



9.31 Township of Riverside

This section presents the jurisdictional annex for the Township of Riverside.

9.31.1 Hazard Mitigation Plan Point of Contact

The following individuals have been identified as the hazard mitigation plan’s primary and alternate points of contact.

Primary Point of Contact	Alternate Point of Contact
Meghan Jack, Township Administrator P.O. Box 188, Riverside, NJ 08075 856.461.1460 ext. 4 mjack@riversidetwp.org	Susan Dydek, Clerk P.O. Box 188, Riverside, NJ 08075 856.431.1460 ext. 4 sdydek@riversidetwp.org

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 Delanco to the east and Delran to the west and south. To the north across the Delaware River, Riverside Township is bordered by Philadelphia, Pennsylvania. The Township encompasses one square mile. According to the 2010 Census, the community's population was 8,079. The township has a total area of 1.614 square miles, including 1.489 square miles of land and 0.125 square miles of water

Riverside Township 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.”

Growth/Development Trends

The following table summarizes recent residential/commercial development since 2013 to present and any known or anticipated major residential/commercial development and major infrastructure development that has been identified in the next five years within the municipality. Refer to the map in 9.31.8 of this annex which illustrates the hazard areas along with the location of potential new development.

Table 9.31-1. Growth and Development

Property or Development Name	Type (e.g. Res., Comm.)	# of Units / Structures	Location (address and/or block/lot)	Known Hazard Zone(s)	Description/Status of Development
Recent Development from 2013 to present					
Golden Triangle	Res	264	N. Pavilion Ave.; 602, 1,2,2.01	Metals, Flooding	Final approvals
The Mill at Riverside	Res	160	S. Fairview St; 1201, 1	None	Seeing Amended Approvals



Property or Development Name	Type (e.g. Res., Comm.)	# of Units / Structures	Location (address and/or block/lot)	Known Hazard Zone(s)	Description/Status of Development
Zurbrugg Hospital Site	Res	400 +/-	Zurbrugg Wat; 3204, 1	Flood: 0.2% Event; SLOSH: Category 4 Asbestos (remediated)	No Approvals
Known or Anticipated Development in the Next Five (5) Years					
None Anticipated					

* Only location-specific hazard zones or vulnerabilities identified.

9.31.3 Natural Hazard Event History Specific to the Municipality

Burlington County has a history of natural and non-natural hazard events as detailed in Volume I, Section 5.0 of this plan. A summary of historical events is provided in each of the hazard profiles and includes a chronology of events that have affected the County and its municipalities. For the purpose of this plan update, events that have occurred in the County from 2013 to present were summarized to indicate the range and impact of hazard events in the community. Information regarding specific damages is included, if available, based on reference material or local sources. This information is presented in the table below. For details of these and additional events, refer to Volume I, Section 5.0 of this plan.

Table 9.31-2. Hazard Event History

Dates of Event	Event Type (Disaster Declaration if applicable)	Burlington County Designated?	Summary of Damages/Losses
April 30-May 1, 2014	Heavy Rain and Flooding	N/A	Heavy rain caused considerable poor drainage and creek flooding in the northern Burlington County. Rancocas Creek was hit the hardest by flooding. Many roads were flooded and closed. Approximately \$1 million in property damage in the County. While the event impacted the entire County, the Township did not experience significant losses or damages.
June 23, 2015	Severe Storm (DR-4231)	Yes	\$10 million in property damage in the County (\$8 million in Medford, \$1 million in Mt Laurel and \$1 million in Medford Lakes). The Township sustained lightening damage to the Public Works Garage and Sewer Authority Plant.
January 22-24, 2016	Severe Winter Storm (DR-4264)	Yes	Heavy snow fell throughout the County; snowfall totals ranged from 12 inches to 16.4 inches. While the event impacted the entire County, the Township did not experience significant losses or damages.

Notes:

- EM Emergency Declaration (FEMA)
- FEMA Federal Emergency Management Agency
- DR Major Disaster Declaration (FEMA)
- N/A Not applicable

9.31.4 Hazard Vulnerabilities and Ranking

The hazard profiles in Section 5.0 of this plan have detailed information regarding each plan participant’s vulnerability to the identified hazards. The following summarizes the hazard vulnerabilities and their ranking in the Township of Riverside. For additional vulnerability information relevant to this jurisdiction, refer to Section 5.0.





Hazard Risk/Vulnerability Risk Ranking

The table below summarizes the hazard risk/vulnerability rankings of potential hazards for the Township of Riverside. During the review of the hazard/vulnerability risk ranking, the Township indicated the following:

- Flood was changed from a low hazard to a medium hazard.
- Wildfire was changed from a low hazard to a medium hazard.

Table 9.31-3. Hazard Risk/Vulnerability Risk Ranking

Hazard type	Estimate of Potential Dollar Losses to Structures Vulnerable to the Hazard ^{a, c}	Probability of Occurrence	Risk Ranking Score (Probability x Impact)	Hazard Ranking ^b
Coastal Erosion	RCV Exposed to CE Hazard Area: \$4,088,468	Occasional	12	Low
Drought	Damage estimate not available.	Frequent	30	Medium
Earthquake	100-Year GBS: \$0 500-Year GBS: \$1,189,807 2,500-Year GBS: \$17,536,060	Occasional	28	Medium
Flood*	1% Annual Chance: \$143,737,008	Frequent	18	High
Landslide	RCV Exposed to Landslide Hazard Area \$2,039,139,951	Occasional	36	High
Severe Storm	100-year MRP: \$1,115,625 500-year MRP: \$9,549,798 Annualized: \$54,671	Frequent	48	High
Severe Winter Weather	1% GBS: \$12,765,203 5% GBS: \$63,826,015	Frequent	51	High
Wildfire*	Estimated Value in the Extreme, Very High, and High Hazard Areas: \$793,375	Occasional	16	Medium

Notes:

- a. Building damage ratio estimates based on FEMA 386-2 (August 2001)
 - b. The valuation of general building stock and loss estimates was based on custom inventory for the municipality.
High = Total hazard priority risk ranking score of 31 and above
Medium = Total hazard priority risk ranking of 20-30+
Low = Total hazard risk ranking below 20
 - c. Loss estimates for the severe storm and severe winter storm hazards are structural values only and do not include the value of contents.
 - d. Loss estimates for the flood and earthquake hazards represent both structure and contents.
 - e. The HAZUS-MH earthquake model results are reported by Census Tract.
- * The Township of Riverside changed the risk ranking for flood from low to high and wildfire from low to medium.

National Flood Insurance Program (NFIP) Summary

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

Table 9.31-4. NFIP Summary

Municipality	# Policies (1)	# Claims (Losses) (1)	Total Loss Payments (2)	# Rep. Loss Prop. (1)	# Severe Rep. Loss Prop. (1)	# Policies in 100-year Boundary (3)
Township of Riverside	64	49	\$515,071.80	5	1	2

Source: FEMA Region 2 2017, 2018

(1) Repetitive loss and severe repetitive loss statistics provided by FEMA Region 2 and are current as of 10/31/2017. Policy and claims statistics current as of 9/30/2018





Please note the total number of repetitive loss properties does not include the severe repetitive loss properties. The number of claims represents claims closed by 9/30/2018.

