



SECTION 9. JURISDICTIONAL ANNEXES

9.28 BOROUGH OF PALMYRA

This section presents the jurisdictional annex for the Borough of Palmyra 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 Borough of Palmyra participated in the planning process, an assessment of the Borough of Palmyra’s risk and vulnerability, the different capabilities used in the Borough of Palmyra, and an action plan that will be implemented to achieve a more resilient community.

9.28.1 Hazard Mitigation Planning Team

The Borough of Palmyra identified the hazard mitigation plan primary and alternate points of contact and developed this plan over the course of several months with input from many Borough of Palmyra departments, including Emergency Management and Construction. The Emergency Management Coordinator 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 9.28-1. Hazard Mitigation Planning Team

Primary Point of Contact		Alternate Point of Contact	
Name/Title:	Ronald Lindemuth, OEM Coordinator	Name/Title:	Tracy Kilmer, Deputy OEM Coordinator
Address:	20 West Broad St., Palmyra, NJ 08065	Address:	20 West Broad St., Palmyra, NJ 08065
Phone Number:	(609) 471-1031	Phone Number:	(609) 868-1314
Email:	Rlindemuth@boroughofpalmyra.com	Email:	tkilmer@boroughofpalmyra.com
NFIP Floodplain Administrator			
Name/Title:	Tracy Kilmer, Construction Official		
Address:	20 West Broad Street Palmyra, NJ 08065		
Phone Number:	(609) 868-1314		
Email:	tkilmer@boroughofpalmyra.com		
Additional Contributors:			
Name/Title:	Ronald Lindemuth, OEM Coordinator		
Method of Participation:			



	Attended the Planning Partnership Risk Assessment Meeting and Mitigation Strategy Workshop. Provided information on previous events, capabilities, NFIP administrations, and recent development. Reviewed previous mitigation actions and assisted in the development of the updated mitigation strategy. Reviewed draft annex.
Name/Title: Method of Participation:	Tracy Kilmer, Construction Official Provided information on NFIP administration and recent development. Reviewed draft annex.
Name/Title: Method of Participation:	Richard Dreby, OEM Deputy Coordinator Attended Planning Partnership meetings.
Name/Title: Method of Participation:	Joe Murphy, Police Lieutenant Reviewed draft annex.
Name/Title: Method of Participation:	John Gural, Administrator Reviewed draft annex.
Name/Title: Method of Participation:	Al Berg, Public Works Foreman Reviewed draft annex.
Name/Title: Method of Participation:	Doretha R. Jackson, Municipal Clerk Reviewed draft annex.
Name/Title: Method of Participation:	Gina Ragomo Tait, Mayor Reviewed draft annex.

9.28.2 Municipal Profile

The Borough of Palmyra is located on the northwestern edge of Burlington County. The Borough is bordered by the Borough of Riverton to the east, the Borough of Cinnaminson to the south, the Township of Pennsauken in Camden County to the west, and the Delaware River to the north. The Tacony section of Philadelphia to which is connected via Route 73 by the Tacony-Palmyra Bridge over the Delaware River.

The Borough of Palmyra is governed under the Borough form of New Jersey municipal government. The government consists of a mayor and a Borough Council comprising six council members, with all positions elected at large. A mayor is elected directly by the voters to a four-year term of office. The Borough Council consists of six members elected to serve three-year terms on a staggered basis, with two seats coming up for election each year.

The mayor retains all general law authority, presides over council meetings, and can vote in the case of a tie. The mayor appoints, with the advice and consent of council, all subordinate officers of the municipality. The council is the legislative body of the Borough. All executive responsibilities not placed in the office of the Mayor by general law, or the Borough law remain with the council. A borough may appoint an administrator and delegate all or a portion of the executive responsibilities to him/her. The council may also adopt an administrative code, prescribing how the council shall perform it duties.

According to the U.S. Census, the 2020 population for the Borough of Palmyra was 7,438, a 0.5 percent increase from the 2010 Census. Data from the 2021 American Community Survey 5-Year Population Estimates indicate that 14.5 percent is 65 years of age or older, 2.6 percent of the population is 5 years of age or younger, 0.6 percent is non-English speaking, 12.9 percent has a disability, and 8.3 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 Borough of Palmyra, 33 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.

9.28.3 Jurisdictional Capability Assessment and Integration

The Borough of Palmyra 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 Borough of Palmyra 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 Borough of Palmyra. The comment field provides information as to how the capability integrates hazard mitigation and risk reduction.

Table 9.28-2. 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				
Building Code	Yes	International Building Code 2021, Chapter 95: Construction Codes, Uniform	State, Local	Construction Official
<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
This chapter and the Building Code shall be enforced and administered by the Construction Official as appointed by the Borough. This code ensures all buildings are in line with the Uniform Construction Code, as adopted by the Borough and the State of New Jersey.				
Zoning/Land Use Code	Yes	Chapter 158 Land Development	Local	Zoning Officer, Land Use Board
<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.				
Subdivision Ordinance	Yes	Chapter 158 Land Development, Article IV Subdivision and Site Plan Procedure	State, Local	Zoning Officer, Land Use Board
<i>How does this reduce risk?</i> It is declared to be the policy of the Borough to consider land subdivisions as part of a plan for the orderly, efficient, and economical development of the Borough. 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.				
Site Plan Ordinance	Yes	Chapter 158 Land Development, Article IV Subdivision and Site Plan Procedure	State, Local	Zoning Officer, Land Use Board
<i>How does this reduce risk?</i> Approval of a site plan by the Land Use Board 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. 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.				
Stormwater Management Ordinance	Yes	Chapter 236 Stormwater Control Regulations	State, Local	Borough Administrator
<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.				
Post-Disaster Recovery/ Reconstruction Ordinance	No	-	-	-
<i>How does this reduce risk?</i>				
Real Estate Disclosure	Yes	Senate Bill 3110; P. L. 2023, c. 93, July 3, 2023	State	Sellers and Landlords of commercial or residential property
<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				



	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>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.</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>The disclosure statement must contain the heading "Flood Risk" and ask the seller the following questions:</p> <ul style="list-style-type: none"> • 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? • 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. • 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. • Is there flood insurance on the property? A standard homeowner's insurance policy typically does not cover flood damage. • 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. • 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? • 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? <p>Not all provisions of this law have become effective at the time of the writing of this plan.</p>				
Growth Management	No	-	-	-
<i>How does this reduce risk?</i>				
Environmental Protection Ordinance	No	-	-	-
<i>How does this reduce risk?</i>				
Flood Damage Prevention Ordinance	Yes	Chapter 126 Flood Damage Prevention	Federal, State, Local	Construction Official
<i>How does this reduce risk?</i>				
<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> <p>A. Protect human life and health.</p>				



