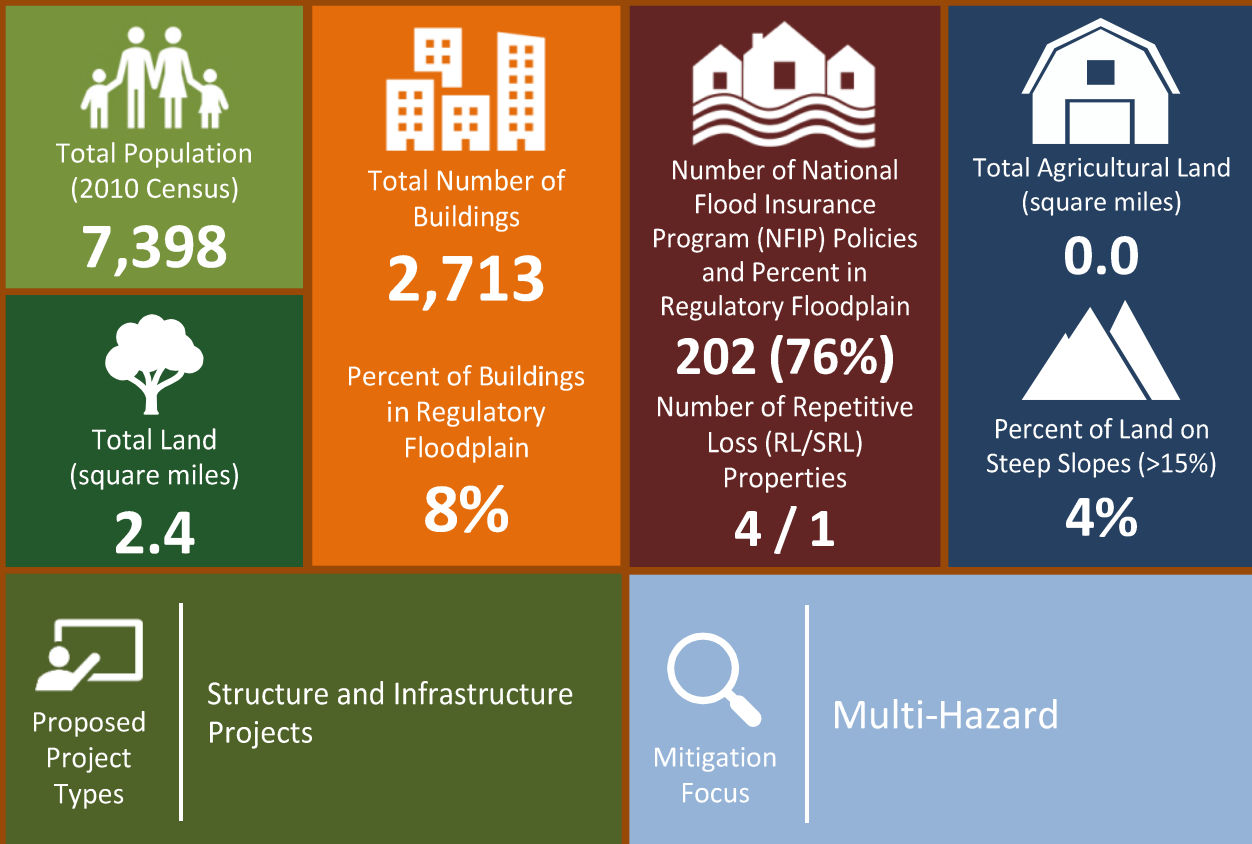
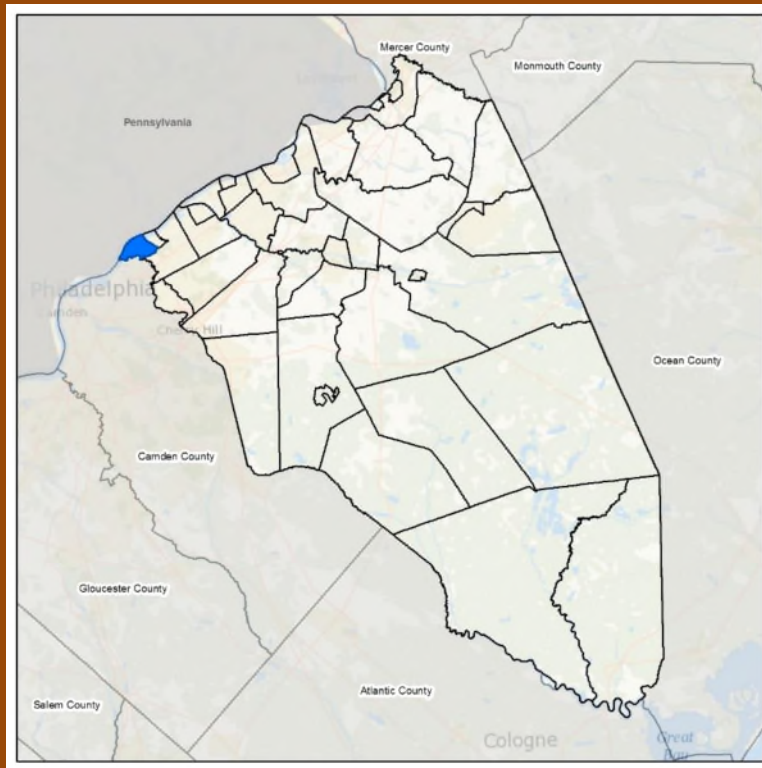




# MUNICIPAL ANNEX | Palmyra Borough





## 9.28 Borough of Palmyra

This section presents the jurisdictional annex for the Borough of Palmyra.

