protect structures from future damage. Phase 1: Identify most cost-effective mitigation option Phase 2: Work with facility manager to implement selected action based on available funding and local match ability.	Municipality with support from Sewerage Treatment Plant operators	In Progress  Communications with the Treatment Plant have begun. Mitigation efforts being assessed.	Yes	Critical facilities located in the floodplain are not only susceptible to flood damage but also create unnecessary complications for the municipality during an emergency event and post-disaster recovery.	Municipality with support from Sewerage Treatment Plant operators



## Additional Mitigation Efforts

In addition to the mitigation initiatives completed in the table above, the Township of Riverside identified the following mitigation efforts completed since the last HMP:

- Annual replacement program for drainage improvements.
- Annual roadway program to improve infrastructure and address drainage issues.
- Actively seeking training for the Township's first responders and floodplain administration staff.

Since the adoption of the County's first HMP, the Township of Riverside has made significant mitigation progress in the following areas:

- Stormwater Management
- Staff Training

## Proposed Hazard Mitigation Initiatives for the HMP Update

The Township of Riverside participated in a mitigation action workshop in October 2023 and was 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 Flood prone 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. Both the four FEMA mitigation action categories and the six CRS mitigation action categories are listed in the table to further demonstrate the wide range of activities and mitigation measures selected.

Table 9.31-17. Analysis of Mitigation Actions by Hazard and Category

Hazard	FEMA						CRS			
	LPR	SIP	NSP	EAP	PR	PP	PI	NR	SP	ES
Dam Failure	X	X		X	X		X		X	X
Disease Outbreak	X	X		X	X		X		X	
Drought	X	X		X	X		X		X	X
Earthquake	X	X		X	X		X		X	X
Extreme Temperatures	X	X		X	X		X		X	X
Flood	X	X		X	X	X	X		X	X
Severe Weather	X	X		X	X	X	X		X	X
Severe Winter Weather	X	X		X	X		X		X	X
Wildfire	X	X		X	X		X		X	X

Note: Mitigation categories are described below the Mitigation Initiatives.



The following pages list the specific mitigation initiatives Township of Riverside would like to pursue in the future to reduce the effects of hazards. The 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 Township priorities.





### Action 2024-Riverside-01. Code Coordinated Ordinance

<b>Lead Agency:</b>	Floodplain Administrator
<b>Supporting Agencies:</b>	Construction Official, Administration, NFIP State Coordinator, FEMA Regional Office
<b>Hazard(s) of Concern:</b>	Flood
<b>Description of the Problem:</b>	A recent audit of New Jersey's model ordinances by FEMA for conformance with NFIP, resulted in a review of existing local flood damage prevention ordinances. Based upon FEMA's review, specific language related to NFIP regulations was not consistent. Additionally, it was determined that better coordination was needed between the three sets of regulations that regulate development and construction in the floodplain. These regulations are: the NFIP implemented by local floodplain administrators, the New Jersey Flood Hazard Area Control Act (FHACA) implemented at the State level by the NJDEP, and the Uniform Construction Code (UCC) implemented by the local Construction Official. NJDEP used this feedback to develop a model Code Coordinated Ordinance and continues to work with municipalities to update flood damage prevention ordinances to the Code Coordinated Ordinance.
<b>Description of the Solution:</b>	After obtaining the appropriate review and concurrence by the NFIP State Coordinator and the FEMA Regional Office, the municipality will update and adopt the Code Coordinated Ordinance.
<b>Estimated Cost:</b>	Staff time
<b>Potential Funding Sources:</b>	Municipal budget
<b>Implementation Timeline:</b>	Within 5 years
<b>Goals Met:</b>	1, 2, 5,7
<b>Benefits:</b>	The updated ordinance will improve floodplain management, meet NFIP requirements, and increase resilience of new and substantially improved structures in the floodplain.
<b>Impact on Socially Vulnerable Populations:</b>	The action will result in better regulation of construction standards within the Special Flood Hazard Area where significant risk to socially vulnerable populations exists.
<b>Impact on Future Development:</b>	The action will result in stronger regulation of construction standards for future development in the Special Flood Hazard Area.
<b>Impact on Critical Facilities/Lifelines:</b>	Critical facilities and lifelines located in the Special Flood Hazard Area will be required to meet the same requirements as general building construction that are set forth in the ordinance.
<b>Impact on Capabilities:</b>	This action will improve floodplain management capabilities through better outlining of responsibilities and administrative procedures.
<b>Climate Change Considerations:</b>	The updated ordinance includes the State's higher standards that are in place to address heightened flood risk due to climate change such as



	those for floodway rise and mandatory freeboard have been incorporated in these new model ordinances.	
Mitigation Category:	Local Plans and Regulations	
CRS Category:	Preventative	
Priority:	High	
Alternatives:	Action	Evaluation
	No Action	Current problem exists
	Modify existing flood damage prevention ordinance	Time intensive
	Leave NFIP	Residents lose flood insurance coverage