(2) Total building and content losses from the claims file provided by FEMA Region 2.

(3) The policies inside and outside of the flood zones are based on the addresses geocoded from the FEMA Region 2 policy file – 10/31/2017.

Notes: FEMA noted that where there is more than one entry for a property, there may be more than one policy in force or more than one GIS possibility.

A zero percentage denotes less than 1/100th percentage and not zero damages or vulnerability as may be the case.

Critical Facilities

The table below presents Hazards United States (HAZUS) – Multi-Hazards (MH) estimates of the damage and loss of use to critical facilities in the community as a result of a 1-percent annual chance flood event.

Table 9.31-5. Potential Flood Losses to Critical Facilities

Name	Type	Exposure		Potential Loss from 1% Flood Event	
		1% Event	0.2% Event	Percent Structure Damage	Percent Content Damage
201 - Riverside American Legion Post No146-Wic	County Building	X	X	-	-
PSE&G Substation	Substation	X	X	-	-
Riverside Sewerage Treatment Plant	Wastewater Treatment	X	X	-	-

Source: FEMA 2017, Burlington County

Note: - = Damages not calculated by HAZUS-MH v4.0

Other Vulnerabilities Identified

The municipality has identified the following vulnerabilities within their community:

- Flood-prone areas along the Rancocas Creek

9.31.5 Capability Assessment

This section identifies the following capabilities of the local jurisdiction:

- Planning and regulatory capability
- Administrative and technical capability
- Fiscal capability
- Community classification
- National Flood Insurance Program
- Integration of mitigation planning into existing and future planning mechanisms

Planning and Regulatory Capability

The table below summarizes the regulatory tools that are available to the Township of Riverside.



Table 9.31-6. Planning and Regulatory Tools

Tool / Program (code, ordinance, plan)	Do you have this? (Yes/No) If Yes, date of adoption or update	Authority (local, county, state, federal)	Dept. /Agency Responsible	Code Citation and Comments (Code Chapter, name of plan, explanation of authority, etc.)
Planning Capability				
Master Plan	Yes (7/16/2013)	-	Township	Chapter 255
Capital Improvements Plan	No	-	-	-
Floodplain Management / Basin Plan	No	-	-	-
Stormwater Management Plan	Yes (4/37/2005)	Local	Township	Chapter 227
Open Space Plan	No	-	-	-
Stream Corridor Management Plan	No	-	-	-
Watershed Management or Protection Plan	No	-	-	-
Economic Development Plan	No	-	-	-
Comprehensive Emergency Management Plan	Yes	County	-	-
Emergency Operation Plan	Yes	County	-	-
Post-Disaster Recovery Plan	No	-	-	-
Transportation Plan	No	-	-	-
Strategic Recovery Planning Report	No	-	-	-
Other Plans:	No	-	-	-
Regulatory Capability				
Building Code	Yes	State & Local	-	State Uniform Construction Code Act (N.J.S. 52:27D-119 et seq.)
Zoning Ordinance	Yes	Local	Township	Chapter 255
Subdivision Ordinance	Yes	Local	Township	Chapter 255
NFIP Flood Damage Prevention Ordinance	Yes	Federal, State, Local	-	Chapter 153
NFIP: Cumulative Substantial Damages	No	-	-	-
NFIP: Freeboard	Yes	State, Local	-	-
Growth Management Ordinances	No	-	-	-
Site Plan Review Requirements	Yes	Local	PB	Chapter 255
Stormwater Management Ordinance	Yes	Local	Township	Chapter 227
Municipal Separate Storm Sewer System (MS4)	Yes	Local	Township	Chapter 227
Stormwater Program Ordinances <ul style="list-style-type: none"> • Pet waste • Litter Control • Improper Disposal of Waste • Wildlife Feeding • Yard Waste Collection • Illicit Connection 	No	-	-	-



Tool / Program (code, ordinance, plan)	Do you have this? (Yes/No) If Yes, date of adoption or update	Authority (local, county, state, federal)	Dept. /Agency Responsible	Code Citation and Comments (Code Chapter, name of plan, explanation of authority, etc.)
<ul style="list-style-type: none"> Private Storm Drain Retrofitting Refuse Container / Dumpster (optional) 				
Natural Hazard Ordinance	No	-	-	-
Post-Disaster Recovery Ordinance	No	-	-	-
Real Estate Disclosure Requirement	No	-	-	-
Other (Special Purpose Ordinances [i.e., sensitive areas, steep slope])	No	-	-	-

Administrative and Technical Capability

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

Table 9.31-7. Administrative and Technical Capabilities

Resources	Is this in place? (Yes or No)	Department/ Agency/Position
Administrative Capability		
Planning Board	Yes	-
Mitigation Planning Committee	No	-
Environmental Board/Commission	No	-
Open Space Board/Committee	No	-
Economic Development Commission/Committee	No	-
Maintenance programs to reduce risk	No	-
Mutual aid agreements	Yes	-
Technical/Staffing Capability		
Planner(s) or engineer(s) with knowledge of land development and land management practices	Yes	-
Engineer(s) or professional(s) trained in construction practices related to buildings and/or infrastructure	Yes	-
Planners or engineers with an understanding of natural hazards	Yes	-
NFIP Floodplain Administrator (FPA)	Yes	-
Surveyor(s)	No	-
Personnel skilled or trained in GIS and/or Hazards United States (HAZUS) – Multi-Hazards (MH) applications	Yes	-
Scientist familiar with natural hazards	No	-
Emergency Manager	Yes	-
Grant writer(s)	Yes	-
Staff with expertise or training in benefit/cost analysis	Yes	-



Resources	Is this in place? (Yes or No)	Department/ Agency/Position
Professionals trained in conducting damage assessments	Yes	-

Fiscal Capability

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

Table 9.31-8. 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
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	No

Community Classifications

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

Table 9.31-9. Community Classifications

Program	Do you have this? (Yes/No)	Classification (if applicable)	Date Classified (if applicable)
Community Rating System (CRS)	No	-	-
Building Code Effectiveness Grading Schedule (BCEGS)	No	-	-
Public Protection (ISO Fire Protection Classes 1 to 10)	No	-	-
Storm Ready Certification	No	-	-
Firewise Communities classification	No	-	-
Natural disaster/safety programs in/for schools	No	-	-
Organizations with mitigation focus (advocacy group, non-government)	No	-	-
Public education program/outreach (through website, social media)	No	-	-
Public-private partnership initiatives addressing disaster-related issues	No	-	-

Note:

- N/A Not applicable
- NP Not participating
- Unavailable





The classifications listed above relate to the community’s ability to provide effective services to lessen its vulnerability to the hazards identified. These classifications can be viewed as a gauge of the community’s capabilities in all phases of emergency management (preparedness, response, recovery and mitigation) and are used as an underwriting parameter for determining the costs of various forms of insurance. The CRS class applies to flood insurance while the BCEGS and Public Protection classifications apply to standard property insurance. CRS classifications range on a scale of 1 to 10 with class 1 being the best possible classification, and class 10 representing no classification benefit. Firewise classifications include a higher classification when the subject property is located beyond 1000 feet of a creditable fire hydrant and is within 5 road miles of a recognized Fire Station.