### 9.28.1 Hazard Mitigation Plan Point of Contact

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

Primary Point of Contact	Alternate Point of Contact
Tracy Kilmer, Deputy OEM Coordinator 20 West Broad St., Palmyra, NJ 08065 856-829-1096 tkilmer@boroughofpalmyra.com	Richard Dreby, OEM Executive Coordinator 20 West Broad St., Palmyra, NJ 08065 609.868.1305 rdreby@boroughofpalmyra.com

### 9.28.2 Municipal Profile

Palmyra borders Riverton to the east, Cinnaminson Township to the south, Pennsauken-Camden County to the west, and the Delaware River to the north. Across the Delaware, it borders the Tacony section of Philadelphia to which it is connected via Route 73 by the Tacony-Palmyra Bridge. This bridge is named for the two communities connected by the bridge. According to the 2010 Census, the community’s population was 7,398. The Borough has a total area of 2.550 square miles, including 1.864 square miles of land and 0.686 square miles of water.

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 its duties.

### Growth/Development Trends

The Borough of Palmyra did not note any recent residential/commercial development since 2013 or any major residential or commercial development, or major infrastructure development planned for the next five years in the municipality.

**Table 9.41-1. Growth and Development**

Property or Development Name	Type (e.g. Res., Comm.)	# of Units / Structures	Location (address and/or block/lot)	Known Hazard Zone(s)	Description/Status of Development
<b>Recent Development from 2013 to present</b>					
None					
<b>Known or Anticipated Development in the Next Five (5) Years</b>					
None Anticipated					

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





### 9.28.3 Natural Hazard Event History Specific to the Municipality

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

**Table 9.28-2. Hazard Event History**

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

Notes:

EM Emergency Declaration (FEMA)

FEMA Federal Emergency Management Agency

DR Major Disaster Declaration (FEMA)

N/A Not applicable

### 9.28.4 Hazard Vulnerabilities and Ranking

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

#### Hazard Risk/Vulnerability Risk Ranking

The table below summarizes the hazard risk/vulnerability rankings of potential hazards for the Borough of Palmyra.





**Table 9.28-3. Hazard Risk/Vulnerability Risk Ranking**

Hazard type	Estimate of Potential Dollar Losses to Structures Vulnerable to the Hazard <sup>a, c</sup>	Probability of Occurrence	Risk Ranking Score (Probability x Impact)	Hazard Ranking <sup>b</sup>
Coastal Erosion	RCV Exposed to CE Hazard Area: \$21,410,857	Occasional	12	Low
Drought	Damage estimate not available.	Frequent	36	High
Earthquake	100-Year GBS: \$0 500-Year GBS: \$1,006,191 2,500-Year GBS: \$14,723,044	Occasional	28	Medium
Flood	1% Annual Chance: \$93,313,877	Frequent	18	High
Landslide	RCV Exposed to Landslide Hazard Area \$1,788,398,557	Occasional	36	High
Severe Storm	100-year MRP: \$1,324,046 500-year MRP: \$10,846,848 Annualized: \$49,933	Frequent	48	High
Severe Winter Weather	1% GBS: \$11,068,191 5% GBS: \$55,340,957	Frequent	51	High
Wildfire	Estimated Value in the Extreme, Very High, and High Hazard Areas: \$0	Occasional	16	Medium

**Notes:**

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

**National Flood Insurance Program (NFIP) Summary**

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

**Table 9.28-4. NFIP Summary**

Municipality	# Policies (1)	# Claims (Losses) (1)	Total Loss Payments (2)	# Rep. Loss Prop. (1)	# Severe Rep. Loss Prop. (1)	# Policies in 100-year Boundary (3)
Borough of Palmyra	189	35	\$198,231.08	4	1	143

Source: FEMA Region 2 2017, 2018

- (1) Repetitive loss and severe repetitive loss statistics provided by FEMA Region 2 and are current as of 10/31/2017. Policy and claims statistics current as of 9/30/2018  
Please note the total number of repetitive loss properties does not include the severe repetitive loss properties. The number of claims represents claims closed by 9/30/2018.
- (2) Total building and content losses from the claims file provided by FEMA Region 2.
- (3) The policies inside and outside of the flood zones are based on the addresses geocoded from the FEMA Region 2 policy file – 10/31/2017.

Notes: FEMA noted that where there is more than one entry for a property, there may be more than one policy in force or more than one GIS possibility.  
A zero percentage denotes less than 1/100th percentage and not zero damages or vulnerability as may be the case.





### Critical Facilities

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

**Table 9.28-5. Potential Flood Losses to Critical Facilities**

Name	Type	Exposure		Potential Loss from 1% Flood Event	
		1% Event	0.2% Event	Percent Structure Damage	Percent Content Damage
474 - Communications Equipment - Burlington County Bridge Police - Palmyra Borough	County Building	X	X	0	0
Bridge Machine Co, Inc.	Business/Industry	X	X	11.5	18.7
Callahan Chemical Co	Chemical		X	-	-
Callahan Chemicals	Business/Industry		X	-	-
Kg Fibers, Inc	Business/Industry		X	-	-
Palmyra Sewerage Treatment Plant	Wastewater Treatment	X	X	-	-
Philadelphia Sign Company	Business/Industry		X	-	-
Tacony Palmyra Bridge Police Department	Police	X	X	0	0
Tacony-Palmyra Bridge	Tier Facility	X	X	-	-
Theodore E. Mozer Inc.	Business/Industry		X	-	-

Source: FEMA 2017, Burlington County  
 Note: - = Damages not calculated by HAZUS-MH v4.0

### Other Vulnerabilities Identified

The municipality has not identified any vulnerabilities within their community.

### 9.28.5 Capability Assessment

This section identifies the following capabilities of the local jurisdiction:

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

### Planning and Regulatory Capability

The table below summarizes the regulatory tools that are available to the Borough of Palmyra.