### Action 2024-Riverside-02. Disaster Debris Management Plan

<b>Lead Agency:</b>	Public Works	
<b>Supporting Agencies:</b>	OEM	
<b>Hazard(s) of Concern:</b>	Dam Failure, Drought, Earthquake, Extreme Temperature, Flood, Severe Weather, Severe Winter Weather, Wildfire	
<b>Description of the Problem:</b>	Major disaster events can result in large amounts of debris that overwhelm normal trash collection operations. Depending on the amount generated, temporary staging areas for debris collection may be needed. The municipality does not have a disaster debris management plan in place. During a disaster that results in debris, the municipality A plan with outlined responsibilities is needed to adequately address post-disaster cleanup operations.	
<b>Description of the Solution:</b>	The municipality will develop a disaster debris management plan. This plan will establish procedures and guidelines for managing disaster debris in a coordinated, environmentally responsible, and cost-effective manner. The plan will identify responsibilities for execution of the plan. The plan will align with permitted temporary collection areas.	
<b>Estimated Cost:</b>	Staff time	
<b>Potential Funding Sources:</b>	Municipal budget	
<b>Implementation Timeline:</b>	Within 5 years	
<b>Goals:</b>	5, 6	
<b>Benefits:</b>	The action will result in increased quicker and more efficient cleanup after disaster events.	
<b>Impact on Socially Vulnerable Populations:</b>	N/A	
<b>Impact on Future Development:</b>	N/A	
<b>Impact on Critical Facilities/Lifelines:</b>	N/A	
<b>Impact on Capabilities:</b>	The action will result in increased post disaster capabilities.	
<b>Climate Change Considerations:</b>	Climate change may result in an increase in the frequency and severity of weather-related disaster events. This action will increase the capabilities to respond to these events.	
<b>Mitigation Category:</b>	Local Plans and Regulations	
<b>CRS Category:</b>	Emergency Services	
<b>Priority:</b>	High	
<b>Alternatives:</b>	<b>Action</b>	<b>Evaluation</b>
	No Action	-



	Rely on federal cleanup	These services may or may not be available
	Rely on state cleanup	These services may or may not be available



### Action 2024-Riverside-03. Substantial Damage Management Plan

<b>Lead Agency:</b>	Floodplain Administrator
<b>Supporting Agencies:</b>	Public Works, OEM, Construction Department
<b>Hazard(s) of Concern:</b>	Dam Failure, Drought, Earthquake, Extreme Temperature, Flood, Severe Weather, Severe Winter Weather, Wildfire
<b>Description of the Problem:</b>	<p>Officials in NFIP-participating communities are responsible for regulating all development in SFHAs by issuing permits and enforcing local floodplain requirements, including Substantial Damage, for the repairs of damaged buildings. After any disaster event, they must:</p> <ul style="list-style-type: none"><li>• Determine where the damage occurred within the community and if the damaged structures are in an SFHA.</li><li>• Determine what to use for "market value" and cost to repair; uniformly applying regulations will protect against liability and promote equitable administration.</li><li>• Determine if repairing plus improving the damaged structure equals or exceeds 50% of the structure's pre-damage value.</li><li>• Require permits for floodplain development.</li></ul> <p>The municipality does not have a Substantial Damage Management Plan in place, nor do they have a formal process in place when conducting substantial damage determinations. The municipality is in need of a formal process and plan to provide a framework for conducting such inspections and determinations.</p>
<b>Description of the Solution:</b>	<p>The municipality will develop a Substantial Damage Management Plan, following the six step planning process in 2021 <i>Developing a Substantial Damage Management Plan</i> (<a href="https://crsresources.org/files/500/developing_subst_damage_mgmt_plan.pdf">https://crsresources.org/files/500/developing_subst_damage_mgmt_plan.pdf</a>). This plan will outline responsibilities for Substantial Damage determinations, determining market value, and permit approval processes following a disaster event.</p>
<b>Estimated Cost:</b>	Low
<b>Potential Funding Sources:</b>	Municipal budget
<b>Implementation Timeline:</b>	Within 5 years to develop the plan; ongoing to maintain and update the plan
<b>Goals Met:</b>	1, 2, 5, 7
<b>Benefits:</b>	This plan will provide a process in making Substantial Damage Determinations and allow the municipality to make these determinations and meet NFIP requirements more quickly.
<b>Impact on Socially Vulnerable Populations:</b>	Substantially damaged structures are required to be rebuilt to be compliance with current codes. Socially vulnerable populations may not have the financial means to make these improvements. This action may allow for the identification of potential resources to address substantial damages to structures owned by socially vulnerable populations.



<b>Impact on Future Development:</b>	A Substantial Damage Management Plan would include all existing, current, and future development in the municipality.	
<b>Impact on Critical Facilities/Lifelines:</b>	A Substantial Damage Management Plan would include all critical facilities and lifelines in the municipality.	
<b>Impact on Capabilities:</b>	This action improves disaster recovery capabilities.	
<b>Climate Change Considerations:</b>	Climate change is likely to increase the intensity and frequency of many climate related disaster events. This action provides additional planning for disaster recovery.	
<b>Mitigation Category:</b>	Local Plans and Regulations	
<b>CRS Category:</b>	Emergency Services, Preventative	
<b>Priority:</b>	High	
<b>Alternatives:</b>	<b>Action</b>	<b>Evaluation</b>
	No Action	-
	Rely on state or federal resources following disaster events	Resources may not be available during major widespread events
	Establish MOUs with outside agencies to conduct Substantial Damage Determinations	A plan outlining responsibilities is still necessary to prevent missing important requirements