Criteria for classification credits are outlined in the following documents:

- The Community Rating System Coordinators Manual
- The Building Code Effectiveness Grading Schedule
- The ISO Mitigation online ISO’s Public Protection website at <https://www.isomitigation.com/ppc/>
- The National Weather Service Storm Ready website at <http://www.stormready.noaa.gov/index.html>
- The National Firewise Communities website at <http://firewise.org/>

Self-Assessment of Capability

The table below provides an approximate measure of the Township of Riverside’s capability to work in a hazard-mitigation capacity and/or effectively implement hazard mitigation strategies to reduce hazard vulnerabilities.

Table 9.31-10. Self-Assessment Capability for the Municipality

Area	Degree of Hazard Mitigation Capability		
	Limited (If limited, what are your obstacles?)*	Moderate	High
Planning and regulatory capability	X - Limited, staff		
Administrative and technical capability	X - Limited, staff		
Fiscal capability	X - Limited, budget		
Community political capability		X	
Community resiliency capability		X	
Capability to integrate mitigation into municipal processes and activities		X	

National Flood Insurance Program

NFIP Floodplain Administrator (FPA)

Meghan Jack, Township Administrator

Flood Vulnerability Summary

The Township of Riverside does not maintain lists or inventories of properties that have been flood damaged. The Township makes substantial damage estimates (2 recently). The FPA indicated that there are currently no residents interested in elevation or mitigation but if there were, HMGP funds would be used.



Resources

The FPA assumes the responsibilities of floodplain administration for the Township of Riverside in concert with the Township Engineer. NFIP administration services and functions provided to residents of Riverside include permit review, inspections, and damage assessments. The Township provides education to the community regarding flood hazards/risk or flood risk reduction through stormwater management information. The FPA stated that limited staff and funds present barriers to running an effective floodplain management program but feels adequately supported and trained to fulfill her responsibilities as the municipal floodplain administrator. The FPA would consider attending continuing education and certification training on floodplain management if it were offered in the future.

Compliance History

The Township is in good compliance with the NFIP. The FPA did not know when the last Community Assistance Visit was conducted.

Regulatory

The Township of Riverside floodplain management ordinance meets the minimum set by FEMA and the State of New Jersey. The FPA indicated that other ordinances are in place to support floodplain management. The FPA indicated the Township had considered joining the CRS program in the past and would consider attending a local seminar on the program.

Integration of Hazard Mitigation into Existing and Future Planning Mechanisms

For a community to succeed in reducing long-term risk, hazard mitigation must be integrated into the day-to-day local government operations. As part of this planning effort, each community was surveyed to obtain a better understanding of their community's progress in plan integration. A summary is provided below. In addition, the community identified specific integration activities that will be incorporated into municipal procedures.

Planning

Hazard Mitigation: The Borough of Wrightstown actively participated in the 5-year update of the Burlington County Hazard Mitigation Plan. The Borough continues to support the implementation, monitoring, maintenance, and updating of the plan.

Regulatory and Enforcement (Ordinances)

The Township of Riverside's codebook can be found online at <https://www.ecode360.com/RI1446>.

Flood Damage Prevention Ordinance: The Riverside Flood Damage Prevention Ordinance (Chapter 153 of the municipal code) was enacted for the protection of the persons and property of Riverside inhabitants and for the preservation of the public health, safety and general welfare. The ordinance notes that the Rancocas Creek is subject to recurring flooding; that such flooding damages and endangers life and public and private property and facilities; and that this condition is aggravated by developments and encroachments.

Land Development Ordinance: The Land Development Ordinance (Chapter 255 of the municipal code) was adopted in order to promote and protect the public health, safety, morals and general welfare, and in the furtherance of the following related and more specific objectives:

- Encourage action to guide the appropriate use or development of all lands in the Township, in a manner which will promote the public health, safety, morals and general welfare.



- Secure safety from fire, flood, panic and other natural and man-made disasters.
- Provide adequate light, air, open space and traffic design.
- Promote the establishment of appropriate population densities and concentrations that will contribute to the well-being of persons, neighborhoods and the entire municipality as well as the preservation of the environment and prevent the overcrowding of land and buildings.
- Provide sufficient space in appropriate locations for a variety of residential, recreational, commercial and industrial uses and open space, both public and private, according to their respective environmental requirements.
- Promote a desirable visual environment through creative development techniques and good civic design and arrangements.
- Promote the conservation of historic sites, open space, energy resources and to prevent the degradation of the environment, including but not limited to the air, water and visual environment, through improper use of land.
- Establish orderly and uniform procedures relating to land use and development regulation.
- Promote utilization of renewable energy sources.
- Conserve the value of property.

NJDEP Municipal Stormwater Regulation Program: New Jersey Department of Environmental Protection issued the statewide municipal stormwater permits that became effective January 1, 2018 and authorizes stormwater discharges from municipal separate storm sewer systems (MS4s) to the waters of the state. Municipalities that have been issued a Notice of Authorization (NOA) to discharge under the Tier A (urban and coastal municipalities) or Tier B (more rural municipalities) master general permit must develop and implement a stormwater program. The first New Jersey Pollutant Discharge Elimination System (NJPDES) permit authorizing discharges from MS4 municipalities became effective in 2004 (subsequently renewed in 2009 and now in 2018), so most municipalities have developed stormwater programs; however, the 2018 permit requires municipalities to maintain a stormwater management plan and enforce stormwater ordinances to address development and redevelopment consistent with the Stormwater Management rules at N.J.A.C 7:8, as well as implementation of additional requirements. For more information on the municipal stormwater regulation program, see http://www.nj.gov/dep/dwq/msrp_home.htm. The Township of Riverside is a Tier A municipality.

Stormwater Management: Chapter 227 of the municipal code discusses stormwater management. The chapter is intended to regulate the feeding of wildlife, disposal of waste, including pet solid waste, yard waste collection, litter, and other waste and pollution that may find its way into stormwater runoff in order to improve, preserve and protect the water quality of waters and streams within the Township and surrounding communities that may be downstream from the Township so as to protect the health safety and welfare of the public. This chapter also regulates connections to the municipal separate storm sewer system (MS4) operated by the Township and establishes penalties for violations of the provisions of this chapter.

Operational and Administration

Information Sharing: The Township is working with Burlington County to improve municipal communications systems to include information sharing with the county and surrounding municipalities. The Township also utilizes Swift911, Nixle, and a police department managed app to share information with residents.



Vegetation Management: The Township’s Municipal Code Enforcement maintains a tree maintenance and clearing program along roadways in high hazard areas.

Floodplain Administrator: The Township promotes the participation of the Floodplain Administrator within the hazard mitigation planning process and other plans and activities.

Joint Land Use Planning Board: The Joint Land Use Planning Board consists of nine members whose duties include those of both a traditional Zoning Board of Adjustment and a Planning Board, as defined by the New Jersey Municipal Land Use Law N.J.S.A. 40:55D-25c. The Planning Board Meets on the 2nd Monday of every month at 7:00 pm.