Table 9.28-7. Planning and Regulatory Tools

Tool / Program (code, ordinance, plan)	Do you have this? (Yes/No) If Yes, date of adoption or update	Authority (local, county, state, federal)	Dept. /Agency Responsible	Code Citation and Comments (Code Chapter, name of plan, explanation of authority, etc.)
<b>Planning Capability</b>				
Master Plan	Yes (Updated 2/27/2001)	Local	Land Use Board	Palmyra Land Use Master Plan (Stand Alone Document)
Capital Improvements Plan	Yes, (Updated 3/9/2013)	Local	Finance	Updated during annual budget process
Floodplain Management / Basin Plan	Yes, (Updated 2017)	Local	Construction	Ordinance #2017-09
Stormwater Management Plan	Yes (No updates)	Local	Sewer	Borough Ordinance Chapter 236
Open Space Plan	Yes (Updated 2/27/2001)	Local	Land Use Board	Part of Land Use Board Master Plan
Stream Corridor Management Plan	No	-	-	-
Watershed Management or Protection Plan	No	-	-	-
Economic Development Plan	Yes (2007)	Local	Governing Body	Ordinance #2007-12
Comprehensive Emergency Management Plan	Yes (Updated April 21, 2017)	Local	Palmyra/Riverton OEM	Stand Alone Document (EOP)
Emergency Operation Plan	Yes (Updated April 21, 2017)	Local	Palmyra/Riverton OEM	Stand Alone Document (EOP)
Post-Disaster Recovery Plan	Yes (Updated April 21, 2107)	Local	Palmyra/Riverton OEM	EOP Appendix
Transportation Plan	No	-	-	-
Strategic Recovery Planning Report	No	-	-	-
Other Plans:	No	-	-	-
<b>Regulatory Capability</b>				
Building Code	Yes	State & Local	Construction Department	State Uniform Construction Code Act (N.J.S. 52:27D-119 et seq.)
Zoning Ordinance	Yes	Local	Zoning Department	Borough Ordinance Chapter 158
Subdivision Ordinance	Yes	Local	Palmyra Land Use Board	Palmyra Land Use Ordinance Chapter 158
NFIP Flood Damage Prevention Ordinance	Yes (Updated 2017)	Federal, State, Local	Construction Department	Borough Ordinance Chapter 126 Borough Ordinance #2017-09
NFIP: Cumulative Substantial Damages	Yes (Updated 2017)	Local	Construction Department	Borough Ordinance #2017-09
NFIP: Freeboard	Yes (Updated 2017)	Local	Construction Department	Borough Ordinance #2017-09





Tool / Program (code, ordinance, plan)	Do you have this? (Yes/No) If Yes, date of adoption or update	Authority (local, county, state, federal)	Dept. /Agency Responsible	Code Citation and Comments (Code Chapter, name of plan, explanation of authority, etc.)
Growth Management Ordinances	No	-	-	-
Site Plan Review Requirements	No	Local	Sewer	Borough Ordinance Chapter 236
Stormwater Management Ordinance	Yes	Local	Sewer	Borough Ordinance Chapter 236
Municipal Separate Storm Sewer System (MS4)	No	-	-	-
Stormwater Program Ordinances <ul style="list-style-type: none"> <li>• Pet waste</li> <li>• Litter Control</li> <li>• Improper Disposal of Waste</li> <li>• Wildlife Feeding</li> <li>• Yard Waste Collection</li> <li>• Illicit Connection</li> <li>• Private Storm Drain Retrofitting</li> <li>• Refuse Container / Dumpster (optional)</li> </ul>	No	-	-	-
Natural Hazard Ordinance	No	-	-	-
Post-Disaster Recovery Ordinance	No	-	-	-
Real Estate Disclosure Requirement	Yes	Local	Construction Department	Borough Ordinance Chapter 236
Other (Special Purpose Ordinances [i.e., sensitive areas, steep slope])	No	-	-	-

### Administrative and Technical Capability

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

**Table 9.28-8. Administrative and Technical Capabilities**

Resources	Is this in place? (Yes or No)	Department/ Agency/Position
<b>Administrative Capability</b>		
Planning Board	Yes	Palmyra Land Use (Combined) Board
Mitigation Planning Committee	No	-
Environmental Board/Commission	No	-
Open Space Board/Committee	Yes	Brown Fields Development Committee
Economic Development Commission/Committee	No	-
Maintenance programs to reduce risk	Yes	Palmyra Borough Safety Committee
Mutual aid agreements	Yes	Law Enforcement, Fire, OEM
<b>Technical/Staffing Capability</b>		
Planner(s) or engineer(s) with knowledge of land development and land management practices	Yes	Administrator/Zoning/Planning Board





Resources	Is this in place? (Yes or No)	Department/ Agency/Position
Engineer(s) or professional(s) trained in construction practices related to buildings and/or infrastructure	Yes	Administrator/Borough Council
Planners or engineers with an understanding of natural hazards	Yes	Administrator/Outside Professional Planners
NFIP Floodplain Administrator (FPA)	Yes	Construction Official
Surveyor(s)	Yes	Borough Engineer
Personnel skilled or trained in GIS and/or Hazards United States (HAZUS) – Multi-Hazards (MH) applications	Yes	Burlington County OEM
Scientist familiar with natural hazards	No	-
Emergency Manager	Yes	Palmyra/Riverton Executive Emergency Management Coordinator
Grant writer(s)	Yes	Administrator/Borough Council/Outside Professionals
Staff with expertise or training in benefit/cost analysis	Yes	Administrator
Professionals trained in conducting damage assessments	Yes	Construction Department/ Borough Engineer

### Fiscal Capability

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

**Table 9.28-9. 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	Yes
Incur debt through general obligation bonds	Yes
Incur debt through special tax bonds	Yes
Incur debt through private activity bonds	No
Withhold public expenditures in hazard-prone areas	No
Other federal or state Funding Programs	Yes
Open Space Acquisition funding programs	Yes
Other	No

### Community Classifications

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







**Table 9.28-10. Community Classifications**

Program	Do you have this? (Yes/No)	Classification (if applicable)	Date Classified (if applicable)
Community Rating System (CRS)	Yes	7	2015
Building Code Effectiveness Grading Schedule (BCEGS)	Yes	Res 3 / Comm 3	2016
Public Protection (ISO Fire Protection Classes 1 to 10)	Yes	3	2017
Storm Ready Certification	Yes	-	2007
Firewise Communities classification	No	-	
Natural disaster/safety programs in/for schools	Yes	-	1996
Organizations with mitigation focus (advocacy group, non-government)	No	-	-
Public education program/outreach (through website, social media)	Yes	-	1996
Public-private partnership initiatives addressing disaster-related issues	Yes	-	1996