### Action 2024-Riverside-04. Generators at Critical Facilities

<b>Lead Agency:</b>	Township Administration	
<b>Supporting Agencies:</b>	County, NJOEM and FEMA	
<b>Hazard(s) of Concern:</b>	Dam Failure, Disease Outbreak, Drought, Earthquake, Extreme Temperature, Flood, Severe Weather, Severe Winter Weather, Wildfire	
<b>Description of the Problem:</b>	The Township Hall, a critical facility, lacks a back-up power source.	
<b>Description of the Solution:</b>	The Township will obtain and install backup power sources (generators) at the Township Hall to ensure continuation of critical functions during power outages.	
<b>Estimated Cost:</b>	High	
<b>Potential Funding Sources:</b>	HMGP, BRIC, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Municipal Budget	
<b>Implementation Timeline:</b>	5 years	
<b>Goals Met:</b>	1, 6, 7	
<b>Benefits:</b>	This action protects public health and safety and ensures continued operation of a critical facility and its essential functions during a power outage.	
<b>Impact on Socially Vulnerable Populations:</b>	Protection of critical facilities provides an opportunity for first responders, utility workers, and emergency managers to stage and deploy resources to vulnerable and hazard prone areas.	
<b>Impact on Future Development:</b>	This action results in protection of a critical facility that could support future development.	
<b>Impact on Critical Facilities/Lifelines:</b>	This action protects public health and safety and ensures continued operation of a critical facility and its essential functions during a power outage.	
<b>Impact on Capabilities:</b>	This action ensures continuity of operations to maintain capabilities.	
<b>Climate Change Considerations:</b>	Climate change is likely to increase severe weather events such as flooding, wind, and extreme temperatures that result in power failures. This action accounts for a likely increase in power failure events.	
<b>Mitigation Category</b>	Structure and Infrastructure Project	
<b>CRS Category</b>	Emergency Services	
<b>Priority</b>	Medium	
<b>Alternatives:</b>	<b>Action</b>	<b>Evaluation</b>
	No Action	Current problem continues
	Solar Panels	Weather dependent and costly
	Mobile Generator	May lack sufficient power supply or run time





### Action 2024-Riverside-05. Roadway Base Repairs

<b>Lead Agency:</b>	Municipal Engineer/NFIP Floodplain Administrator	
<b>Supporting Agencies:</b>	NJOEM, FEMA	
<b>Hazard(s) of Concern:</b>	Flood, Severe Weather	
<b>Description of the Problem:</b>	Greenwood Avenue, Grant Street, and Arndt Avenue and have been eroded due to repetitive flooding.	
<b>Description of the Solution:</b>	Greenwood Avenue, Grant Street, and Arndt Avenue will have base repairs performed. Opportunities to reduce future erosion will be investigated during the repair process. Cost effective measures will be implemented.	
<b>Estimated Cost:</b>	High	
<b>Potential Funding Sources:</b>	FEMA BRIC, HMGP, Municipal Budget	
<b>Implementation Timeline:</b>	5 years	
<b>Goals Met:</b>	2	
<b>Benefits:</b>	Performing base repairs will result in the achievement of the desired load-bearing capacity and absorb traffic loads so that the underlying subgrade is not deformed.	
<b>Impact on Socially Vulnerable Populations:</b>	N/A	
<b>Impact on Future Development:</b>	N/A	
<b>Impact on Critical Facilities/Lifelines:</b>	N/A	
<b>Impact on Capabilities:</b>	N/A	
<b>Climate Change Considerations:</b>	The projected increase in heavy rains could result in the infiltration of water into any porous openings of new roadways. Furthermore, the forecasted increase in severe weather could cause an increase in erosion, potentially leading to the same repairs needing to be performed.	
<b>Mitigation Category</b>	Structure and Infrastructure Project	
<b>CRS Category</b>	Structural Flood Control Projects	
<b>Priority</b>	Medium	
<b>Alternatives:</b>	<b>Action</b>	<b>Evaluation</b>
	No action	Current problem remains
	Elevate roadways	Cost prohibitive
	Only complete repairs	Problem will remain and reoccur in future events



### Action 2024-Riverside-06. CRS Program Participation

<b>Lead Agency:</b>	Floodplain Administrator	
<b>Supporting Agencies:</b>	OEM, Township Committee	
<b>Hazard(s) of Concern:</b>	Flood	
<b>Description of the Problem:</b>	Although the Township has flood exposure, the Township does not participate in the Community Rating System (CRS) program. Flood insurance premiums continue to rise.	
<b>Description of the Solution:</b>	The Township will evaluate the benefits and costs of participating in CRS program. If feasible, the Township will join the program and begin implementing standards that exceed NFIP requirements.	
<b>Estimated Cost:</b>	Low	
<b>Potential Funding Sources:</b>	Municipal Budget	
<b>Implementation Timeline:</b>	2 years	
<b>Goals Met:</b>	2, 5	
<b>Benefits:</b>	The participation in the Community Rating System (CRS) benefits communities by offering discounted rates for flood insurance premiums, which addresses the three goals of the program: reduce and avoid flood damage to insurable property, strengthen and support the insurance aspects of the National Flood Insurance Program, and foster comprehensive floodplain management.	
<b>Impact on Socially Vulnerable Populations:</b>	The participation in the Community Rating System (CRS) benefits communities by offering discounted rates for flood insurance premiums, which may be more affordable for some socially vulnerable populations.	
<b>Impact on Future Development:</b>	Future development would need to adhere to any increased standards established as part of joining the CRS program such as increased freeboard and elevation certificate requirements.	
<b>Impact on Critical Facilities/Lifelines:</b>	N/A	
<b>Impact on Capabilities:</b>	This action would enhance the Township's floodplain management capabilities.	
<b>Climate Change Considerations:</b>	A warmer atmosphere means storms have the potential to be more intense and occur more often, including increased periods of intense rain events. As sea level rises due to climate change, the area of the flood hazard may expand. These changes are likely to increase flood risks.	
<b>Mitigation Category</b>	Education and Awareness Programs	
<b>CRS Category</b>	Public Information	
<b>Priority</b>	Medium	
<b>Alternatives:</b>	<b>Action</b>	<b>Evaluation</b>