Redevelopment Committee: Over the past several years, Riverside has begun to revitalize and reinvent itself, focused on molding its Downtown and surrounding redevelopment areas into a vibrant hub of shopping, dining, living and leisure. Riverside’s redevelopment has been, and will continue to be, focused in four main areas, which consist of the Downtown Central Business District, the Golden Triangle Watchcase Site, the Golden Triangle Zurbrugg Hospital Site, and the Taubels Mill Site. The Downtown Central Business District is a true, walkable downtown with a mix of apartments over first floor commercial establishments. Several properties are undergoing renovation, bringing both new life and new blood to this already spectacular Downtown. The three remaining sites will see predominantly residential development with design concept and preliminary site plans underway from each of the respective developers.

Funding

The Township will look at mitigation actions when allocating funding in the future. The Township has provided funding for mitigation projects identified in the hazard mitigation plan.

The Township has identified various financial resources that are available including Community Development Block Grants; Capital Improvements Project Funding; authority to levy taxes for specific purposes; user fees for water, sewer, gas, or electric services; state mitigation grant programs; and incurring debt through special tax bonds.

Education and Outreach

The Township of Riverside offers training on best practices for hazard mitigation, grant applications, hazard identification, and other training related to hazard mitigation. The Township also conducts outreach on hazards through various methods.

The Township maintains a municipal website (<http://www.riversidetwp.org/>) where they post information regarding upcoming community events, important municipal decisions, and information about the municipality. The Township Police Department also maintains a Facebook page and Twitter account with similar information.

Burlington County utilizes the Swift911 Emergency Notification system. Swift911 is used in order to keep residents informed during fires, outages, floods, hurricanes, evacuations, road closures and more. All notifications are delivered for the sole purpose of delivering emergency messages and public notifications that are time sensitive in order to increase the safety and security. This service is also extended to the 40 municipalities within Burlington County, including the Township of Riverside.

The Township also utilizes Nixle. Similar to Swift911, Nixle is a messaging service that residents can register for that allows messages to be sent by government agencies to local residents via phone, email, and web. Nixle can be used for emergency or non-emergency situations.



The Riverside Township Police Department also has an app for phones that allows residents to stay up to date on police notifications.

9.31.6 Mitigation Strategy and Prioritization

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

Past Mitigation Initiative Status

The following table indicates progress on the community’s mitigation strategy identified in the 2013 Plan. Actions that are carried forward as part of this plan update are included in the following subsection in its own table with prioritization. Previous actions that are now on-going programs and capabilities are indicated as such in the following table and may also be found under ‘Capability Assessment’ presented previously in this annex.



Table 9.31-11. Status of Previous Mitigation Actions

Action Number	2013 Mitigation Action	Responsible Party	Status (In progress, No progress, Complete)	Describe Status 1. Please describe what was accomplished and indicate % complete. 2. If there was no progress, indicate what obstacles/delays encountered? 3. If there was progress, how is/was the action being funded (e.g., FEMA HMGP grant, local budget)?	Next Steps 1. Project to be included in 2019 HMP or Discontinue 2. If including action in the 2019 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
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	In Progress	Municipal Ordinance under review by Solicitor N/A N/A	1. Include in 2019 HMP 2. See table 9.31-13 3. N/A
RS-2	Improve municipal communication systems to include information sharing with county and surrounding municipalities.	Municipality with support from County, NJOEM and FEMA	In Progress	Working on coordination N/A N/A	1. Discontinue 2. N/A 3. Ongoing capability
RS-3	Obtain and install backup power sources at critical facilities.	Municipality with support from County, NJOEM and FEMA	No Progress	1. 0% 2. Budget and Location Constraints 3. N/A	1. Include in 2019 HMP 2. See table 9.31-13 3. N/A
RS-4	Create/Enhance/Maintain Mutual Aid agreements with neighboring communities for continuity of operations	Municipality with support from County, NJOEM, FEMA and surrounding communities	Complete	100% N/A N/A	1. Discontinue 2. N/A 3. Complete
RS-5	Purchase, relocate, or elevate structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss property as priority. Phase 1: Identify appropriate candidates based on cost-effectiveness, for example: 119 Polk Street and 138 Polk Street have been identified for elevation and acquisition respectively.	Municipality (via Municipal Engineer/NFIP Floodplain Administrator) with support from County Planning, NJOEM, FEMA	Complete	119 Polk Street was elevated. 138 Polk Street was discontinued due to abandonment of property by owner. 2. N/A 3. N/A	1. Discontinue 2. N/A 3. Complete



Action Number	2013 Mitigation Action	Responsible Party	Status (In progress, No progress, Complete)	Describe Status 1. Please describe what was accomplished and indicate % complete. 2. If there was no progress, indicate what obstacles/delays encountered? 3. If there was progress, how is/was the action being funded (e.g., FEMA HMGP grant, local budget)?	Next Steps 1. Project to be included in 2019 HMP or Discontinue 2. If including action in the 2019 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
	Phase 2: Where determined to be a viable option, work with property owners toward implementation of the determined action based on available funding from FEMA and local match availability				
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	In Progress	In progress Hooker and Arndt Avenue projects have begun N/A	1. Include in 2019 HMP 2. See table 9.31-13 3. N/A
RS-7	Obtain and archive elevation certificates	NFIP Floodplain Administrator	No Progress	0% Staff time N/A	1. Include in 2019 HMP 2. See table 9.31-13 3.
RS-8	Promote the participation of Floodplain Administrator within the planning process and other related activities.	Municipality with support from County, NJOEM and FEMA	In Progress	1. In Progress 2. N/A 3. N/A	1. Discontinue 2. N/A 3. Ongoing capability
RS-9	Establish an alternate emergency operations center within the Municipal Building.	Municipality with support from County, NJOEM and FEMA	No Progress	0% No longer a priority N/A	1. Discontinue 2. N/A 3. No longer a priority
RS-10	Provide public education and outreach on proper installation and/or use of backup power	Municipal Clerk	In Progress	1. In Progress 2. N/A 3. N/A	1. Include in 2019 HMP 2. See table 9.31-13 3. N/A
RS-11	Implement, review, and enforce municipal policies and programs to prevent trees from threatening lives and impacting power availability/interruption.	Municipal Code Enforcement	In Progress	1. In Progress 2. N/A 3. N/A	1. Discontinue 2. N/A 3. Ongoing capability
RS-12	Evaluate benefits of participating in CRS program	Twp. Committee,	No Progress	1. 0% 2. Staff time	1. Include in 2019 HMP 2. See table 9.31-13





Action Number	2013 Mitigation Action	Responsible Party	Status (In progress, No progress, Complete)	Describe Status 1. Please describe what was accomplished and indicate % complete. 2. If there was no progress, indicate what obstacles/delays encountered? 3. If there was progress, how is/was the action being funded (e.g., FEMA HMGP grant, local budget)?	Next Steps 1. Project to be included in 2019 HMP or Discontinue 2. If including action in the 2019 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
		Planning, OEM, Floodplain Adm.		3. N/A	3. N/A
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"> Disaster preparedness Hazard mitigation 	Municipality with support from Planning Partners, County Planning, NJOEM, FEMA	No Progress	1. 0% 2. Staff time 3. N/A	1. Include in 2019 HMP 2. See table 9.31-13 3. N/A
RS-14	Continue to support the implementation, monitoring, maintenance, and updating of this Plan through participating in the 5 year Plan Update	Municipality with support from Planning Partners, County Planning, NJOEM, FEMA	In Progress	Ongoing N/A N/A	1. Discontinue 2. N/A 3. Ongoing capability
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	No Progress	1. 0% 2. Staff time 3. N/A	1. Include in 2019 HMP 2. See table 9.31-13 3. N/A



Completed Mitigation Initiatives Not Identified in the Previous Mitigation Strategy

The Township of Riverside has identified the following mitigation projects/activities that have also been completed but were not identified in the previous mitigation strategy in the 2013 Plan:

- None identified.