	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>B. Minimize the expenditure of public money for costly flood-control projects.</p> <p>C. Minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public.</p> <p>D. Minimize prolonged business interruptions.</p> <p>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.</p> <p>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.</p> <p>G. Ensure that potential buyers are notified that property is in an area of special flood hazard.</p> <p>H. Ensure that those who occupy the areas of special flood hazard assume responsibility for their actions.</p>				
The Borough has not adopted NJDEP's Model Code Coordinated Ordinance.				
Wellhead Protection	No	-	-	-
<i>How does this reduce risk?</i>				
Emergency Management Ordinance	No	-	-	-
<i>How does this reduce risk?</i>				
Climate Change Ordinance	No	-	-	-
<i>How does this reduce risk?</i>				
Other	No	-	-	-
<i>How does this reduce risk?</i>				
Planning Documents				
Comprehensive/Master Plan	Yes	Palmyra Land Use Master Plan, February 2001	Local	Land Use Board
<i>How does this reduce risk?</i>				
The master plan is intended to provide a set of policies for the Borough that will guide municipal officials, the planning and zoning boards, and citizens on decisions and regulations within the Borough. The plan is a broad policy document that guides the use of lands and future physical, economic, and social development of the Borough.				
Capital Improvement Plan	Yes	Annual Budget	Local	Finance
<i>How does this reduce risk?</i>				
Identifies capital projects and equipment purchases, provides a planning schedule, and identifies options for financing the plan.				
Disaster Debris Management Plan	Yes	Palmyra/Riverton Emergency Operations Plan – Annex K, May 2023	Local	Palmyra/Riverton OEM
<i>How does this reduce risk?</i>				
This plan provides guidance for the operation of a viable debris management program during any emergency or disaster situation to ensure completion of required emergency actions.				
Floodplain Management or Watershed Plan	Yes	Floodplain Management Plan, 2023	Local	Floodplain Administrator
<i>How does this reduce risk?</i>				
This plan identifies land areas susceptible to being inundated by water from any source.				
Stormwater Management Plan	Yes	Municipal Stormwater Management Plan, March 2006	Local	Borough 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 Borough’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>				
Stormwater Pollution Prevention Plan	Yes	Stormwater Pollution Prevention Plan, May 2019	Local	Borough 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"> • Site map and description • Descriptions of activities that could cause pollution • Best Management Practices & control measures for preventing pollution • Procedures for conducting inspections and monitoring • Plans for keeping your SWPPP up to date 				
Open Space Plan	Yes	Palmyra Land Use Master Plan Open Space Element, February 2001	Local	Land Use Board
<p><i>How does this reduce risk?</i></p> <p>This element of the Master Plan addresses new open space acquisitions and programs for open space preservation, including farmland preservation. Acquiring land for open space can reduce the Borough’s vulnerability to certain hazards, such as flooding.</p>				
Urban Water Management Plan	No	-	-	-
<i>How does this reduce risk?</i>				
Habitat Conservation Plan	No	-	-	-
<i>How does this reduce risk?</i>				
Economic Development Plan	No	-	-	-
<i>How does this reduce risk?</i>				
Shoreline Management Plan	No	-	-	-
<i>How does this reduce risk?</i>				
Community Wildfire Protection Plan	No	-	-	-
<i>How does this reduce risk?</i>				
Community Forest Management Plan	No	-	-	-
<i>How does this reduce risk?</i>				
Transportation Plan	No	-	-	-
<i>How does this reduce risk?</i>				
Agriculture Plan	No	-	-	-
<i>How does this reduce risk?</i>				
Climate Action/ Resiliency/Sustainability Plan	No	-	-	-
<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
Tourism Plan	No	-	-	-
<i>How does this reduce risk?</i>				
Business/ Downtown Development Plan	No	-	-	-
<i>How does this reduce risk?</i>				
Other	No	-	-	-
<i>How does this reduce risk?</i>				
Response/Recovery Planning				
Emergency Operations Plan	Yes	Palmyra/Riverton Emergency Operations Plan, May 2023	Local	Palmyra/Riverton OEM
<i>How does this reduce risk?</i> The Emergency Operations Plan aims to assess the Borough’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.				
Continuity of Operations Plan	No	-	-	-
<i>How does this reduce risk?</i>				
Strategic Recovery Planning Report	No	-	-	-
<i>How does this reduce risk?</i>				
Threat & Hazard Identification & Risk Assessment (THIRA)	No	-	-	-
<i>How does this reduce risk?</i>				
Post-Disaster Recovery Plan	Yes	Palmyra/Riverton Emergency Operations Plan, May 2023	Local	Palmyra/Riverton OEM
<i>How does this reduce risk?</i> The Emergency Operations Plan includes an appendix for post-disaster recovery to address both short- and long-term recovery.				
Public Health Plan	Yes	Community Health Improvement Plan, 2014	County	Health Dept.
<i>How does this reduce risk?</i> The Burlington County Health Department’s (BCHD) Community Health Improvement Plan (CHIP) is a summation of health disparity in the county and interventions to guide our efforts to keep residents healthy. With data gathered from the Tri-County Health Assessment Collaborative, Burlington County worked with Camden County, Gloucester County, local area hospitals and health systems to conduct a comprehensive regional community health needs assessment (CHNA). From September 2012 to June 2013, the counties, partners, and residents were contributing valuable information to help identify areas of health concern to be targeted for strategic interventions.				
Other	No	-	-	-
<i>How does this reduce risk?</i>				

Development and Permitting Capability

The table below summarizes the capabilities of the Borough of Palmyra to oversee and track development.



Table 9.28-3. 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
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	Tracked in tax records data by borough tax assessor and Land Use Development engineer
Describe the level of build-out in your jurisdiction.	N/A	There are areas within the Borough available for future development. According to the Borough's zoning map, portions of the Borough are zoned for Redevelopment Highway Commercial.

Administrative and Technical Capability

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

Table 9.28-4. Administrative and Technical Capabilities

Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
Administrative Capability		
Planning Board	Yes	<p>Operating as a combined planning and zoning board, the Borough of Palmyra Land Use Board (LUB) is intended to: facilitate development of an appropriate mix of uses; protect, enhance, and preserve our physical environment; conserve public resources; and shape the community's character by implementing provisions of the Land Use Ordinance.</p> <p>The LUB works with the residential and business communities to improve the quality of life and living environment through supporting sustainable growth. The LUB accomplishes this through maintaining and enforcing the provisions of the Master Plan and periodically updating the Land Use Ordinance.</p> <p>Working hand in hand with the LUB, the Zoning Official provides regulatory enforcement of the Land Use ordinances.</p> <p>The uses of land are regulated through a permitting process whereby applicants identify anticipated uses</p>



Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
		and structural setbacks, and the department ensures compliance with the applicable codes.
Zoning Board of Adjustment	No	The Land Use Board is a combined planning and zoning board. See above.
Planning Department	No	-
Mitigation Planning Committee	No	-
Environmental Board/Commission	Yes	<p>The Palmyra Green Team is an advisory committee, which also manages the Borough's participation in Sustainable Jersey. The Green Team's purpose is to</p> <ul style="list-style-type: none"> ▪ Encourage the pursuit of sustainable practices and implement the governing body's economic and social goals, as they relate to the environment and sustainability and environmental goal. ▪ Provide suggestions for further research and action to the governing body. ▪ Provide suggestions to the Land Use Board to promote economic and social issues, as they relate to the environment and sustainability. ▪ Form environmental subcommittees of the Green Team. ▪ Solicit and evaluate economic and social ideas and suggestions, as they relate to the environment and sustainability from the community. ▪ Promote the causes of sustainability within Palmyra.
Open Space Board/Committee	No	-
Economic Development Commission/Committee	Yes	The Economic Development Committee develops ways and means of promoting the Borough's economic development and attracting industry, business, and other potential economic interests.
Public Works/Highway Department	Yes	The Public Works Department is responsible for many services, including but not limited to trash collection, road maintenance, street sweeping, snow removal, leaf and brush collection, metal collection, bulk trash collection, installation of street signs, storm water drainage and the maintenance of municipally owned facilities.
Construction/Building/Code Enforcement Department	Yes	Under the supervision of the Construction Official the Construction Office provides the administrative and technical support for the enforcement of the State of New Jersey Uniform Construction Code. The Construction Official and Building, Electrical, Fire Protection and Plumbing Sub-Code Officials and support staff are appointed by the mayor to provide an efficient and professional level of service to the community.



Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
		The Code Enforcement Officer enforces the provisions of the Property Maintenance Code. High grass, stagnant water conditions (which breed mosquitos), abandoned/junk vehicles, and trash, leaves and brush/limbs placed at the curb before scheduled collection times, represent just a few of the code enforcement/property maintenance issues that concern Palmyra residents. The Borough of Palmyra has adopted the 1996 BOCA, National Property Maintenance Code, to help effectively regulate and provide certain requirements regarding the health and safety for existing buildings and structures.
Emergency Management/Public Safety Department	Yes	In 2009 the Palmyra Office of Emergency Management (OEM) joined with the Borough of Riverton to form one OEM. The OEM is responsible for the response and coordination of all activities necessary to protect both Boroughs residents from natural and manmade disasters such as fire, flood, severe storms, terrorism, and mass casualty events. This is performed through emergency planning. OEM coordinates emergency management services for the Borough by providing leadership, planning, education, and training exercises.
Warning Systems / Services (mass notification system, outdoor warning signals, etc.)	Yes	The Borough utilizes Nixle and Swift911 to send warnings, advisories, alerts, and notification to its residents.
Maintenance programs to reduce risk (stormwater maintenance, tree trimming, etc.)	Yes	The Public Works Department is responsible for many services, including but not limited to trash collection, road maintenance, street sweeping, snow removal, leaf and brush collection, metal collection, bulk trash collection, installation of street signs, stormwater drainage, and the maintenance of municipally owned facilities.
Mutual aid agreements	No	-
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>	No	-
Other: Shade Tree Advisory Board	Yes	The Palmyra Shade Tree Advisory Board members are volunteers appointed by the mayor to maintain the municipal shade trees in the Borough.
Technical/Staffing Capability		
Planners or engineers with knowledge of land development and land management practices	Yes	Borough engineers
Engineers or professionals trained in building or infrastructure construction practices	Yes	Borough construction office staff and borough engineer
Planners or engineers with an understanding of natural hazards	Yes	Borough engineer and professional planner on contract



Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
Staff with expertise or training in benefit/cost analysis	Yes	Borough tax assessor and borough engineer
Professionals trained in conducting damage assessments	Yes	Borough construction staff, borough engineers
Personnel skilled or trained in GIS and/or Hazards United States (HAZUS) – Multi-Hazards (MH) applications	No	-
Environmental scientist familiar with natural hazards	No	-
Surveyor(s)	Yes	Borough engineers
Emergency Manager	Yes	The OEM Coordinator for Palmyra is Ron Lindemuth.
Grant writer(s) <i>Consider the following - Are data and maps from the HMP used to support documentation in grant applications?</i>	Yes	Contracted as needed.
Resilience Officer	No	-
Other (this could include stormwater engineer, environmental specialist, etc.)	Yes	Borough engineer is our appointed stormwater engineer

Fiscal Capability

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

Table 9.28-5. 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
Impact fees for homebuyers or developers of new development/homes	Yes
Stormwater utility fee	No
Incur debt through general obligation bonds	Yes
Incur debt through special tax bonds	Yes
Incur debt through private activity bonds	No
Withhold public expenditures in hazard-prone areas	No
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 Borough of Palmyra.



Table 9.28-6. Education and Outreach Capabilities

Outreach Resources	Available? (Yes/No)	Comment:
Public information officer or communications office	Yes	The Borough Administrator is the Information Officer.
Personnel skilled or trained in website development	Yes	Contracted
Hazard mitigation information available on your website	Yes	This information can be found on the Emergency Management webpage.
Social media for hazard mitigation education and outreach	Yes	The Borough and its Fire and EMS Departments utilize social media (Facebook, Twitter) to disperse information related to hazard mitigation.
Citizen boards or commissions that address issues related to hazard mitigation	No	-
Warning systems for hazard events	Yes	The Borough utilizes Nixle and Swift911 to send warnings, advisories, alerts, and notification to its residents.
Natural disaster/safety programs in place for schools	Yes	Palmyra School District maintains an Emergency Plan.
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	Post educational information to the Borough website

Community Classifications

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

Table 9.28-7. Community Classifications

Program	Participating? (Yes/No)	Classification (if applicable)	Date Classified (if applicable)
Community Rating System (CRS)	Yes	7	May 1, 2015
Building Code Effectiveness Grading Schedule (BCEGS)	Yes	Residential – 3 Commercial - 3	2021
Public Protection (ISO Fire Protection Classes 1 to 10)	Yes	3	2017
StormReady Certification	Yes	N/A	2023
Firewise Communities classification	No	-	-
New Jersey Sustainable Jersey Community	Yes	None	August 17, 2012
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 9.28-8. Adaptive Capacity

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

The Borough of Palmyra indicated the following:

- Due to no nearby dams, the adaptive capacity for the dam failure hazard was modified from ‘moderate’ to ‘weak’ as no existing capabilities for dam failure are in place.

9.28.4 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)

Tracy Kilmer, Construction Official

National Flood Insurance Program (NFIP) Summary

The following table summarizes the NFIP statistics for the Borough of Palmyra.

Table 9.28-9. NFIP Summary

Active Policies	Total Premium + Policy Fee	Number of Losses	Total Net Payment	Repetitive Loss Properties
132	\$128,493	44	\$235,083.95	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 Borough of Palmyra.