Note:

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

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

Criteria for classification credits are outlined in the following documents:

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

### Self-Assessment of Capability

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

**Table 9.28-11. Self-Assessment Capability for the Municipality**

Area	Degree of Hazard Mitigation Capability		
	Limited (If limited, what are your obstacles?)*	Moderate	High
Planning and regulatory capability		X	





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

### National Flood Insurance Program

#### NFIP Floodplain Administrator (FPA)

Tracy Kilmer, Construction Official

#### Flood Vulnerability Summary

The Borough of Palmyra maintains inventories of properties that have been damaged by flooding and identifies property owners who are interested in mitigation. The FPA noted that Hurricane Sandy resulted in infrastructure damage to many commercial and residential structures. In any event that causes damage to structures, damage assessor LEPC members will drive around and speak to residents in vulnerable areas of the Borough. The Borough had one property ownery that was interested in elevation mitigation but was determined to be uneligibile for grant funding.

#### Resources

The FPA assumes the responsibilities of floodplain administration for the Borugh of Palmyra. As a Class 7 community in the CRS program, the Borough provides NFIP administration services and functions to residents including permit review, inspections, damage assessments, record keeping, GIS, education, and outreach. The FPA stated there are no barriers to running an effective floodplain management program and feels additional adequately supported and trained to fulfill her responsibilities as the municipal floodplain administrator. The FPA would consider attending continuing education and certification training on floodplain management if it were offered in the future.

#### Compliance History

To the best of the FPA’s knowledge, the Borough is in good compliance with the NFIP. The most recent Community Assistance Visit is unknown but the last CRS recertification took place in October of 2017.

#### Regulatory

The Borough of Palmyra’s floodplain management ordinance meets the minimum set by FEMA and the State of New Jersey. The FPA stated that the Borough’s Land Use Master Plan is up for review this year and will review/address floodplain standards and new requirements set by the NFIP. Every application before the Land Use Board goes through a flood plan review. The Borough is a Class 7 CRS community.

### Integration of Hazard Mitigation into Existing and Future Planning Mechanisms

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





addition, the community identified specific integration activities that will be incorporated into municipal procedures.

### Planning

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

### Regulatory and Enforcement (Ordinances)

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The Borough of Palmyra's codebook can be found online at <https://www.ecode360.com/PA0254?needHash=true>.

**Flood Damage Prevention Ordinance:** The Palmyra Flood Damage Prevention Ordinance (Chapter 126 of the municipal code) designates the local floodplain administrator, identifies base flood data, and sets standards for flood hazard reduction. Borough Ordinance 2017-09 updates the Flood Damage Prevention Ordinance to include freeboard and cumulative substantial damages.

**Land Development Ordinance:** The Borough's Land Development Ordinance (Chapter 158 of the municipal code) purpose is to consolidate the zoning regulations and achieve substantial conformity with the primary elements of the Master Plan of the Borough of Palmyra and to make such regulations substantially consistent with the land use element of the Master Plan. The ordinance covers land use, zoning, subdivisions, and the planning board.

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

**Stormwater Management:** Chapter 236 of the municipal code discusses stormwater management. The chapter is intended to regulate the feeding of wildlife, disposal of waste, including pet solid waste, yard waste collection, litter, and other waste and pollution that may find its way into stormwater runoff in order to improve, preserve and protect the water quality of waters and streams within the Borough and surrounding communities that may be downstream from the Borough so as to protect the health safety and welfare of the public. This chapter also regulates connections to the municipal separate storm sewer system (MS4) operated by the Borough and establishes penalties for violations of the provisions of this chapter.

### Operational and Administration

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**Mutual Aid Agreements:** The Borough maintains mutual aid agreements with neighboring communities for continuity of operations.





**Information Sharing:** The Borough works to improve municipal communication systems to include information sharing with the county and surround municipalities.

**Vegetation Management:** The Borough's Department of Public Works has a program to address dangerous trees threatening people and property through proactive tree-trimming (vegetation management) programs in conjunction with property owners and utility companies.

**Land Use Board:** 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 our community's character by implementing provisions of the Land Use Ordinance. 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. Working hand in hand with the LUB, the Zoning Official provides regulatory enforcement of the Land Use ordinances. It is through the enforcement of our comprehensive zoning, subdivision, and flood plan ordinances, as well as related Borough administrative codes, that we achieve our mission goals. The uses of land are regulated through a permitting process whereby applicants identify anticipated uses and structural setbacks and the department ensures compliance with the applicable codes.

**Shade Tree Advisory Board:** The Palmyra Shade Tree Advisory Board members are volunteers appointed by the mayor to maintain the municipal shade trees in the Borough. The municipal shade trees save homeowner's energy, improve the value of homes, and add to the beauty of the community. The trees closest to the street are most likely Palmyra's shade trees, and if homeowners think that the trees need to be trimmed or present a hazard, they should contact the Shade Tree Advisory Board.

### Funding

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The Borough of Palmyra has a line for mitigation project funding in the municipal/operating budget. The Capital Improvement Budget also has a line item for mitigation project funding. The Borough has provided funding for mitigation projects identified in the hazard mitigation plan and has provided protection for buildings/infrastructure in high hazard areas.

### Education and Outreach

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The Borough conducts and facilitates community and public education and outreach for residents and businesses to promote natural hazard risk reduction to include disaster preparedness and hazard mitigation. The Borough also provides public education and outreach on proper installation and/or use of backup power.

The Borough maintains a municipal website (<http://boroughofpalmyra.com/>) where they post information regarding upcoming community events, important municipal decisions, and information about the municipality. Residents can sign up for an email list that is used to send the Borough newsletter. The Borough also maintains a Facebook page and Twitter account with similar information.