Proposed Hazard Mitigation Initiatives for the Plan Update

The Township of Riverside participated in a mitigation action workshop in March 2018 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 Floodprone Structures’ (March 2007) and FEMA ‘Mitigation Ideas – A Resource for Reducing Risk to Natural Hazards’ (January 2013).

Table 9.31-12 summarizes the comprehensive-range of specific mitigation initiatives the Township of Riverside would like to pursue in the future to reduce the effects of hazards. Some of these initiatives may be previous actions carried forward for this plan update. These initiatives are dependent upon available funding (grants and local match availability) and may be modified or omitted at any time based on the occurrence of new hazard events and changes in municipal priorities. Both the four FEMA mitigation action categories and the six CRS mitigation action categories are listed in the table below to further demonstrate the wide-range of activities and mitigation measures selected.

As discussed in Section 6, 14 evaluation/prioritization criteria are used to complete the prioritization of mitigation initiatives. For each new mitigation action, a numeric rank is assigned (-1, 0, or 1) for each of the 14 evaluation criteria to assist with prioritizing your actions as ‘High’, ‘Medium’, or ‘Low.’ The table below summarizes the evaluation of each mitigation initiative, listed by Action Number.

Table 9.31-13 provides a summary of the prioritization of all proposed mitigation initiatives for the Plan update.



Table 9.31-12. Proposed Hazard Mitigation Initiatives

Initiative	Mitigation Initiative	Critical Facility (Y/N)	Hazard(s) Mitigated	Goals Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category	CRS Category
T. Riverside – 1 (former RS-1)	Incorporate ordinances and/or zoning restrictions to control and mitigate future development in hazard areas.	No	All Hazards	1	Municipality with support from County, NJOEM and FEMA	Medium	Medium	Municipal Budget	Short Term	Medium	LPR	PR
T. Riverside – 2 (former RS-3)	Obtain and install backup power sources at critical facilities.	Yes	All Hazards	1, 3, 6	Municipality with support from County, NJOEM and FEMA	Medium	Medium	HMA Grants Municipal Budget	Short Term	Medium	SIP	ES PR
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.	No	Flood, Severe Storm	1	Municipality (via Municipal Engineer/NFI P Floodplain Administrator) with support from NJOEM, FEMA	High	Low-Medium	HMGP grants and Municipal Budget	On-going	High	SIP	PR
T. Riverside – 4 (former RS-7)	Obtain and archive elevation certificates	No	Flood, Severe Storm	1	NFIP Floodplain Administrator	Medium	Low	Municipal Budget	On-going	High	LPR	PR
T. Riverside – 5 (former RS-10)	Provide public education and outreach on proper installation and/or use of backup power	No	Severe Storm	1, 5	Municipal Clerk	Medium	Low	Municipal Budget	Short	High	EAP	PI
T. Riverside – 6 (former RS-11)	Implement, review, and enforce municipal policies and programs to prevent trees from threatening lives and impacting power availability/interruption.	No	Severe Storm	1, 4	Municipal Code Enforcement	Medium	Low	Municipal Budget	Short	High	LPR NSP	NR
T. Riverside – 7	Evaluate benefits of participating in CRS program	No	All	1, 2, 3, 4, 5, 6	Twp. Committee, Planning,	Medium	Low	Municipal Government, OEM and	Short Term	Medium	LPR	PR





Initiative	Mitigation Initiative	Critical Facility (Y/N)	Hazard(s) Mitigated	Goals Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category	CRS Category
(former RS-12)					OEM, Floodplain Adm.			Floodplain Admin.				
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"> • Disaster preparedness • Hazard mitigation 	No	All Hazards	5	Municipality with support from Planning Partners, County Planning, NJOEM, FEMA	Medium	Medium	Municipal Budget, HMA programs with local or county match	Short Term	High	EAP	PI
T. Riverside – 9 (former RS-15)	Enhance community resilience to severe storms (incl. severe winter storms) by joining the NOAA “Storm Ready” program.	No	Severe Storm	1, 3	Municipality with support from County, NJOEM and FEMA	Medium	Low	Municipal Budget	Short Term DOF	Medium	EAP	PI
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	No	Flood	1, 2, 3, 4	Municipality	High	High	HMGP, PDM, Municipal Budget	Short Term DOF	High	SIP	PR PP
T. Riverside - 11	Require new developments to provide mitigation to ensure that the cumulative rate of peak runoff is maintained at pre-development levels	No	All Hazards	2, 4	Municipality	High	Low	Municipal Budget	Short Term DOF	High	LRP	PR





Initiative	Mitigation Initiative	Critical Facility (Y/N)	Hazard(s) Mitigated	Goals Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category	CRS Category
T. Riverside - 12	<p>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.</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>		All Hazards	1, 2, 5	Municipality with support from American Legion	High	High	HMA Grants, Municipal Budget	Short Term DOF	Medium	SIP	SP, PP
T. Riverside - 13	<p>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.</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>	Yes	All Hazards	1, 2, 3, 4, 5, 6	Municipality with support from PSE&G Substation operator	High	High	HMA Grants, Municipal Budget	Short Term DOF	Medium	SIP	SP, PP
T. Riverside - 14	<p>Coordinate with the facilities manager at the Riverside Sewerage Treatment Plant to support the mitigation of vulnerable structures via retrofit (e.g. elevation,</p>	Yes	All Hazards	1, 2, 3, 4,	Municipality with support from Sewerage Treatment Plant operators	High	High	HMA Grants, Municipal Budget	Short Term DOF	Medium	SIP	SP, PP





Initiative	Mitigation Initiative	Critical Facility (Y/N)	Hazard(s) Mitigated	Goals Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category	CRS Category
	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.											

Notes:

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

*Does this mitigation initiative reduce the effects of hazards on new and/or existing buildings and/or infrastructure? Not applicable (N/A) is inserted if this does not apply.

Acronyms and Abbreviations:

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

Potential FEMA HMA Funding Sources:

FMA Flood Mitigation Assistance Grant Program
 HMGP Hazard Mitigation Grant Program
 PDM Pre-Disaster Mitigation Grant Program
 RFC Repetitive Flood Claims Grant Program (discontinued in 2015)
 SRL Severe Repetitive Loss Grant Program (discontinued in 2015)

Timeline:

Short 1 to 5 years
 Long Term 5 years or greater
 OG On-going program
 DOF Depending on funding

Costs:

Where actual project costs have been reasonably estimated:

Low < \$10,000
 Medium \$10,000 to \$100,000
 High > \$100,000

Where actual project costs cannot reasonably be established at this time:

Low Possible to fund under existing budget. Project is part of, or can be part of an existing on-going program.
 Medium Could budget for under existing work plan, but would require a reapportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.
 High Would require an increase in revenue via an alternative source (i.e., bonds, grants, fee increases) to implement. Existing funding levels are not adequate to cover the costs of the proposed project.