Table 9.28-10. NFIP Summary

NFIP Topic	Comments
Flood Vulnerability Summary	
Describe areas prone to flooding in your jurisdiction. <ul style="list-style-type: none"> Do you maintain a list of properties that have been damaged by flooding? 	Low lying areas A list is maintained by the Floodplain Administrator
Do you maintain a list of property owners interested in flood mitigation? <ul style="list-style-type: none"> How many homeowners and/or business owners are interested in mitigation (elevation or acquisition)? 	Yes. There has been no interest as of this date.
Are any RiskMAP projects currently underway in your jurisdiction? <ul style="list-style-type: none"> If so, state what projects are underway. 	None at this time
How do you make Substantial Damage determinations? <ul style="list-style-type: none"> How many were declared for recent flood events in your jurisdiction? 	Through the OEM Damage Assessment Coordinator None
How many properties have been mitigated (elevation or acquisition) in your jurisdiction? <ul style="list-style-type: none"> If there are mitigated properties, how were the projects funded? 	None
Do your flood hazard maps adequately address the flood risk within your jurisdiction? <ul style="list-style-type: none"> If not, state why. 	Yes
NFIP Compliance	
What local department is responsible for floodplain management?	Construction Official
Are any certified floodplain managers on staff in your jurisdiction?	Yes
Do you have access to resources to determine possible future flooding conditions from climate change?	No
Does your floodplain management staff need any assistance or training to support its floodplain management program? <ul style="list-style-type: none"> If so, what type of assistance/training is needed? 	No
Provide an explanation of NFIP administration services you provide (e.g. permit review, GIS, education/outreach, inspections, engineering capability)	Mitigation Services, Educational Services, Engineering services available.
How do you determine if proposed development on an existing structure would qualify as a substantial improvement?	Cost analysis, Code Standards, Consultation with Borough Professionals.



NFIP Topic	Comments
What are the barriers to running an effective NFIP program in the community, if any?	None
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)?	Approximately 2 years ago
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 126 Yes September 1, 2020
Does your floodplain management program meet or exceed minimum requirements? • If exceeds, in what ways?	Exceeds. The Borough participates in the CRS program.
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?	Yes, Palmyra Land Use Board.
Does your community plan to join the CRS program or is your community interested in improving your CRS classification?	The Borough participates and is a Class 7 community.

9.28.5 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 9.28-11. Number of Building Permits for New Construction

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

SFHA Special Flood Hazard Area (1% annual chance flood event)
* Only location-specific hazard zones or vulnerabilities identified.



Table 9.28-12. 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					
Palmyra Urban Redevelopment Entity	Comm	1	202 N Rt 73 Parcel 156 Lot 1,1.01 1.02	None	Completed
Palmyra Urban Redevelopment Entity	Comm	1	Block 156 Lot 2	None	Footings/Foundations
Conifer Reality	Res	102	Block 156 Lot 1.07	None	Not started
Known or Anticipated Major Development in the Next Five (5) Years					
There are no known or anticipated major development in the next five (5) years.					

9.28.6 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 Borough of Palmyra’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 Borough of Palmyra has significant exposure. The maps also show the location of potential new development, where available.

Figure 9.28-1. Borough of Palmyra Flood and Sea Level Rise Hazard Area Extent and Location Map

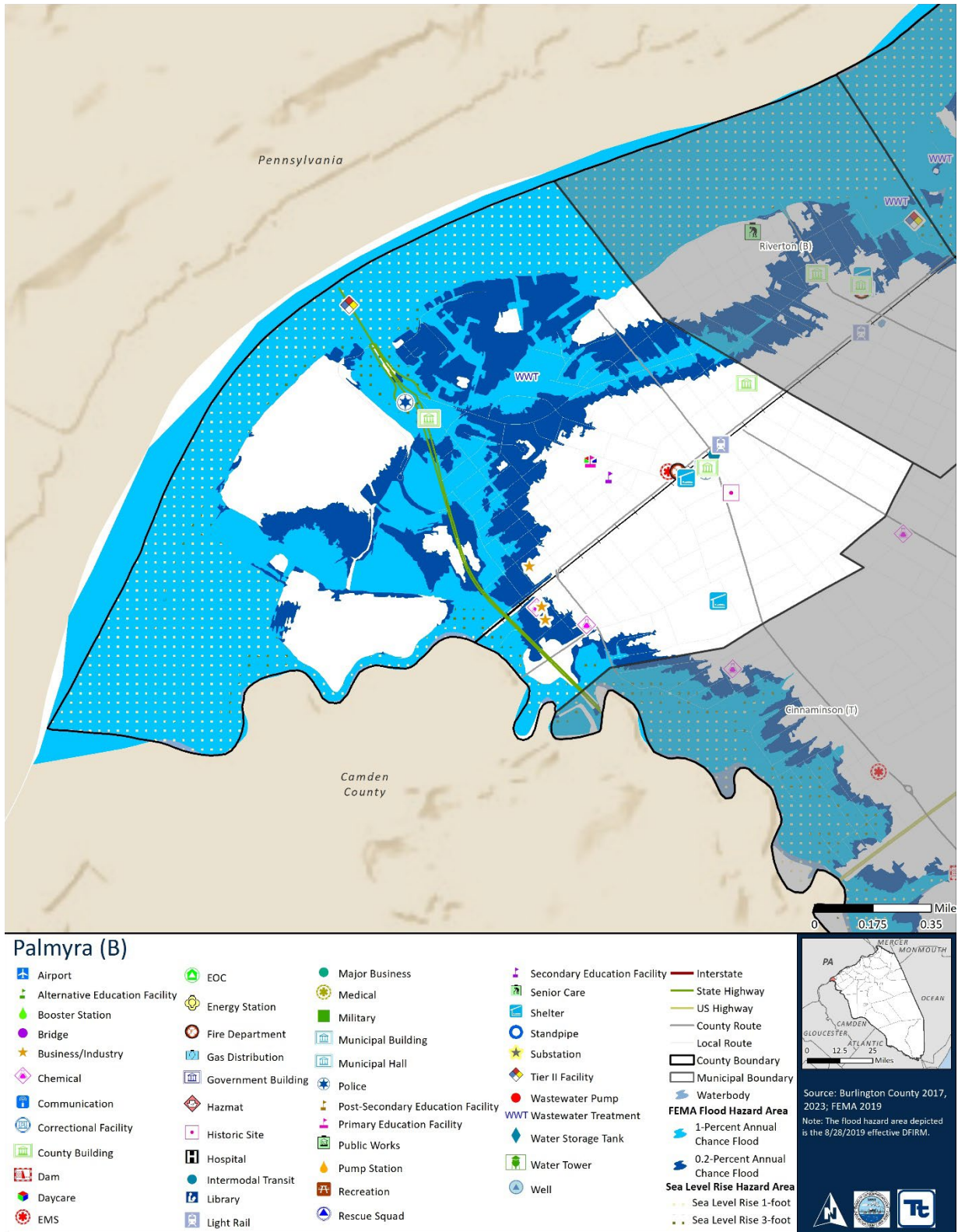
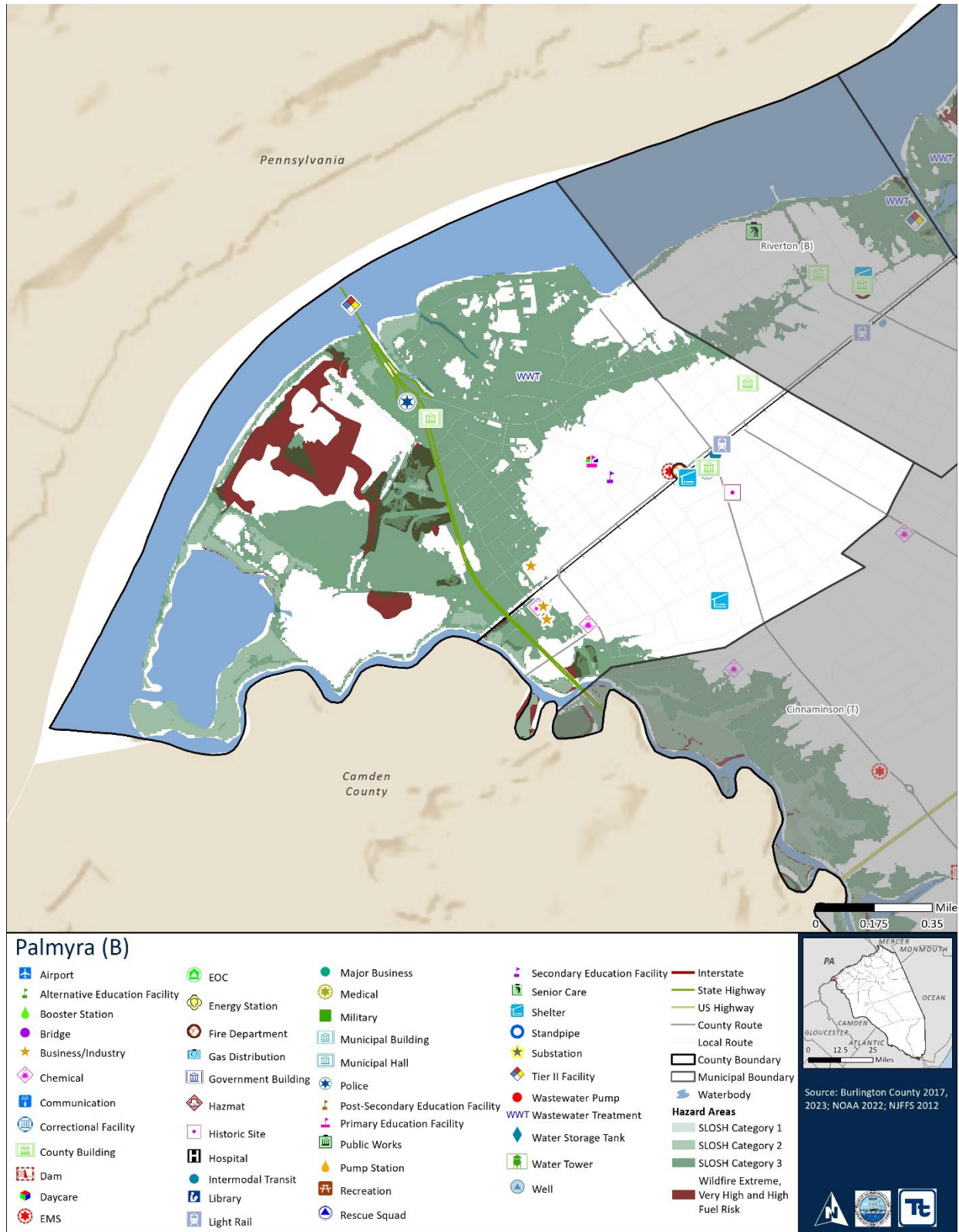