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



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

### **9.28.6 Mitigation Strategy and Prioritization**

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

#### **Past Mitigation Initiative Status**

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

DRAFT



Table 9.28-12. Status of Previous Mitigation Actions

Action Number	2013 Mitigation Action	Responsible Party	Status (In progress, No progress, Complete)	Describe Status 1. Please describe what was accomplished and indicate % complete. 2. If there was no progress, indicate what obstacles/delays encountered? 3. If there was progress, how is/was the action being funded (e.g., FEMA HMGP grant, local budget)?	Next Steps 1. Project to be included in 2019 HMP or Discontinue 2. If including action in the 2019 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
PA-1	Install an emergency generator at the Palmyra Community Center.	Lead: Palmyra Borough Support: NJOEM	Complete	100% N/A N/A	1. Discontinue 2. N/A 3. Complete
PA-2	Upgrade tidal Riverwall at Palmyra Harbour, Cinnaminson Ave. and Harbour Dr., and Bank Ave.	Lead: Palmyra Borough Support: NJOEM	In Progress	In Progress N/A N/A	1. Discontinue 2. N/A 3. Complete
PA-3	Install Tide Gate/Flapper Valve and other essential stormwater equipment at Palmyra Harbour, Palmyra Drive.	Lead: Palmyra Borough Support: NJOEM	Complete	100% N/A N/A	1. Discontinue 2. N/A 3. Complete
PA-4	Drainage, curbs, sidewalks, stormwater improvements to East Charles Street	Lead: Palmyra Borough	Complete	100% N/A N/A	1. Discontinue 2. N/A 3. Complete
PA-5	Drainage, stormwater, to alleviate flooding conditions at along two blocks of W. 2 <sup>nd</sup> St. Improvements will be on two blocks from Orchard Ave. to Market St.	Lead: Palmyra Borough	Complete	100% N/A N/A	1. Discontinue 2. N/A 3. Complete
PA-6	Continue to support the implementation, monitoring, maintenance, and updating of this Plan, as defined in Section 7.0	Lead: Palmyra Borough	In Progress	In Progress N/A Budget Source: Borough	1. Discontinue 2. N/A 3. Ongoing capability
PA-7	Evaluate benefits of participating in CRS program	Twp. Committee; Planning	In Progress	In Progress N/A Budget Source: Borough	1. Discontinue 2. N/A 3. Ongoing capability
PA-8	Conduct and facilitate community and public education and outreach for residents and businesses to	Municipality with support from Planning Partners, County	In Progress	In Progress N/A Budget Source: Borough	1. Discontinue 2. N/A 3. Ongoing capability





Action Number	2013 Mitigation Action	Responsible Party	Status (In progress, No progress, Complete)	Describe Status	
				1. Please describe what was accomplished and indicate % complete.	2. If there was no progress, indicate what obstacles/delays encountered?
				3. If there was progress, how is/was the action being funded (e.g., FEMA HMGP grant, local budget)?	Next Steps
	promote natural hazard risk reduction to include: Disaster preparedness Hazard mitigation	Planning, NJOEM, FEMA			
PA-9	Improve municipal communications systems to include information sharing with county and surrounding municipalities.	Municipality with support from County, NJOEM and FEMA	In Progress	Ongoing N/A Budget Source: Borough	1. Discontinue 2. N/A 3. Ongoing capability
PA-10	Obtain and install backup power sources at critical facilities.	Municipality with support from County, NJOEM and FEMA	Complete	100% N/A N/A	1. Discontinue 2. N/A 3. Complete
PA-11	Create/Enhance/Maintain Mutual Aid agreements with neighboring communities for continuity of operations	Municipality with support from County, NJOEM, FEMA and surrounding communities	Complete	100% N/A N/A	1. Discontinue 2. N/A 3. Complete
PA-12	Promote the participation of Floodplain Administrators within the planning process and other activities.	Municipality with support from County, NJOEM and FEMA	Complete	100% N/A N/A	1. Discontinue 2. N/A 3. Complete
PA-13	Enhance resilience to severe storms by continuing to participate in the NOAA "Storm Ready" program.	Municipality with support from County, NJOEM and FEMA	Complete	100% N/A N/A	1. Discontinue 2. N/A 3. Complete
PA 14	Provide public education and outreach on proper installation and/or use of backup power	Municipal Clerk	In Progress	In Progress N/A Budget Source: Borough	1. Discontinue 2. N/A 3. Ongoing capability
PA-15	Address dangerous trees threatening people and property	Municipal DPW	In Progress	Ongoing N/A	1. Discontinue 2. N/A





Action Number	2013 Mitigation Action	Responsible Party	Status (In progress, No progress, Complete)	Describe Status 1. Please describe what was accomplished and indicate % complete. 2. If there was no progress, indicate what obstacles/delays encountered? 3. If there was progress, how is/was the action being funded (e.g., FEMA HMGP grant, local budget)?	Next Steps 1. Project to be included in 2019 HMP or Discontinue 2. If including action in the 2019 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
	through proactive tree-trimming (vegetation management) programs in conjunction with property owners and utility companies.			Budget Source: Borough	3. Ongoing capability
PA-16	Continue to support the implementation, monitoring, maintenance, and updating of this Plan through participating in the 5-year Plan Update	Municipality with support from Planning Partners, County Planning, NJOEM, FEMA	In Progress	Ongoing N/A Budget Source: Borough	1. Discontinue 2. N/A 3. Ongoing capability

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### **Completed Mitigation Initiatives Not Identified in the Previous Mitigation Strategy**

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

- None identified.

### **Proposed Hazard Mitigation Initiatives for the Plan Update**

The Borough of Palmyra participated in a mitigation action workshop in March 2018 and was provided the following FEMA publications to use as a resource as part of their comprehensive review of all possible activities and mitigation measures to address their hazards: FEMA 551 ‘Selecting Appropriate Mitigation Measures for Floodprone Structures’ (March 2007) and FEMA ‘Mitigation Ideas – A Resource for Reducing Risk to Natural Hazards’ (January 2013).

Table 9.28-13 summarizes the comprehensive-range of specific mitigation initiatives the Borough of Palmyra would like to pursue in the future to reduce the effects of hazards. Some of these initiatives may be previous actions carried forward for this plan update. These initiatives are dependent upon available funding (grants and local match availability) and may be modified or omitted at any time based on the occurrence of new hazard events and changes in municipal priorities. Both the four FEMA mitigation action categories and the six CRS mitigation action categories are listed in the table below to further demonstrate the wide-range of activities and mitigation measures selected.