	No action	The Township does not participate in the CRS Program
	Adopt aspects of the CRS program into the floodplain management program	Increased floodplain management capabilities but no reduction in flood insurance premiums
	Abandon any floodplain management practices not required by NFIP	Reduction in floodplain management capabilities and increase in risk.



### Action 2024-Riverside-07. Public Education and Outreach

<b>Lead Agency:</b>	Township Administration
<b>Supporting Agencies:</b>	OEM
<b>Hazard(s) of Concern:</b>	Dam Failure, Disease Outbreak, Drought, Earthquake, Extreme Temperature, Flood, Severe Weather, Severe Winter Weather, Wildfire
<b>Description of the Problem:</b>	Residents and businesses in the Township, may not be aware of how to safely prepare for or mitigate the various hazards which may impact them in the Township.
<b>Description of the Solution:</b>	Conduct and facilitate community and public education and outreach for residents and businesses to promote natural hazard risk reduction to include disaster preparedness and hazard mitigation. Methods of distribution may include Township events, the Township newsletter, social media, the Township website, and having the materials on display for the public at Township libraries and offices.
<b>Estimated Cost:</b>	Low
<b>Potential Funding Sources:</b>	Municipal Budget
<b>Implementation Timeline:</b>	1 year
<b>Goals Met:</b>	1, 2, 3, 5, 7
<b>Benefits:</b>	This action will improve the current public education and outreach program in the Township by including discussions on disaster preparedness and hazard mitigation to residents and business owners, which will contribute to the resiliency of the Township.
<b>Impact on Socially Vulnerable Populations:</b>	Socially vulnerable populations will learn how to prepare for and mitigate the various hazards which may impact them in the Township.
<b>Impact on Future Development:</b>	N/A
<b>Impact on Critical Facilities/Lifelines:</b>	Businesses, which may be considered critical facilities or lifelines, would be more informed on how to prepare for emergency events and mitigate the risks of potential hazards. With these businesses becoming more resilient, this action would contribute to their continuity of operations.  With increased public education, the need for emergency response during hazard events may be reduced as the public avoids high risk areas and protect their homes.
<b>Impact on Capabilities:</b>	This action would build upon the Township's already existing public education and outreach program.
<b>Climate Change Considerations:</b>	Climate change is likely to increase the intensity and frequency of many climate related disaster events. This action will inform residents and business owners of how to reduce risk from hazards and how climate change may exacerbate those risks.
<b>Mitigation Category</b>	Education and Awareness Programs



CRS Category	Public Information	
Priority	High	
Alternatives:	Action	Evaluation
	No action	Current methods remain the only ones used
	Rely on state or federal resources	Resources may be generalized and not specific to the risks in the Township
	Use only a few methods for distribution	Using only a few methods of distribution may hinder socially vulnerable populations from receiving the guidance



### Action 2024-Riverside-08. Storm Ready Program

<b>Lead Agency:</b>	Township OEM
<b>Supporting Agencies:</b>	County, NJOEM
<b>Hazard(s) of Concern:</b>	Severe Weather
<b>Description of the Problem:</b>	The National Weather Service (NWS) provides a certification called StormReady to locales that adopt certain weather preparedness principles and planning. The Township does not participate in NOAA's Storm Ready program.
<b>Description of the Solution:</b>	The Township will coordinate with the local NWS office to complete all necessary requirements to become a StormReady community.
<b>Estimated Cost:</b>	Low
<b>Potential Funding Sources:</b>	Municipal Budget
<b>Implementation Timeline:</b>	3 years
<b>Goals Met:</b>	1, 2, 3, 5
<b>Benefits:</b>	StormReady is a nationwide program that helps communities better protect their citizens during severe weather. The program encourages communities to take a proactive approach to improving local hazardous weather operations. StormReady provides emergency managers with clear-cut guidelines on how to improve their hazardous weather operations. Community Rating System (CRS) points will become available that can reduce flood insurance premiums for home and business owners.
<b>Impact on Socially Vulnerable Populations:</b>	To become a participant in the StormReady program, a community must have more than one way to receive severe weather warnings and forecasts and to alert the public. Increasing methods of communication to socially vulnerable populations can assist in the safety and security of residents.
<b>Impact on Future Development:</b>	This action will result in increased warning system capabilities for all current and future development.
<b>Impact on Critical Facilities/Lifelines:</b>	Being a part of the StormReady program would result in improved critical facility readiness.
<b>Impact on Capabilities:</b>	Participating in the StormReady program will increase the capabilities of the Township. To become a participant in the program, a community must establish a 24-hour warning point and emergency operations center, have more than one way to receive severe weather warnings and forecasts and to alert the public, create a system that monitors weather conditions locally, promote the importance of public readiness through community seminars, and develop a formal hazardous weather plan, which includes training severe weather spotters and holding emergency exercises.