Figure 9.28-2. Borough of Palmyra SLOSH and Wildfire Hazard Area Extent and Location Map





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 Borough of Palmyra’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 Borough of Palmyra 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 9.28-13. 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, the Borough did not report any significant damages.
August 13, 2018	Flash Flood	No	Heavy rain resulted in widespread flash flooding.	There was widespread roadway flooding in Palmyra.
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 Borough was subject to closures and social distancing/masking requirements.
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, the Borough did not report any significant damages.



Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	Municipal Summary of Closures, Damages, and Losses
May 26, 2021	Thunderstorm Wind	No	A widespread severe weather event resulted in damaging winds. Numerous instances of downed trees and power lines and some property damage were reported.	Trees and powerlines were downed in Palmyra.
June 4, 2021	Hail, Thunderstorm Wind	No	Several severe storms posed a threat for damaging winds and hail. Hail was reported to be 0.75 inch in diameter.	Trees and powerlines were downed in Palmyra.
July 12, 2021	Thunderstorm Wind	No	Thunderstorms developed; some storms became severe. There were several water rescues.	Trees and powerlines were downed in Palmyra.
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 Borough and Burlington City. Rainfall totals exceed 3 inches in parts of County; 4 water rescues occurred due to flash flooding. NJ Route 73 in Palmyra was closed due to flooding.	Although the County was impacted, the Borough did not report any significant damages.

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 Borough of Palmyra’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 Borough of Palmyra. The Borough of Palmyra 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 Borough of Palmyra indicated the following:

- The Borough changed the drought ranking from low to medium, because the Borough experienced more drought events.
- The Borough changed the flood ranking from low to medium due to an increase in flooding events.
- The Borough changed the severe winter weather ranking from medium to low because of the lack of severe winter weather.
- The Borough agreed with the remainder of the calculated hazard rankings.

Table 9.28-14. Hazard Ranking Input

Hazard	Hazard Ranking – High/Medium/Low
Dam Failure	Low
Disease Outbreak	Medium
Drought	Medium
Earthquake	Low
Extreme Temperatures	Medium
Flood	Medium
Severe Weather	High
Severe Winter Weather	Low
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 9.28-15. Potential Flood Exposure of Critical Facilities and Community Lifelines

Name	Type	Exposure	
		1% Event	0.2% Event
474 - Communications Equipment - Burlington County Bridge Police - Palmyra Boro	County Building	Yes	Yes
Palmyra Sewerage Treatment Plant	Wastewater Treatment	Yes	Yes
Tacony Palmyra Bridge Police Department	Police	Yes	Yes
Tacony Palmyra Bridge	Tier II Facility	Yes	Yes

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



Identified Issues

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

- 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 does not have a disaster debris management plan in place.
- The Borough has not adopted NJDEP’s Code Coordinated Ordinance.
- There are multiple facilities not operated by the Borough which are located within the Special Flood Hazard Areas, including the Tacony Palmyra Bridge Police Department, Tacony Palmyra Bridge, Burlington County Bridge Police, and Callahan Chemical Company.
- The Public Works Department and many of its buildings (Equalization Building, Equipment Storage Shed, and Salt Storage Building) are located within the floodplain.
- Culverts through the Borough contribute to flooding conditions.
- Residents on Old River Road frequently experience flooding conditions from the Pennsauken Creek.
- The Sewerage Treatment Plant does not have back-up power capabilities.
- The Borough recognizes that it could increase its outreach initiatives to all populations in the community.
- Frequent flooding events have resulted in damages to residential properties in low lying areas of the Borough. These properties have been repetitively flooded as documented by paid NFIP claims. The Borough has four repetitive loss properties, but other properties may be impacted by flooding as well.
- 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.