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

Table 9.28-14 provides a summary of the prioritization of all proposed mitigation initiatives for the Plan update.



Table 9.28-13. Proposed Hazard Mitigation Initiatives

Initiative	Mitigation Initiative	Hazard(s) Mitigated	Goals Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category	CRS Category
B. Palmyra - 1	Critical Infrastructure Flood Hazard Mitigation for Borough of Palmyra Public Works Equalization Building	Flooding, Utility Failure	1, 2, 3	Through Borough of Palmyra professionals	High	High	Borough budget	Long Term/ongoing program	High	SIP	PP
B. Palmyra - 2	Critical Infrastructure Flood Hazard Mitigation for Borough of Palmyra Public Works Department Equipment Storage Building	Flooding, Utility Failure	1, 2, 3	Through Borough of Palmyra professionals	High	High	Borough budget	Long Term/ongoing program	High	SIP	PP
B. Palmyra - 3	Critical Infrastructure Flood Hazard Mitigation for Borough of Palmyra Public Works Department Office/Digester Building	Flooding, Utility Failure	1, 2, 3	Through Borough of Palmyra professionals	High	High	Borough budget	Long Term/ongoing program	High	SIP	PP
B. Palmyra - 4	Critical Infrastructure Flood Hazard Mitigation for Borough of Palmyra Public Works Department Salt Storage Building	Flooding, Utility Failure	1, 2, 3	Through Borough of Palmyra professionals	High	High	Borough budget	Long Term/ongoing program	High	SIP	PP
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	All Hazards	1, 2, 6	Municipality with support from facility manager	High	High	HMA Grants, Municipal Budget	Short Term DOF	Medium	SIP	SP, PP
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-	All Hazards	1, 2, 3	Municipality with support from facility manager	High	High	HMA Grants, Municipal Budget	Short Term DOF	Medium	SIP	SP, PP





Initiative	Mitigation Initiative	Hazard(s) Mitigated	Goals Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category	CRS Category
	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										
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	All Hazards	1, 2, 3	Municipality with support from facility manager	High	High	HMA Grants, Municipal Budget	Short Term DOF	Medium	SIP	SP, PP
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. 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	All Hazards	1, 2, 4, 6	Municipality with support from facility manager	High	High	HMA Grants, Municipal Budget	Short Term DOF	Medium	SIP	SP, PP
B. Palmyra - 9	Coordinate with the facility manager at the Tacony Palmyra Bridge Police Dept to support the mitigation of vulnerable structures via	All Hazards	1, 2, 6	Municipality with support from facility manager	High	High	HMA Grants, Municipal Budget	Short Term DOF	Medium	SIP	SP, PP





Initiative	Mitigation Initiative	Hazard(s) Mitigated	Goals Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category	CRS Category
	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										
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	All Hazards	1, 2, 6	Municipality with support from facility manager	High	High	HMA Grants, Municipal Budget	Short Term DOF	Medium	SIP	SP, PP

**Notes:**

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

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

Acronyms and Abbreviations:

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

Potential FEMA HMA Funding Sources:

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

Timeline:

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





Costs:

Where actual project costs have been reasonably estimated:

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

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

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

Mitigation Category:

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

CRS Category:

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

Benefits:

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

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

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

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





Table 9.28-14. Summary of Prioritization of Actions

Mitigation Action/Project Number	Mitigation Action/Initiative	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community	Total	High / Medium / Low
B. Palmyra - 1	Critical Infrastructure Flood Hazard Mitigation for Borough of Palmyra Public Works Equalization Building	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	High
B. Palmyra - 2	Critical Infrastructure Flood Hazard Mitigation for Borough of Palmyra Public Works Department Equipment Storage Building	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	High
B. Palmyra - 3	Critical Infrastructure Flood Hazard Mitigation for Borough of Palmyra Public Works Department Office/Digester Building	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	High
B. Palmyra - 4	Critical Infrastructure Flood Hazard Mitigation for Borough of Palmyra Public Works Department Salt Storage Building	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	High
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.	0	1	1	1	1	1	-1	0	1	1	0	0	1	0	7	Medium





Table 9.28-14. Summary of Prioritization of Actions

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





Table 9.28-14. Summary of Prioritization of Actions

Mitigation Action/Project Number	Mitigation Action/Initiative	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community	Total	High / Medium / Low
	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																
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. Phase 1: Identify most cost-effective mitigation option Phase 2: Work with facility manager to implement selected action based on available funding and local match ability	0	1	1	1	1	1	-1	0	1	1	0	0	1	0	7	Medium
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-	0	1	1	1	1	1	-1	0	1	1	0	0	1	0	7	Medium







Table 9.28-14. Summary of Prioritization of Actions

Mitigation Action/Project Number	Mitigation Action/Initiative	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community	Total	High / Medium / Low
	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																
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	0	1	1	1	1	1	-1	0	1	1	0	0	1	0	7	Medium
B. Palmyra - 11	Require new developments to provide mitigation to insure that the cumulative rate of peak runoff is	0	1	0	1	1	1	-1	0	1	1	1	0	1	0	6	Medium





Table 9.28-14. Summary of Prioritization of Actions

Mitigation Action/Project Number	Mitigation Action/Initiative	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community	Total	High / Medium / Low
	maintained at pre-development levels																
B. Palmyra - 12	The Township will continue to promote and support non-structural flood hazard mitigation alternatives for at risk properties within the floodplain, including those that have been identified as Repetitive Loss (RL) and Severe Repetitive Loss (SRL), such as acquisition/relocation or elevation depending on feasibility. The parameters for this initiative would be: funding, benefits versus cost, and willing participation of property owners	1	1	0	1	1	1	-1	0	1	1	1	0	1	0	8	Medium

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





### 9.28.7 Future Needs To Better Understand Risk/Vulnerability

None at this time.

### 9.28.8 Hazard Area Extent and Location

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

### 9.28.9 Additional Comments

None at this time.