Benefits:

Where possible, an estimate of project benefits (per FEMA's benefit calculation methodology) has been evaluated against the project costs, and is presented as:

Low= < \$10,000
 Medium \$10,000 to \$100,000
 High > \$100,000

Where numerical project benefits cannot reasonably be established at this time:

Low Long-term benefits of the project are difficult to quantify in the short term.
 Medium Project will have a long-term impact on the reduction of risk exposure to life and property, or project will provide an immediate reduction in the risk exposure to property.
 High Project will have an immediate impact on the reduction of risk exposure to life and property.





Mitigation Category:

- *Local Plans and Regulations (LPR) – These actions include government authorities, policies or codes that influence the way land and buildings are being developed and built.*
- *Structure and Infrastructure Project (SIP) - These actions involve modifying existing structures and infrastructure to protect them from a hazard or remove them from a hazard area. This could apply to public or private structures as well as critical facilities and infrastructure. This type of action also involves projects to construct manmade structures to reduce the impact of hazards.*
- *Natural Systems Protection (NSP) – These are actions that minimize damage and losses, and also preserve or restore the functions of natural systems.*
- *Education and Awareness Programs (EAP) – These are actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them. These actions may also include participation in national programs, such as StormReady and Firewise Communities*

CRS Category:

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



Table 9.31-13. Summary of Prioritization of Actions

Mitigation Action/Project Number	Mitigation Action/Initiative	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community	Total	High / Medium / Low
T. Riverside – 1 (former RS-1)	Incorporate ordinances and/or zoning restrictions to control and mitigate future development in hazard areas.	0	1	0	1	1	1	-1	0	1	1	1	0	1	0	6	Medium
T. Riverside – 2 (former RS-3)	Obtain and install backup power sources at critical facilities.	1	0	0	1	1	1	0	0	1	1	1	0	1	0	8	Medium
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.	1	1	0	0	1	1	0	0	1	1	1	1	1	1	10	High
T. Riverside – 4 (former RS-7)	Obtain and archive elevation certificates	0	1	1	1	1	1	1	0	1	1	0	1	1	1	11	High
T. Riverside – 5 (former RS-10)	Provide public education and outreach on proper installation and/or use of backup power	1	1	1	1	1	1	1	1	1	1	1	1	1	0	13	High
T. Riverside – 6 (former RS-11)	Implement, review, and enforce municipal policies and programs to prevent trees from threatening lives and impacting power availability/interruption.	1	1	0	1	1	1	0	0	1	1	1	1	1	1	11	High
T. Riverside – 7 (former RS-12)	Evaluate benefits of participating in CRS program	1	1	0	1	1	1	0	0	1	1	1	0	1	0	9	Medium
T. Riverside – 8 (former RS-13)	Conduct and facilitate community and public education and outreach for residents and businesses to promote	1	1	1	1	1	1	1	1	1	1	1	1	1	0	13	High





Table 9.31-13. Summary of Prioritization of Actions

Mitigation Action/Project Number	Mitigation Action/Initiative	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community	Total	High / Medium / Low
	natural hazard risk reduction to include: <ul style="list-style-type: none"> • Disaster preparedness • Hazard mitigation 																
T. Riverside – 9 (former RS-15)	Enhance community resilience to severe storms (incl. severe winter storms) by joining the NOAA “Storm Ready” program.	1	0	0	1	1	1	0	0	1	1	1	0	1	0	8	Medium
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	1	1	0	1	1	1	-1	0	1	1	1	0	1	0	8	Medium
T. Riverside - 11	Require new developments to provide mitigation to ensure that the cumulative rate of peak	0	1	0	1	1	1	-1	0	1	1	1	0	1	0	6	Medium





Table 9.31-13. Summary of Prioritization of Actions

Mitigation Action/Project Number	Mitigation Action/Initiative	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community	Total	High / Medium / Low
	runoff is maintained at pre-development levels																
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.	0	1	1	1	1	1	-1	0	1	1	0	0	1	0	7	Medium
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	0	1	1	1	1	1	-1	0	1	1	0	0	1	0	7	Medium





Table 9.31-13. Summary of Prioritization of Actions

Mitigation Action/Project Number	Mitigation Action/Initiative	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community	Total	High / Medium / Low
	available funding and local match ability.																
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.	0	1	1	1	1	1	-1	0	1	1	0	0	1	0	7	Medium

Note: Refer to Section 6, which conveys guidance on prioritizing mitigation actions.



9.31.7 Future Needs to Better Understand Risk/Vulnerability

None at this time.

9.31.8 Hazard Area Extent and Location

Hazard area extent and location maps have been generated for the Township of Riverside that illustrate the probable areas impacted within the municipality. These maps are based on the best available data at the time of the preparation of this plan and are considered to be adequate for planning purposes. Maps have only been generated for those hazards that can be clearly identified using mapping techniques and technologies, and for which the Township of Riverside has significant exposure. These maps are illustrated in the hazard profiles within Section 5.4, Volume I of this Plan.

9.31.9 Additional Comments

None at this time.