9.28.7 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 9.28-16. 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.
B. Palmyra - 1	Critical Infrastructure Flood Hazard Mitigation for Borough of Palmyra Public Works Equalization Building	Through Borough of Palmyra professionals	In Progress	Yes	The Public Works Department Equalization Building is located within the floodplain.	Palmyra Borough
B. Palmyra - 2	Critical Infrastructure Flood Hazard Mitigation for Borough of Palmyra Public Works Department Equipment Storage Building	Through Borough of Palmyra professionals	In Progress	Yes	The Public Works Department Equipment Storage Shed is located within the floodplain.	Palmyra Borough
B. Palmyra - 3	Critical Infrastructure Flood Hazard Mitigation for Borough of Palmyra Public Works Department Office/Digester Building	Through Borough of Palmyra professionals	In Progress	Yes	The Public Works Department is located within the floodplain.	Palmyra Borough
B. Palmyra - 4	Critical Infrastructure Flood Hazard Mitigation for Borough of Palmyra Public Works Department Salt Storage Building	Through Borough of Palmyra professionals	In Progress	Yes	The Public Works Department Salt Storage Building is located within the floodplain.	Palmyra Borough
B. Palmyra - 5	Coordinate with the facilities manager at the 474 – Comm. Equipment – Burlington Co Bridge Police- Palmyra station 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 facility manager	No Progress	Yes	Critical facilities located in the floodplain are not only susceptible to flood damage but also create complications for the municipality during an emergency event and post-disaster recovery.	Municipality with support from facility manager



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.
B. Palmyra - 6	Coordinate with the facilities managers at Business/Industry facilities 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 facility manager	No Progress	Yes	Critical facilities located in the floodplain are not only susceptible to flood damage but also create complications for the municipality during an emergency event and post-disaster recovery.	Municipality with support from facility manager
B. Palmyra - 7	Coordinate with the facility manager at the Callahan Chemical Company 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 facility manager	No Progress	Yes	Critical facilities located in the floodplain are not only susceptible to flood damage but also create complications for the municipality during an emergency event and post-disaster recovery.	Municipality with support from facility manager
B. Palmyra - 8	Coordinate with the facility manager at the Palmyra 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.	Municipality with support from facility manager	In Progress	Yes	Critical facilities located in the floodplain are not only susceptible to flood damage but also create complications for the municipality during an	Municipality with support from facility manager



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.
	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				emergency event and post-disaster recovery.	
B. Palmyra - 9	Coordinate with the facility manager at the Tacony Palmyra Bridge Police Dept 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 facility manager	In Progress	Yes	Critical facilities located in the floodplain are not only susceptible to flood damage but also create complications for the municipality during an emergency event and post-disaster recovery.	Municipality with support from facility manager
B. Palmyra - 10	Coordinate with the facility manager at the Tacony-Palmyra bridge 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 facility manager	No Progress	Yes	Critical facilities located in the floodplain are not only susceptible to flood damage but also create complications for the municipality during an emergency event and post-disaster recovery.	Municipality with support from facility manager



Additional Mitigation Efforts

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

- None identified

Proposed Hazard Mitigation Initiatives for the HMP Update

The Borough of Palmyra 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 9.28-17. 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
Disease Outbreak	X	X		X	X		X			X
Drought	X	X		X	X		X			X
Earthquake	X	X		X	X		X			X
Extreme Temperatures	X	X		X	X		X			X
Flood	X	X		X	X		X		X	X
Severe Weather	X	X		X	X		X			X
Severe Winter Weather	X	X		X	X		X			X
Wildfire	X	X		X	X		X			X

Note: Mitigation categories are described below the Mitigation Initiatives.



The following pages list the specific mitigation initiatives Borough of Palmyra 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 Borough priorities.



Action 2024-Palmyra-01. Code Coordinated Ordinance

Lead Agency:	Floodplain Administrator
Supporting Agencies:	Construction Official, Administration, NFIP State Coordinator, FEMA Regional Office
Hazard(s) of Concern:	Flood
Description of the Problem:	<p>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.</p> <p>The Borough’s ordinance requires update to meet the updated model ordinance.</p>
Description of the Solution:	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.
Estimated Cost:	Staff time
Potential Funding Sources:	Municipal budget
Implementation Timeline:	Within 5 years
Goals Met:	1, 2, 5,7
Benefits:	The updated ordinance will improve floodplain management, meet NFIP requirements, and increase resilience of new and substantially improved structures in the floodplain.
Impact on Socially Vulnerable Populations:	The action will result in better regulation of construction standards within the Special Flood Hazard Area where significant risk to socially vulnerable populations exists.
Impact on Future Development:	The action will result in stronger regulation of construction standards for future development in the Special Flood Hazard Area.
Impact on Critical Facilities/Lifelines:	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.
Impact on Capabilities:	This action will improve floodplain management capabilities through better outlining of responsibilities and administrative procedures.



Climate Change Considerations:	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-Palmyra-02. Disaster Debris Management Plan

Lead Agency:	Public Works	
Supporting Agencies:	OEM	
Hazard(s) of Concern:	Dam Failure, Drought, Earthquake, Extreme Temperature, Flood, Severe Weather, Severe Winter Weather, Wildfire	
Description of the Problem:	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, a plan with outlined responsibilities is needed to adequately address post-disaster cleanup operations.	
Description of the Solution:	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.	
Estimated Cost:	Staff time	
Potential Funding Sources:	Municipal budget	
Implementation Timeline:	Within 5 years	
Goals:	5, 6	
Benefits:	The action will result in increased quicker and more efficient cleanup after disaster events.	
Impact on Socially Vulnerable Populations:	N/A	
Impact on Future Development:	N/A	
Impact on Critical Facilities/Lifelines:	N/A	
Impact on Capabilities:	The action will result in increased post disaster capabilities.	
Climate Change Considerations:	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.	
Mitigation Category:	Local Plans and Regulations	
CRS Category:	Emergency Services	
Priority:	High	
Alternatives:	Action	Evaluation
	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-Palmyra-02. Substantial Damage Management Plan

Lead Agency:	Floodplain Administrator
Supporting Agencies:	Public Works, OEM, Construction Department
Hazard(s) of Concern:	Dam Failure, Drought, Earthquake, Extreme Temperature, Flood, Severe Weather, Severe Winter Weather, Wildfire
Description of the Problem:	<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"> • Determine where the damage occurred within the community and if the damaged structures are in an SFHA. • Determine what to use for “market value” and cost to repair; uniformly applying regulations will protect against liability and promote equitable administration. • Determine if repairing plus improving the damaged structure equals or exceeds 50% of the structure’s pre-damage value. • Require permits for floodplain development. <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>
Description of the Solution:	<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> (https://crsresources.org/files/500/developing_subst_damage_mgmt_plan.pdf). This plan will outline responsibilities for Substantial Damage determinations, determining market value, and permit approval processes following a disaster event.</p>
Estimated Cost:	Low
Potential Funding Sources:	Municipal budget
Implementation Timeline:	Within 5 years to develop the plan; ongoing to maintain and update the plan
Goals Met:	1, 2, 5, 7
Benefits:	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.
Impact on Socially Vulnerable Populations:	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.