Climate Change Considerations:	Climate change is likely to increase the intensity and frequency of many climate related disaster events.	
Mitigation Category	Local Plans and Regulations, Education and Awareness Programs	
CRS Category	Emergency Services, Preventative Measures	
Priority	High	
Alternatives:	Action	Evaluation
	No Action	The Township does not participate in the Storm Ready Program
	Complete half of the program requirements	The Township would not be eligible to participate in the Storm Ready Program
	Participate in the program, but do not utilize resources	The Township would miss opportunities to strengthen communication and safety skills





### Action 2024-Riverside-09. Flood Hazard Mitigation

<b>Lead Agency:</b>	Township Administration
<b>Supporting Agencies:</b>	County, NJOEM
<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 4 repetitive loss properties, but other properties may be impacted by flooding as well.
<b>Description of the Solution:</b>	Conduct outreach to 15 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>Estimated Cost:</b>	Medium
<b>Potential Funding Sources:</b>	FEMA FMA, FMA SWIFT, NJDEP Green Acres, NJDEP Blue Acres, Municipal Budget
<b>Implementation Timeline:</b>	3 years
<b>Goals Met:</b>	2, 3, 5, 7
<b>Benefits:</b>	Eliminates flood damage to homes and residences, which creating an open space for the municipality and increasing flood storage.
<b>Impact on Socially Vulnerable Populations:</b>	Removing homes from the floodplain immediately removes the risk to life and property. Socially vulnerable populations may be able to have houses elevated or acquired when it would otherwise be unaffordable.
<b>Impact on Future Development:</b>	Increased outreach to homeowners within a flood prone area will limit construction in areas that are prone to hazard events. Homes may be acquired, which will remove those structures from the floodplain and prevent future development on those sites.
<b>Impact on Critical Facilities/Lifelines:</b>	Removing structures from the floodplain decreases the demand on utilities and emergency services including health and medical, law enforcement, and search and rescue.
<b>Impact on Capabilities:</b>	Removing the risk from the immediate floodplain via acquisition of properties will free up resources for search and rescue and other emergency operations as needed.
<b>Climate Change Considerations:</b>	Climate change is likely to increase the frequency and severity of severe rainfall, flash flooding, riverine flooding, and coastal flooding from sea level rise and storm surge events. Removing structures from the floodplain will reduce the response and recovery costs as a result of these events, and decrease the loss of human life as a result of these events.



	Elevating structures will reduce the recovery costs as a result of these events.	
Mitigation Category	Structure and Infrastructure Project	
CRS Category	Property Protection	
Priority	Medium	
Alternatives:	Action	Evaluation
	No action	Current problem continues
	Levee around floodplain	Costly, not enough room
	Deployable flood barriers	Requires deployment. Residents may not have adequate time to deploy, especially those who are elderly or disabled.



### Action 2024-Riverside-10. Critical Facilities and Community Lifelines in the Floodplain

<b>Lead Agency:</b>	Township Administration
<b>Supporting Agencies:</b>	OEM, facility managers
<b>Hazard(s) of Concern:</b>	Flood
<b>Description of the Problem:</b>	Critical facilities located in the floodplain are not only susceptible to flood damage but also create unnecessary complications for the municipality during an emergency event and post-disaster recovery.
<b>Description of the Solution:</b>	<p>Coordinate with the facility manager at the Riverside American Legion Post No. 146-WIC and the Riverside Sewerage Treatment Plant to support the mitigation of vulnerable structures via retrofit (e.g. elevation, flood-proofing) or relocation to protect structures from future damage.</p> <p>Phase 1: Identify most cost-effective mitigation option</p> <p>Phase 2: Work with facility manager to implement selected action based on available funding and local match ability.</p>
<b>Estimated Cost:</b>	High
<b>Potential Funding Sources:</b>	FEMA BRIC, HMGP, Municipal Budget
<b>Implementation Timeline:</b>	5 years
<b>Goals Met:</b>	2
<b>Benefits:</b>	This action will remove or reduce critical facility and community lifeline vulnerability to the flood hazard and remove or reduce safety risks for first responders.
<b>Impact on Socially Vulnerable Populations:</b>	Retrofitting or relocating the identified structures will benefit socially vulnerable populations, as individuals within these populations rely on resources from various government facilities, transportation facilities, and medical and senior care facilities.
<b>Impact on Future Development:</b>	Noting the number of facilities located within the flood hazard area may encourage the consideration of relocating critical facilities and lifelines from the flood hazard area and deter the development of any additional facilities in the flood hazard area.
<b>Impact on Critical Facilities/Lifelines:</b>	Noting the number of facilities located within the flood hazard area may encourage the consideration of relocating critical facilities and lifelines from the flood hazard area and deter the development of any additional facilities in the flood hazard area.
<b>Impact on Capabilities:</b>	N/A
<b>Climate Change Considerations:</b>	A warmer atmosphere means storms have the potential to be more intense and occur more often, including increased periods of intense rain events. As sea level rises due to climate change, the area of the flood hazard may expand.
<b>Mitigation Category</b>	Structure and Infrastructure Project