Figure 9.31-1. Township of Riverside Hazard Area Extent and Location Map 1

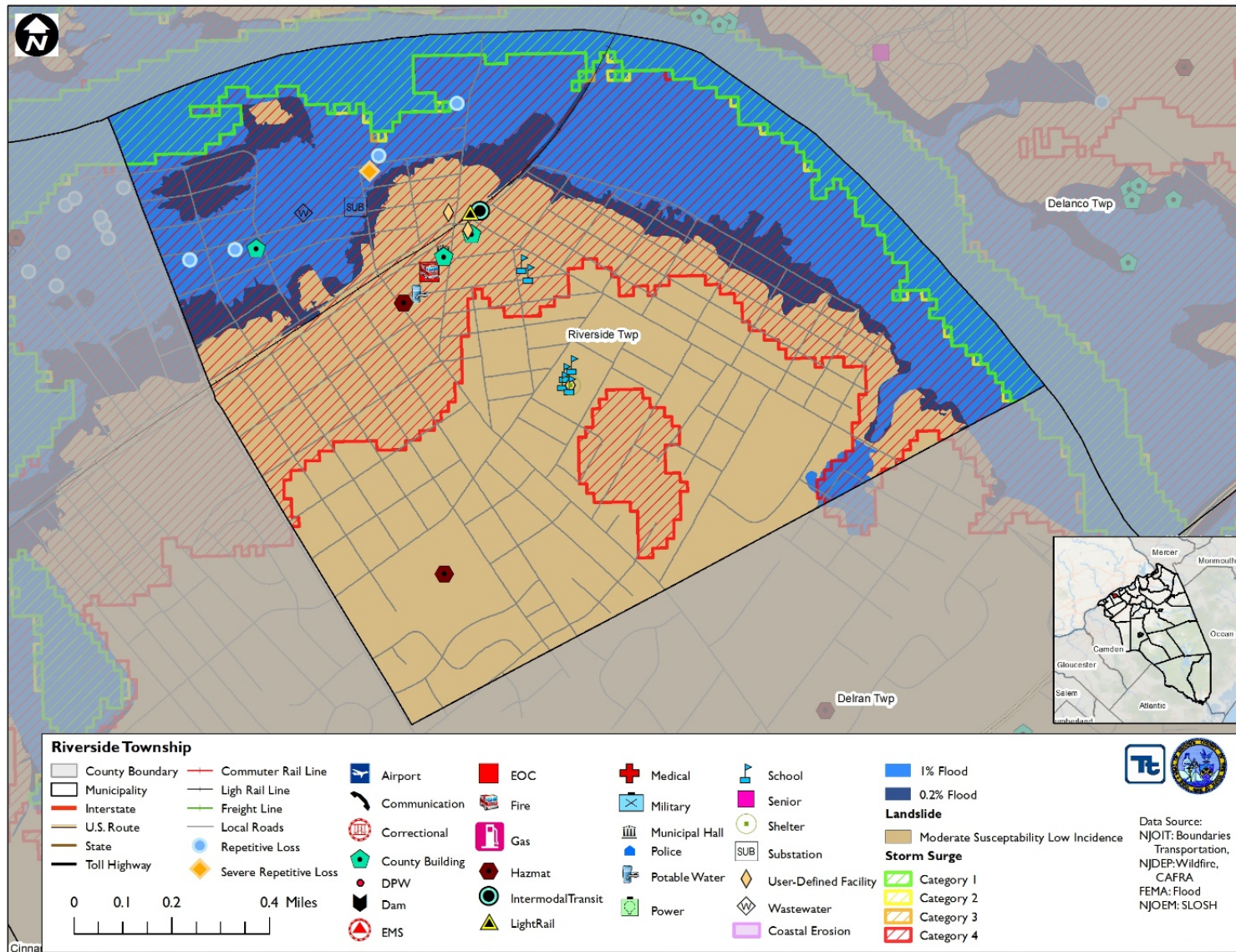
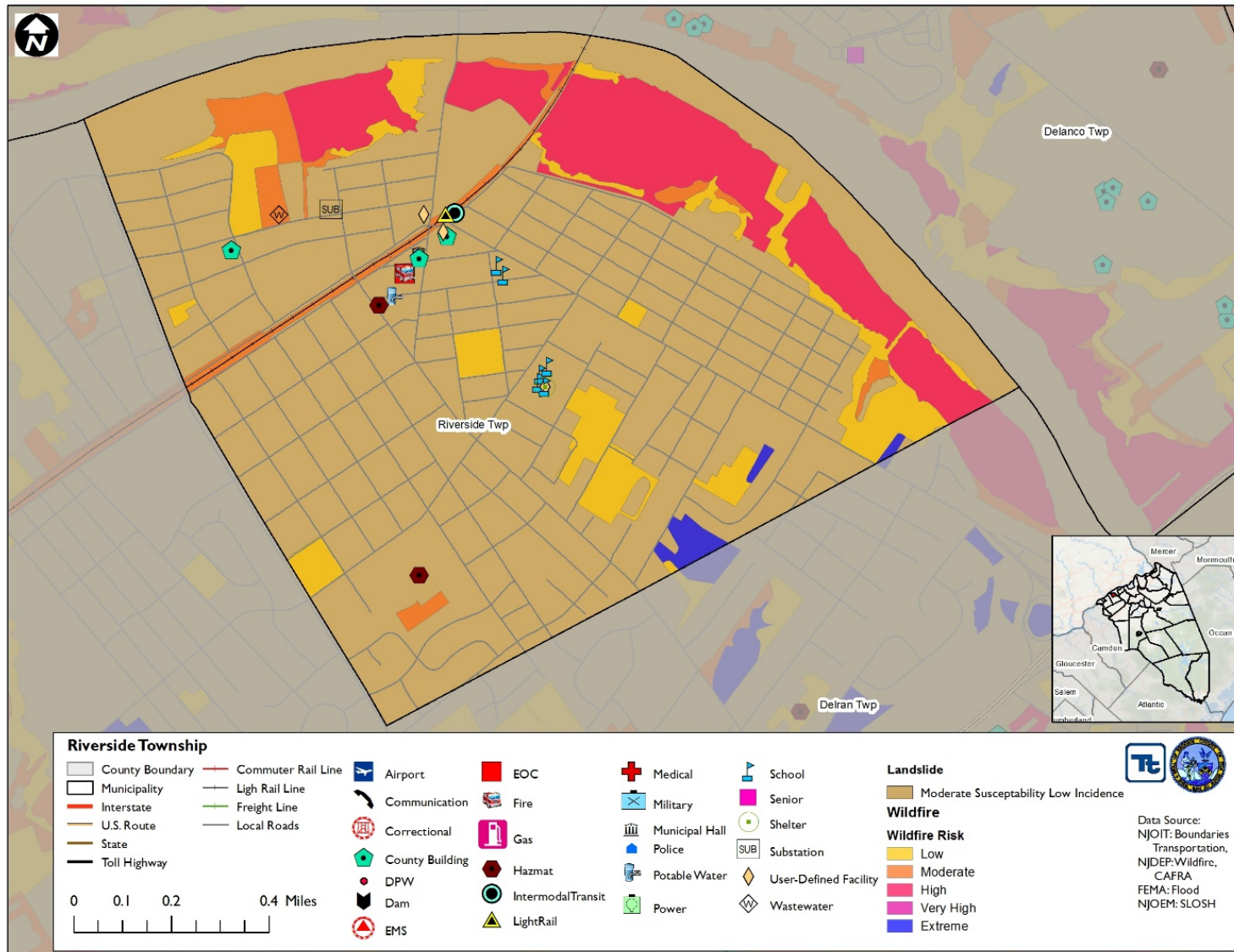




Figure 9.31-2. Township of Riverside Hazard Area Extent and Location Map 2





Action Number: T. Riverside – 2 (former RS-3)
Mitigation Action/Initiative: Obtain and install backup power sources at critical facilities.

Assessing the Risk	
Hazard(s) addressed:	All Hazards
Specific problem being mitigated:	Critical facilities lack back up power source
Evaluation of Potential Actions/Projects	
Actions/Projects Considered (name of project and reason for not selecting):	No action: Current problem continues Solar panels: Cost prohibitive, weather dependent
Action/Project Intended for Implementation	
Description of Selected Action/Project	The Township will obtain and install backup power sources (generators) at critical facilities to ensure continuation of critical functions during power outages.
Action/Project Category	SIP
Goals Met	1, 3, 6
Critical Facility (Y/N)	Yes
Benefits (losses avoided)	Medium
Estimated Cost	Medium
Priority*	Medium
Plan for Implementation	
Responsible Organization	Municipality with support from County, NJOEM and FEMA
Local Planning Mechanism	Hazard Mitigation Planning, Emergency Management Planning
Potential Funding Sources	HMA Grants, Municipal Budget
Timeline for Completion	Short Term
Reporting on Progress	
Date of Status Report/ Report of Progress	



Action Number: T. Riverside – 2 (former RS-3)
Mitigation Action/Initiative: Obtain and install backup power sources at critical facilities.