Impact on Future Development:	A Substantial Damage Management Plan would include all existing, current, and future development in the municipality.	
Impact on Critical Facilities/Lifelines:	A Substantial Damage Management Plan would include all critical facilities and lifelines in the municipality.	
Impact on Capabilities:	This action improves disaster recovery capabilities.	
Climate Change Considerations:	Climate change is likely to increase the intensity and frequency of many climate related disaster events. This action provides additional planning for disaster recovery.	
Mitigation Category:	Local Plans and Regulations	
CRS Category:	Emergency Services, Preventative	
Priority:	High	
Alternatives:	Action	Evaluation
	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-Palmyra-04. Critical Facilities and Community Lifelines in the Floodplain

Lead Agency:	Borough Administration
Supporting Agencies:	OEM, facility managers
Hazard(s) of Concern:	Flood
Description of the Problem:	There are multiple facilities not operated by the Borough which are located within the Special Flood Hazard Areas, including the Tacony Palmyra Bridge Police Department, Tacony Palmyra Bridge, Burlington County Bridge Police, and Callahan Chemical Company.
Description of the Solution:	<p>The Township will coordinate with the facility managers at each facility in the Borough 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>
Estimated Cost:	High
Potential Funding Sources:	FEMA BRIC, HMGP, Municipal Budget
Implementation Timeline:	5 years
Goals Met:	2
Benefits:	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.
Impact on Socially Vulnerable Populations:	N/A
Impact on Future Development:	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.
Impact on Critical Facilities/Lifelines:	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.
Impact on Capabilities:	N/A
Climate Change Considerations:	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.
Mitigation Category	Structure and Infrastructure Project, Education and Awareness Project



CRS Category	Structural Flood Control Projects, Public Information	
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-Palmyra-05. Public Works Facilities in the Floodplain

Lead Agency:	Engineer
Supporting Agencies:	Public Works
Hazard(s) of Concern:	Flood
Description of the Problem:	The Public Works Department and many of its buildings (Equalization Building, Equipment Storage Shed, and Salt Storage Building) are located within the floodplain.
Description of the Solution:	The Engineer will complete a flood study of exposed facilities to determine potential mitigation actions for flood protection. 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.
Estimated Cost:	High
Potential Funding Sources:	FEMA BRIC, HMGP, Municipal Budget
Implementation Timeline:	5 years
Goals Met:	2
Benefits:	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.
Impact on Socially Vulnerable Populations:	N/A
Impact on Future Development:	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.
Impact on Critical Facilities/Lifelines:	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.
Impact on Capabilities:	N/A
Climate Change Considerations:	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.
Mitigation Category	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-Palmyra-06. Culvert Upgrades

Lead Agency:	Engineering	
Supporting Agencies:	Borough Public Works	
Hazard(s) of Concern:	Flood	
Description of the Problem:	Numerous culverts through the Borough contribute to flooding conditions.	
Description of the Solution:	The Engineer will identify the appropriately sized culverts at each location in the Borough. Public Works will be responsible for the replacement/upgrades at each identified culvert.	
Estimated Cost:	High	
Potential Funding Sources:	FEMA BRIC, HMGP, Municipal Budget	
Implementation Timeline:	5 years	
Goals Met:	2	
Benefits:	The Borough will have upgraded all the culverts to be able to manage stormwater, mitigating the flood hazard.	
Impact on Socially Vulnerable Populations:	This action will assist socially vulnerable populations whose properties are impacted by flooding. 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.	
Impact on Future Development:	N/A	
Impact on Critical Facilities/Lifelines:	This action would assist in the reduction of roadway flooding, permitting first responders to traverse the roadways safely.	
Impact on Capabilities:	N/A	
Climate Change Considerations:	A warmer atmosphere means storms have the potential to be more intense and occur more often, including increased periods of intense rain events that contribute to flooding. This action will increase the carrying capacity of the culverts to account for increased stormwater volumes.	
Mitigation Category	Structure and Infrastructure Project	
CRS Category	Structural Flood Control Projects	
Priority	Medium	
Alternatives	Action	Evaluation
	No action	Current problem remains
	Construct flood walls/barriers around vulnerable areas	Costly and can divert floodwaters to other areas
	Implement green infrastructure	May be insufficient space for green infrastructure to be effective



Action 2024-Palmyra-07. Old River Road Flood Mitigation

Lead Agency:	Engineering	
Supporting Agencies:	Borough Administration, County, NJOEM, FEMA	
Hazard(s) of Concern:	Flood	
Description of the Problem:	Residents on Old River Road frequently experience flooding conditions from the Pennsauken Creek.	
Description of the Solution:	The Borough will work with partnering agencies to identify feasible mitigation measures to provide relief from flooding impacts caused by the Pennsauken Creek. Cost effective measures will be implemented.	
Estimated Cost:	High	
Potential Funding Sources:	FEMA BRIC, HMGP	
Implementation Timeline:	5 years	
Goals Met:	2	
Benefits:	This action would reduce the flooding impacts felt by the Borough from the Pennsauken Creek.	
Impact on Socially Vulnerable Populations:	This action will assist socially vulnerable populations whose properties are impacted by flooding from the Pennsauken 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.	
Impact on Future Development:	N/A	
Impact on Critical Facilities/Lifelines:	This action would assist in the reduction of roadway flooding from the Pennsauken Creek, permitting first responders to traverse the roadways safely.	
Impact on Capabilities:	N/A	
Climate Change Considerations:	A warmer atmosphere means storms have the potential to be more intense and occur more often, including increased periods of intense rain events.	
Mitigation Category	Structure and Infrastructure Project	
CRS Category	Structural Flood Control Projects	
Priority	Medium	
Alternatives	Action	Evaluation
	No action	Current problem remains
	Raise banks of creek to increase storage capacity	Cost prohibitive
	Construct floodwall along creek	Cost prohibitive