CRS Category	Structural Flood Control Projects	
Priority	Medium	
Alternatives:	Action	Evaluation
	No action	Current problem continues
	Floodproof existing structures	May not necessarily reduce risk
	Construct floodwalls to stop flood issues	Will most likely interrupt natural floodplain function



### Action 2024-Riverside-11. Rancocas Creek Flood Mitigation

<b>Lead Agency:</b>	Engineering	
<b>Supporting Agencies:</b>	Township Administration, County, USACE, NJOEM, FEMA	
<b>Hazard(s) of Concern:</b>	Flood	
<b>Description of the Problem:</b>	The Township's flood-prone areas are along the Rancocas Creek. The Township has attempted multiple stormwater management practices to no avail. The Township recognizes it may need the assistance of the United States Army Corp of Engineers (USACE) to assist in this larger issue surrounding the Creek bed.	
<b>Description of the Solution:</b>	The Township will work with USACE to identify feasible mitigation measures to provide relief from flooding impacts caused by the Rancocas Creek. The Township will support cost effective mitigation measures identified.	
<b>Estimated Cost:</b>	High	
<b>Potential Funding Sources:</b>	FEMA BRIC, HMGP	
<b>Implementation Timeline:</b>	5 years	
<b>Goals Met:</b>	2	
<b>Benefits:</b>	This action would reduce the flooding impacts felt by the Township from the Rancocas Creek.	
<b>Impact on Socially Vulnerable Populations:</b>	This action will assist socially vulnerable populations whose properties are impacted by flooding from the Rancocas Creek. Furthermore, this action will assist in keeping roadways clear of flood waters for the populations which may need to attend medical appointments or require medical attention from first responders.	
<b>Impact on Future Development:</b>	N/A	
<b>Impact on Critical Facilities/Lifelines:</b>	This action would assist in the reduction of roadway flooding from the Rancocas Creek, permitting first responders to traverse the roadways safely.	
<b>Impact on Capabilities:</b>	N/A	
<b>Climate Change Considerations:</b>	A warmer atmosphere means storms have the potential to be more intense and occur more often, including increased periods of intense rain events. Sea level rise associated with climate change may cause water levels in the tidal Delaware River to increase.	
<b>Mitigation Category</b>	Structure and Infrastructure Project	
<b>CRS Category</b>	Structural Flood Control Projects	
<b>Priority</b>	Medium	
<b>Alternatives:</b>	<b>Action</b>	<b>Evaluation</b>
	No action	Current problem remains



	Raise banks of creek to increase storage capacity	Cost prohibitive
	Construct floodwall along creek	Cost prohibitive



### Action 2024-Riverside-12. Register Ready

<b>Lead Agency:</b>	Township OEM	
<b>Supporting Agencies:</b>	County OEM	
<b>Hazard(s) of Concern:</b>	Dam Failure, Disease Outbreak, Drought, Earthquake, Extreme Temperature, Flood, Severe Weather, Severe Winter Weather, Wildfire	
<b>Description of the Problem:</b>	The Township is unaware of the greater socially vulnerable populations in the jurisdiction.	
<b>Description of the Solution:</b>	The Township will work with the County to receive access to the Register Ready program to be able to identify the location of registered members of the socially vulnerable population.	
<b>Estimated Cost:</b>	Low	
<b>Potential Funding Sources:</b>	Municipal Budget	
<b>Implementation Timeline:</b>	1 year	
<b>Goals Met:</b>	1, 5, 7	
<b>Benefits:</b>	The Township will have the location of registered members of the socially vulnerable population as well as any emergency or medical information the registrant was willing to share.	
<b>Impact on Socially Vulnerable Populations:</b>	Socially vulnerable populations are able to register via Register Ready to have important emergency and medical information stored in a secure system for first responders.	
<b>Impact on Future Development:</b>	N/A	
<b>Impact on Critical Facilities/Lifelines:</b>	This action allows first responders to understand the emergency and medical needs of registered individuals should assistance be needed.	
<b>Impact on Capabilities:</b>	This action will increase the Township's emergency response and socially vulnerable community support capabilities.	
<b>Climate Change Considerations:</b>	N/A	
<b>Mitigation Category</b>	Local Plans and Regulations	
<b>CRS Category</b>	Preventative Measures, Emergency Services	
<b>Priority</b>	Medium	
<b>Alternatives:</b>	<b>Action</b>	<b>Evaluation</b>
	No action	Vulnerable populations will remain unknown
	Do not download information	Population information will not be available to the Township
	Create new system	Cost and start-up restraints