Figure 9.28-1. Borough of Palmyra Hazard Area Extent and Location Map 1

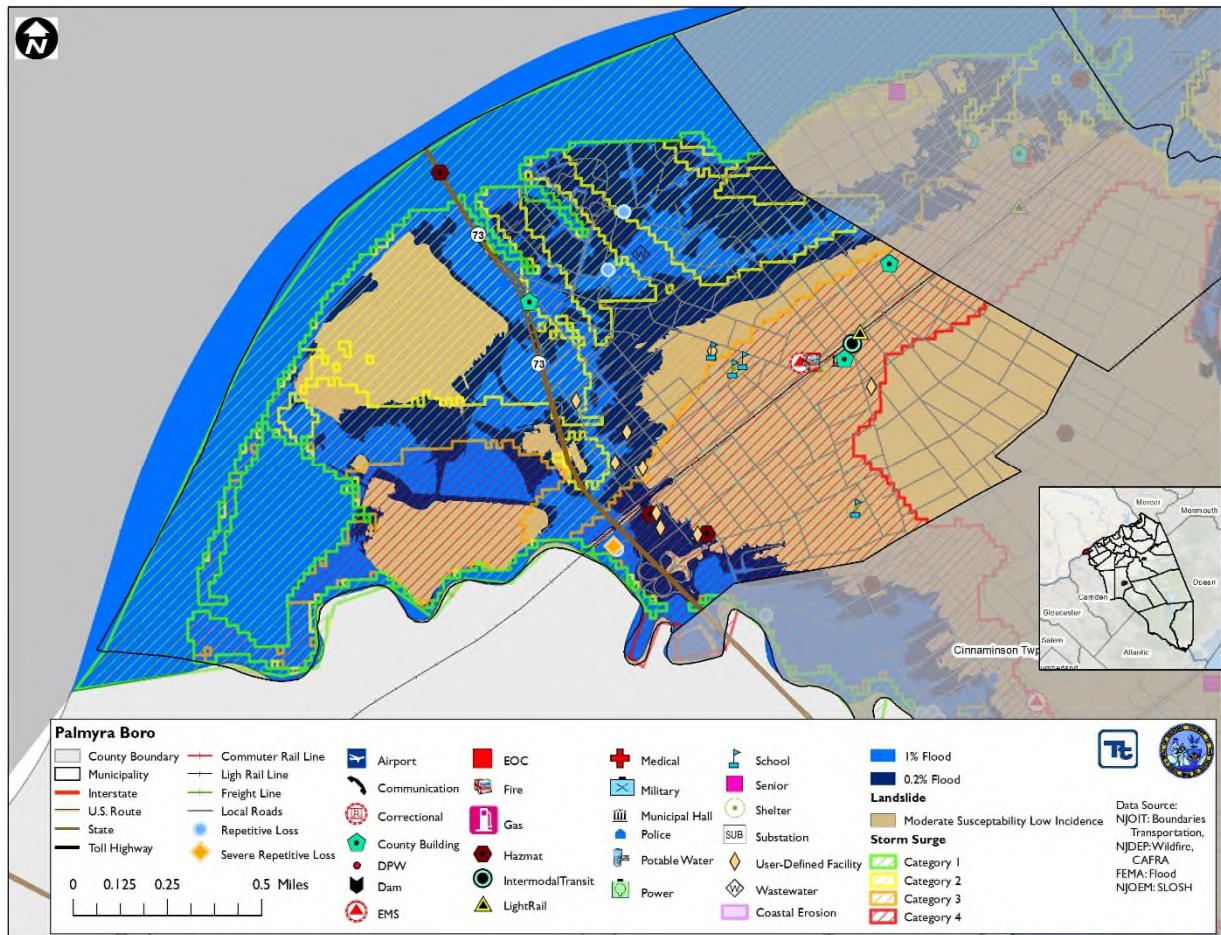


Figure 9.28-2. Borough of Palmyra Hazard Area Extent and Location Map 2





<b>Name of Jurisdiction:</b>	Borough of Palmyra
<b>Name and Title Completing Worksheet:</b>	Tracy Kilmer, Deputy OEM Coordinator
<b>Action Number:</b>	B. Palmyra - 1
<b>Mitigation Action/Initiative:</b>	Critical Infrastructure Flood Hazard Mitigation for Borough of Palmyra Public Works Equalization Building

Assessing the Risk	
<b>Hazard(s) addressed:</b>	Flooding, Utility Failure
<b>Specific problem being mitigated:</b>	<p>The Borough is currently paying over \$46,000 in flood insurance premiums for buildings in the Department of Public Works (DPW) facility that are in the flood zone.</p> <p>The facilities have received flood damage in the past but no losses have occurred that have required us to establish a claim.</p>
Evaluation of Potential Actions/Projects	
<b>Actions/Projects Considered (name of project and reason for not selecting):</b>	<p>No action: Problem continues</p> <p>Relocation: Not feasible</p>
Action/Project Intended for Implementation	
<b>Description of Selected Action/Project</b>	Equalization Building: Work Recommended: The best mitigation is to lift the finished floor six (6) feet above ground level. This could be lifted onto piers or a crawlspace, as long as the crawlspace is properly vented. There must be at least two flood vents on different walls per enclosed area below the Base Flood Elevation (BFE). The mechanicals of the building need to be elevated above the BFE for protection.
<b>Action/Project Category</b>	Structure and Infrastructure Project (SIP)
<b>Goals Met</b>	1, 2, 3
<b>Applies to existing and or new development, or not applicable</b>	This project would apply to the existing building contained within the DPW.
<b>Benefits (losses avoided)</b>	<p>The losses avoided would be total shut down of sewer services to over 8,000 residents and a regional shelter for emergency management. It would create a public health crisis by causing a harmful level of bacteriological agent by waste water and excrement build-up and eventual overflow.</p> <p>Without the borough sewer functioning properly sewage or effluent will collect, overflow causing a public health alert.</p> <p>It would promote the release of toxic constituents</p> <p>Disruption in the sewer system would cause a shutdown of all commercial businesses in the Borough.</p>
<b>Estimated Cost</b>	High
<b>Priority*</b>	High
Plan for Implementation	
<b>Responsible Organization</b>	Borough of Palmyra has engineers on staff/site who could be responsible for the project.
<b>Local Planning Mechanism</b>	Hazard mitigation planning
<b>Potential Funding Sources</b>	Grant funding with local cost share including but limited to federal, state, and local sources





<b>Timeline for Completion</b>	Long Term/On-going Program: Depending on funding available. Project can be phased-in per building.
<b>Reporting on Progress</b>	
<b>Date of Status Report/ Report of Progress</b>	Date: March 16, 2018 Progress on Action/Project: This is a new project. As stated above, the entire project would be the lifting/elevation and vent placement for the above mentioned building. This project is funding dependent. With that being said, we could phase each building into NFIP compliance.