Action 2024-Palmyra-08. Sewerage Treatment Plant Backup Power

Lead Agency:	Engineering	
Supporting Agencies:	Borough OEM, County OEM, NJOEM, and FEMA	
Hazard(s) of Concern:	Dam Failure, Disease Outbreak, Drought, Earthquake, Extreme Temperature, Flood, Severe Weather, Severe Winter Weather, Wildfire	
Description of the Problem:	The Sewerage Treatment Plant does not have back-up power capabilities. As a critical facility	
Description of the Solution:	The Borough Engineer will determine the appropriately sized generator for the Sewerage Treatment Plant. Public Works will obtain and install the generator and necessary electrical components to ensure continuation of critical functions during power outages. Public Works will be responsible for maintenance following installation.	
Estimated Cost:	High	
Potential Funding Sources:	FEMA BRIC, HMGP, Municipal Budget	
Implementation Timeline:	5 years	
Goals Met:	1, 6, 7	
Benefits:	The Borough will be able to provide a means for continuity of operations.	
Impact on Socially Vulnerable Populations:	N/A	
Impact on Future Development:	N/A	
Impact on Critical Facilities/Lifelines:	The Sewerage Treatment Plant is a critical facility which will be able to maintain continuity of operations.	
Impact on Capabilities:	The action would protect sewerage treatment capabilities.	
Climate Change Considerations:	Climate change is likely to increase the intensity and frequency of many climate related disaster events that result in power outages. This action provides a means for continuity of operations.	
Mitigation Category	Structure and Infrastructure Project	
CRS Category	Emergency Services	
Priority	Medium	
Alternatives	Action	Evaluation
	No Action	Current problem continues
	Solar Panels	Weather dependent and costly
	Mobile Generator	May lack sufficient power supply or run time



Action 2024-Palmyra-09. Public Education and Outreach

Lead Agency:	Borough Administration	
Supporting Agencies:	OEM	
Hazard(s) of Concern:	Dam Failure, Disease Outbreak, Drought, Earthquake, Extreme Temperature, Flood, Severe Weather, Severe Winter Weather, Wildfire	
Description of the Problem:	The Borough recognizes that it could increase its outreach initiatives to all populations in the community.	
Description of the Solution:	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 Borough events, the Borough newsletter, social media, the Borough website, and having the materials on display for the public at Borough libraries and offices.	
Estimated Cost:	Low	
Potential Funding Sources:	Municipal Budget	
Implementation Timeline:	1 year	
Goals Met:	1, 2, 3, 5, 7	
Benefits:	This action will improve the current public education and outreach program in the Borough by including discussions on disaster preparedness and hazard mitigation to residents and business owners, which will contribute to the resiliency of the Borough.	
Impact on Socially Vulnerable Populations:	Socially vulnerable populations will learn how to prepare for and mitigate the various hazards which may impact them in the Borough.	
Impact on Future Development:	N/A	
Impact on Critical Facilities/Lifelines:	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.	
Impact on Capabilities:	This action would build upon the Borough's already existing public education and outreach program.	
Climate Change Considerations:	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.	
Mitigation Category	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 Borough
	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-Palmyra-09. Repetitive Loss Property

Lead Agency:	NFIP administrator
Supporting Agencies:	-
Hazard(s) of Concern:	Severe Weather, Flood
Description of the Problem:	Frequent flooding events have resulted in damages to residential properties in low lying areas of the Borough. These properties have been repetitively flooded as documented by paid NFIP claims. The Borough has four repetitive loss properties, but other properties may be impacted by flooding as well.
Description of the Solution:	Conduct outreach to 10 flood-prone property owners, including RL/SRL property owners and provide information on mitigation alternatives. After preferred mitigation measures are identified, collect required property-owner information and develop a FEMA grant application and BCA to obtain funding to implement acquisition/purchase/moving/elevating residential homes in the flood prone areas that experience frequent flooding (high risk areas).
Estimated Cost:	High
Potential Funding Sources:	BRIC, FMA, HMGP, match from property owners
Implementation Timeline:	Within 5 years
Goals Met:	1, 2
Benefits:	Eliminates flood damage to homes and residences, which creating an open space for the municipality and increasing flood storage.
Impact on Socially Vulnerable Populations:	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.
Impact on Future Development:	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.
Impact on Critical Facilities/Lifelines:	Removing structures from the floodplain decreases the demand on utilities and emergency services including health and medical, law enforcement, and search and rescue.
Impact on Capabilities:	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.
Climate Change Considerations:	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 methods remain the only ones used
	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- Palmyra-10. Burlington County – U.S. Route 130 Corridor Climate Change-Related Hazard Vulnerability Assessment

Lead Agency:	Borough Administration
Supporting Agencies:	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, Riverton Borough, Riverside Township, and Willingboro Township.
Hazard(s) of Concern:	Drought, Extreme Temperature, Flood, Severe Weather, Severe Winter Weather, Wildfire
Description of the Problem:	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.
Description of the Solution:	<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"> • Community engagement and outreach to plan for each municipality; • 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; • Assessments to understand the current and future local impacts of climate change; and • 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. <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>
Estimated Cost:	\$760,000 for full region
Potential Funding Sources:	NOAA through the New Jersey Coastal Management Program
Implementation Timeline:	Within 3 years
Goals Met:	1, 2, 3, 4, 5, 6, 7
Benefits:	<p>This effort will result in the following benefits:</p> <ul style="list-style-type: none"> • 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



	<p>flooding, hurricanes, increased risk of fire, and sea-level rise will be analyzed.</p> <ul style="list-style-type: none"> Assess the threats to, and vulnerabilities of, socially vulnerable populations will be assessed and actions to address the impacts will be identified. 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 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. 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. Potential strategies and design standards that could be implemented to reduce or avoid risks associated with natural hazards will be identified.
Impact on Socially Vulnerable Populations:	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.
Impact on Future Development:	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.
Impact on Critical Facilities/Lifelines:	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.
Impact on Capabilities:	This effort will allow for incorporation of climate resilience into municipal master plans to enhance planning and regulatory capabilities.
Climate Change Considerations:	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.
Mitigation Category	Local Plans and Regulations
CRS Category	Preventative Measures
Priority	High



	Action	Evaluation
Alternatives:	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 9.28-18. 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-Palmyra-01	Code Coordinated Ordinance	1	1	1	1	1	1	1	1	1	0	1	1	0	0
2024-Palmyra-02	Disaster Debris Management Plan	0	1	1	1	1	1	1	0	1	1	1	1	0	1	11	High
2024-Palmyra-03	Substantial Damage Management Plan	0	1	1	1	1	1	0	1	1	1	1	1	1	0	11	High
2024-Palmyra-04	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-Palmyra-05	Public Works Facilities in the Floodplain	0	1	1	1	1	0	0	0	1	0	1	1	1	0	8	Medium
2024-Palmyra-06	Culvert Upgrades	0	1	1	1	1	1	1	0	1	0	1	1	0	0	9	Medium
2024-Palmyra-07	Old River Road Flood Mitigation	0	1	1	1	1	0	1	0	1	0	1	1	0	1	9	Medium
2024-Palmyra-08	Sewerage Treatment Plant Backup Power	0	1	1	1	1	0	0	1	1	1	0	1	1	0	9	Medium
2024-Palmyra-09	Public Education and Outreach	1	1	1	1	1	1	0	1	1	1	1	1	0	1	12	High
2024-Palmyra-10	Repetitive Loss Mitigation	1	1	0	1	0	0	1	1	1	1	1	0	0	1	9	Medium
2024-Palmyra-11	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).