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	
Property Protection	0	
Cost-Effectiveness	0	
Technical	1	
Political	1	
Legal	1	
Fiscal	0	Need to seek funding to complete the project
Environmental	0	
Social	1	
Administrative	1	
Multi-Hazard	1	All hazards
Timeline	0	
Agency Champion	1	
Other Community Objectives	0	
Total	8	
Priority (High/Med/Low)	Medium	



Action Number: T. Riverside – 3 (Former RS-6)

Mitigation Action/Initiative: Perform base repairs on Greenwood Avenue, Hooker Street, Grant Street, Arndt Avenue and Delaware Avenue, which have been eroded due to repetitive flooding.

Assessing the Risk	
Hazard(s) addressed:	Flood, Severe Storm
Specific problem being mitigated:	Greenwood Avenue, Hooker Street, Grant Street, Arndt Avenue and Delaware Avenue have been eroded due to repetitive flooding.
Evaluation of Potential Actions/Projects	
Actions/Projects Considered (name of project and reason for not selecting):	No action: Current problem remains Elevate roadways: Cost prohibitive
Action/Project Intended for Implementation	
Description of Selected Action/Project	Greenwood Avenue, Hooker Street, Grant Street, Arndt Avenue and Delaware Avenue, which have been eroded due to repetitive flooding will have base repairs performed. Opportunities to reduce future erosion will be investigated during the repair process.
Action/Project Category	SIP
Goals Met	1
Critical Facility (Y/N)	No
Benefits (losses avoided)	High
Estimated Cost	Low-Medium
Priority*	High
Plan for Implementation	
Responsible Organization	Municipality (via Municipal Engineer/NFIP Floodplain Administrator) with support from NJOEM, FEMA
Local Planning Mechanism	Hazard Mitigation Planning
Potential Funding Sources	HMGP, Municipal Budget
Timeline for Completion	On-going
Reporting on Progress	
Date of Status Report/ Report of Progress	



Action Number:

T. Riverside – 3 (Former RS-6)

Mitigation Action/Initiative:

Perform base repairs on Greenwood Avenue, Hooker Street, Grant Street, Arndt Avenue and Delaware Avenue, which have been eroded due to repetitive flooding.

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	
Property Protection	1	
Cost-Effectiveness	0	
Technical	0	
Political	1	
Legal	1	
Fiscal	0	Need to seek funding to complete project
Environmental	0	No negative environmental impacts
Social	1	
Administrative	1	
Multi-Hazard	1	Flood, Severe Storm
Timeline	1	
Agency Champion	1	
Other Community Objectives	1	
Total	10	
Priority (High/Med/Low)	High	



Action Number:

T. Riverside-12

Mitigation Action Name:

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.

Assessing the Risk	
Hazard(s) addressed:	Flood
Specific problem being mitigated:	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.
Evaluation of Potential Actions/Projects	
Actions/Projects Considered (name of project and reason for not selecting):	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/Project Intended for Implementation	
Description of Selected Action/Project	Mitigation of critical facilities.
Mitigation Action Type	SIP
Goals Met	1, 2, 5
Critical Facility (Y/N)	Yes
Benefits (losses avoided)	High
Estimated Cost	High
Priority*	Medium
Plan for Implementation	
Responsible Organization	Municipality with support from American Legion
Local Planning Mechanism	Hazard mitigation, emergency management
Potential Funding Sources	HMA Grants, Municipal Budget
Timeline for Completion	Short Term, DOF
Reporting on Progress	
Date of Status Report/ Report of Progress	



Action Number:
Mitigation Action Name:

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.

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	0	
Property Protection	1	Project would protect potential flood impacts to the structure
Cost-Effectiveness	1	
Technical	1	
Political	1	
Legal	1	
Fiscal	-1	Need funding to complete project; however, the municipality does not have jurisdiction over the structure
Environmental	0	
Social	1	
Administrative	1	
Multi-Hazard	0	Flood
Timeline	0	
Agency Champion	1	
Other Community Objectives	0	
Total	7	
Priority (H/M/L)	Medium	



Action Number:

T. Riverside - 13

Mitigation Action Name:

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

Assessing the Risk	
Hazard(s) addressed:	Flood
Specific problem being mitigated:	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.
Evaluation of Potential Actions/Projects	
Actions/Projects Considered (name of project and reason for not selecting):	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/Project Intended for Implementation	
Description of Selected Action/Project	Mitigation of critical facilities.
Mitigation Action Type	SIP
Goals Met	1, 2, 3, 4, 5, 6
Critical Facility (Y/N)	Yes
Benefits (losses avoided)	High
Estimated Cost	High
Priority*	Medium
Plan for Implementation	
Responsible Organization	Municipality with support from PSE&G Substation operator
Local Planning Mechanism	Hazard mitigation, emergency management
Potential Funding Sources	HMA Grants, Municipal Budget
Timeline for Completion	Short Term, DOF
Reporting on Progress	
Date of Status Report/ Report of Progress	



Action Number:
Mitigation Action Name:

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

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	0	
Property Protection	1	Project would protect potential flood impacts to the structure
Cost-Effectiveness	1	
Technical	1	
Political	1	
Legal	1	
Fiscal	-1	Need funding to complete project; however, the municipality does not have jurisdiction over the structure
Environmental	0	
Social	1	
Administrative	1	
Multi-Hazard	0	Flood
Timeline	0	
Agency Champion	1	
Other Community Objectives	0	
Total	7	
Priority (H/M/L)	Medium	



Action Number:

T. Riverside - 14

Mitigation Action Name:

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.

Assessing the Risk	
Hazard(s) addressed:	All Hazards
Specific problem being mitigated:	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.
Evaluation of Potential Actions/Projects	
Actions/Projects Considered (name of project and reason for not selecting):	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/Project Intended for Implementation	
Description of Selected Action/Project	Mitigation of critical facilities.
Mitigation Action Type	SIP
Goals Met	1, 2, 3, 4
Critical Facility (Y/N)	Yes
Benefits (losses avoided)	High
Estimated Cost	High
Priority*	Medium
Plan for Implementation	
Responsible Organization	Municipality with support from Sewerage Treatment Plant operators
Local Planning Mechanism	Hazard mitigation, emergency management
Potential Funding Sources	HMA Grants, Municipal Budget
Timeline for Completion	Short Term, DOF
Reporting on Progress	
Date of Status Report/ Report of Progress	



Action Number:
Mitigation Action Name:

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Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	0	
Property Protection	1	Project would protect potential flood impacts to the structure
Cost-Effectiveness	1	
Technical	1	
Political	1	
Legal	1	
Fiscal	-1	Need funding to complete project; however, the municipality does not have jurisdiction over the structure
Environmental	0	
Social	1	
Administrative	1	
Multi-Hazard	0	Flood
Timeline	0	
Agency Champion	1	
Other Community Objectives	0	
Total	7	
Priority (H/M/L)	Medium	