### Action 2024-Riverside-13. Emergency Operations Plan

<b>Lead Agency:</b>	Township OEM	
<b>Supporting Agencies:</b>	Township Administration	
<b>Hazard(s) of Concern:</b>	Dam Failure, Disease Outbreak, Drought, Earthquake, Extreme Temperature, Flood, Severe Weather, Severe Winter Weather, Wildfire	
<b>Description of the Problem:</b>	The Township's Emergency Operations Plan is going to expire at the end of 2024.	
<b>Description of the Solution:</b>	Township OEM will update the Emergency Operations Plan.	
<b>Estimated Cost:</b>	Staff time, Low	
<b>Potential Funding Sources:</b>	Municipal Budget	
<b>Implementation Timeline:</b>	1 year	
<b>Goals Met:</b>	5, 6	
<b>Benefits:</b>	The Emergency Operations Plan (EOP) details what the Township will do during a disaster (incident command implementation, command center location and activities, specific plans by department, etc.). Updating the EOP will permit the Township to integrate new plans, policies, capabilities, and hazard assessments.	
<b>Impact on Socially Vulnerable Populations:</b>	The section overview portion of the Emergency Operation Plan covers a discussion of a variety of topics, including population distribution and locations, including any concentrated populations of individuals with disabilities, others with access and functional needs, or individuals with limited English proficiency, as well as unaccompanied minors and children in daycare and school settings.	
<b>Impact on Future Development:</b>	N/A	
<b>Impact on Critical Facilities/Lifelines:</b>	The section overview portion of the Emergency Operation Plan covers a discussion of a variety of topics, including vulnerable critical facilities (e.g. nursing homes, schools, hospitals, infrastructure).	
<b>Impact on Capabilities:</b>	This action will update an already existing planning capability of the Township.	
<b>Climate Change Considerations:</b>	As impacts from climate change are increasingly felt, the contents in an Emergency Operations Plan, including in the basic plan and any annexes, may need to be updated.	
<b>Mitigation Category</b>	Local Plans and Regulations	
<b>CRS Category</b>	Preventative Measures	
<b>Priority</b>	Medium	
<b>Alternatives:</b>	<b>Action</b>	<b>Evaluation</b>
	No action	The plan will expire



	Update just the basic plan	The plan will not meet State requirements
	Resubmit the EOP as is	The plan will not contain new capabilities, plans, policies, or hazard assessments



## Action 2024- Riverside-14. Burlington County – U.S. Route 130 Corridor Climate Change-Related Hazard Vulnerability Assessment

<b>Lead Agency:</b>	Township Administration
<b>Supporting Agencies:</b>	Burlington County Department of Public Works, NJDEP Office of Climate Resilience Resilient NJ: Municipal Assistance Program, Beverly City, Burlington City, Burlington Township, Cinnaminson Township, Delran Township, Edgewater Park Township, Florence Township, Palmyra Borough, Riverton Borough, and Willingboro Township.
<b>Hazard(s) of Concern:</b>	Drought, Extreme Temperature, Flood, Severe Weather, Severe Winter Weather, Wildfire
<b>Description of the Problem:</b>	The municipalities along the U.S. Route 130 corridor in Burlington County are impacted primarily by riverine flooding that may be worsened by climate change. These communities along the Delaware River and its tributaries, including the Rancocas, Assiscunk, and Pompeston creeks, are frequently impacted by severe flooding events. A joint regional climate change resilience planning effort is needed to assess future risks and identify local and regional solutions.
<b>Description of the Solution:</b>	<p>The NJ DEP will engage consultants on behalf of the communities to complete this work. The resilience planning process to develop the Climate Change-Related Hazard Vulnerability Assessment (CCRHVA) involves the following:</p> <ul style="list-style-type: none"> <li>• Community engagement and outreach to plan for each municipality;</li> <li>• Examination of current local conditions through research and review of data, reports, plans, and other information that have shaped the community's and the region's character;</li> <li>• Assessments to understand the current and future local impacts of climate change; and</li> <li>• Identification and prioritization of appropriate strategies, design standards and other resilience actions that address and/or minimize the impacts of climate change and other natural hazards assessed in the CCRHVA.</li> </ul> <p>In response to the vulnerabilities identified in the vulnerability assessment, potential strategies, regulations, and design standards that could be implemented to reduce, mitigate, or avoid risks, as well as increase resilience will be identified. Considerations include land use strategies, design standards/ building codes, zoning ordinances, and programming. Resilience actions appropriate for the county or other state/regional entities, and those where cooperation/ coordination by multiple municipalities, if necessary, will be identified in addition to municipal-specific actions. For each action, responsible parties, estimated rough costs for implementation (if applicable), possible sources of funding, and the estimated timelines will be identified.</p>
<b>Estimated Cost:</b>	\$760,000 for full region
<b>Potential Funding Sources:</b>	NOAA through the New Jersey Coastal Management Program
<b>Implementation Timeline:</b>	Within 3 years
<b>Goals Met:</b>	1, 2, 3, 4, 5, 6, 7
<b>Benefits:</b>	<p>This effort will result in the following benefits:</p> <ul style="list-style-type: none"> <li>• Current and future threats to, and vulnerabilities of, each municipality associated with climate-related hazards, including, but not limited to, increased temperatures, drought, all types of</li> </ul>



	<p>flooding, hurricanes, increased risk of fire, and sea-level rise will be analyzed.</p> <ul style="list-style-type: none"> <li>Assess the threats to, and vulnerabilities of, socially vulnerable populations will be assessed and actions to address the impacts will be identified.</li> <li>A buildout analysis of future residential, commercial, industrial, and other development in each municipality, and an assessment of the threats and vulnerabilities to that development will be developed</li> <li>Critical facilities, utilities, roadways, and infrastructure necessary for evacuation purposes and sustaining quality of life during a natural disaster and immediately thereafter will be identified.</li> <li>Potential impacts of natural hazards on the relevant elements of each individual master plan will be analyzed. Considerations include community facilities plans, open space, housing, economic development, circulation/ transportation, sustainability, health, capital improvements, redevelopment, etc.</li> <li>Potential strategies and design standards that could be implemented to reduce or avoid risks associated with natural hazards will be identified.</li> </ul>
<b>Impact on Socially Vulnerable Populations:</b>	This effort will assess the potential risks and impacts of hazards on socially vulnerable and underserved populations and describe how they may exacerbate disadvantages. Actions will be developed to reduce risks for these populations.
<b>Impact on Future Development:</b>	The assessments will include a geographically based build-out analysis of current and future residential, commercial, industrial, and other development in each municipality on developed, underdeveloped, and undeveloped land, to inform an assessment of the exposure and vulnerabilities of those land uses in relation to the hazards identified.
<b>Impact on Critical Facilities/Lifelines:</b>	The assessments will identify and assess the exposure and vulnerability of critical facilities, systems, utilities, roadways, and other infrastructure necessary for evacuation purposes and sustaining quality of life during and immediately after a natural disaster. The assessments will also identify and assess the exposure and vulnerability of community assets important to community character, regional significance, and sustaining daily quality of life (e.g. neighborhood centers, gas stations, and grocery stores). This includes but is not limited to natural resources and systems, economic assets, social, cultural, government, or professional services, and other community priorities be assessed. Access to important and critical assets and services located outside of the municipalities should also be evaluated as well as community liabilities that have the potential to cause harm, such as contaminated sites.
<b>Impact on Capabilities:</b>	This effort will allow for incorporation of climate resilience into municipal master plans to enhance planning and regulatory capabilities.
<b>Climate Change Considerations:</b>	Climate change is likely to increase the frequency and severity of climate related events. This project will include a comprehensive assessment of the vulnerability to current and future climate change-related hazards of the entire multi-municipal region as well as for each of the individual municipalities. The vulnerability assessment will consider all climate change impacts through 2100.
<b>Mitigation Category</b>	Local Plans and Regulations
<b>CRS Category</b>	Preventative Measures
<b>Priority</b>	High



Alternatives:	Action	Evaluation
	No Action	-
	Elect not to participate in program but develop municipal specific CCRHVA	Costly and lacking regional coordination
	Elect not to participate in program but develop municipal specific assessment without climate change impacts	Costly, lacking regional coordination, and not meeting state requirements



The prioritization criteria provided in Volume 1, Section 6 (Mitigation Strategy) identify 14 evaluation/prioritization criteria 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 provides a summary of the prioritization of all proposed mitigation initiatives for the HMP update.

Table 9.31-18. Summary of Prioritization of Actions

Project Number	Project Name	Life Safety	Property Protection	Cost-Effectiveness	Political	Legal	Fiscal	Environmental	Social Vulnerability	Administrative	Hazards of Concern	Climate Change	Timeline	Community Lifelines	Other Community Objectives	Total	High / Medium / Low
2024-Riverside-01	Code Coordinated Ordinance	1	1	1	1	1	1	1	1	1	0	1	1	0	0	11	High
2024-Riverside-02	Disaster Debris Management Plan	0	1	1	1	1	1	1	0	1	1	1	1	0	1	11	High
2024-Riverside-03	Substantial Damage Management Plan	0	1	1	1	1	1	0	1	1	1	1	1	1	0	11	High
2024-Riverside-04	Generators at Critical Facilities	1	0	1	1	1	0	0	1	1	1	0	1	1	0	9	Medium
2024-Riverside-05	Roadway Base Repairs	0	0	1	1	1	0	0	0	1	1	0	1	0	1	7	Medium
2024-Riverside-06	CRS Program Participation	0	1	1	1	1	1	0	0	1	0	1	1	0	1	9	Medium
2024-Riverside-07	Public Education and Outreach	1	1	1	1	1	1	0	1	1	1	1	1	0	1	12	High
2024-Riverside-08	Storm Ready Program	1	1	1	1	1	1	0	0	1	1	1	1	0	1	11	High
2024-Riverside-09	Flood Hazard Mitigation	0	1	1	1	1	0	1	0	1	0	1	1	0	0	8	Medium
2024-Riverside-10	Critical Facilities and Community Lifelines in the Floodplain	0	1	1	1	1	0	0	0	1	0	1	1	1	0	8	Medium
2024-Riverside-11	Rancocas Creek Flood Mitigation	0	1	1	1	1	0	1	0	1	0	1	1	0	1	9	Medium
2024-Riverside-12	Register Ready	1	0	1	1	1	1	0	1	1	1	0	1	0	0	9	Medium



Project Number	Project Name	Life Safety	Property Protection	Cost-Effectiveness	Political	Legal	Fiscal	Environmental	Social Vulnerability	Administrative	Hazards of Concern	Climate Change	Timeline	Community Lifelines	Other Community Objectives	Total	High / Medium / Low
2024-Riverside-13	Emergency Operations Plan	1	0	1	1	1	1	0	1	1	1	0	1	0	0	9	Medium
2024-Riverside-14	Burlington County – U.S. Route 130 Corridor Climate Change-Related Hazard Vulnerability Assessment	1	1	1	1	1	1	1	1	1	1	1	1	1	0	13	High

Note: Volume 1, Section 6 (Mitigation Strategy) conveys guidance on prioritizing mitigation actions. Low (0-6), Medium (7-10), High (11-14).