DRAFT



**Action Number:**

B. Palmyra - 1

**Mitigation Action/Initiative:**

Critical Infrastructure Flood Hazard Mitigation for Borough of Palmyra Public Works Equalization Building

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
<b>Life Safety</b>	1	Prevents public health hazards of sewage into homes and commercial businesses.
<b>Property Protection</b>	1	Buildings listed are in a flood zone. Reducing damages to structures would be significant for protecting health and public welfare.
<b>Cost-Effectiveness</b>	1	Providing for no disruption in public services provided by the Borough to residents and business owners.
<b>Technical</b>	1	I have quotes from a contractor who specializes in flood mitigation and protection of structures.
<b>Political</b>	1	Our local politicians and business administrator do not want to answer calls from residents why this wasn't completed when they have no sewer service.
<b>Legal</b>	1	We are our own sewer department
<b>Fiscal</b>	1	We can plan to encumber funding for the project with a grant but we cannot sustain the cost all ourselves.
<b>Environmental</b>	1	There will be no environmental impact.
<b>Social</b>	1	This project will only positively help all residents in the Borough.
<b>Administrative</b>	1	We will utilize borough engineers who are on staff. All contractual work will be completed by qualified outside vendors.
<b>Multi-Hazard</b>	1	This project will be a benefit to all with no risk.
<b>Timeline</b>	1	This project can be completed within a short period of time if all funding is made available.
<b>Agency Champion</b>	1	The governing body is looking to achieve no sewer outages and also to reduce the astronomical amount of flood insurance premiums they are paying
<b>Other Community Objectives</b>	1	This project fits into the overall community objectives
<b>Total</b>	14	
<b>Priority (High/Med/Low)</b>	High	



**Name of Jurisdiction:** Borough of Palmyra  
**Name and Title Completing Worksheet:** Tracy Kilmer, Deputy OEM Coordinator  
**Action Number:** B. Palmyra - 2  
**Mitigation Action/Initiative:** Critical Infrastructure Flood Hazard Mitigation for Borough of Palmyra Public Works Department Equipment Storage Building

Assessing the Risk	
<b>Hazard(s) addressed:</b>	Flooding, Utility Failure
<b>Specific problem being mitigated:</b>	<p>The Borough is currently paying over \$46,000 in flood insurance premiums for buildings in the Department of Public Works (DPW) facility that are in the flood zone.</p> <p>The facilities have received flood damage in the past but no losses have occurred that have required us to establish a claim.</p>
Evaluation of Potential Actions/Projects	
<b>Actions/Projects Considered (name of project and reason for not selecting):</b>	<p>No action: Problem continues</p> <p>Relocation: Not feasible</p>
Action/Project Intended for Implementation	
<b>Description of Selected Action/Project</b>	Equipment Storage Building: Work Recommended: The best mitigation is to lift the finished floor three (3) feet above the ground level. This could be lifted on piers or a crawlspace, as long as the crawlspace is properly flood vented. There must be at least two flood vents on different walls per enclosed area below the Base Flood Elevation (BFE). The mechanicals of the building need to be elevated above the BFE for protection.
<b>Action/Project Category</b>	Structure and Infrastructure Project (SIP)
<b>Goals Met</b>	1, 2, 3
<b>Applies to existing and or new development, or not applicable</b>	This project would apply to the existing building contained within the DPW.
<b>Benefits (losses avoided)</b>	<p>The losses avoided would be total shut down of sewer services to over 8,000 residents and a regional shelter for emergency management. It would create a public health crisis by causing a harmful level of bacteriological agent by waste water and excrement build-up and eventual overflow.</p> <p>Without the borough sewer functioning properly sewage or effluent will collect, overflow causing a public health alert.</p> <p>It would promote the release of toxic constituents</p> <p>Disruption in the sewer system would cause a shutdown of all commercial businesses in the Borough.</p>
<b>Estimated Cost</b>	High
<b>Priority*</b>	High
Plan for Implementation	
<b>Responsible Organization</b>	Borough of Palmyra has engineers on staff/site who could be responsible for the project.
<b>Local Planning Mechanism</b>	Hazard mitigation planning
<b>Potential Funding Sources</b>	Grant funding with local cost share including but limited to federal, state, and local sources





<b>Timeline for Completion</b>	Long Term/On-going Program: Depending on funding available. Project can be phased-in per building.
<b>Reporting on Progress</b>	
<b>Date of Status Report/ Report of Progress</b>	Date: March 16, 2018 Progress on Action/Project: This is a new project. As stated above, the entire project would be the lifting/elevation and vent placement for the above mentioned building. This project is funding dependent. With that being said, we could phase each building into NFIP compliance.

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**Action Number:**

B. Palmyra - 2

**Mitigation Action/Initiative:**

Critical Infrastructure Flood Hazard Mitigation for Borough of Palmyra Public Works Department Equipment Storage Building

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
<b>Life Safety</b>	1	Prevents public health hazards of sewage into homes and commercial businesses.
<b>Property Protection</b>	1	Buildings listed are in a flood zone. Reducing damages to structures would be significant for protecting health and public welfare.
<b>Cost-Effectiveness</b>	1	Providing for no disruption in public services provided by the Borough to residents and business owners.
<b>Technical</b>	1	I have quotes from a contractor who specializes in flood mitigation and protection of structures.
<b>Political</b>	1	Our local politicians and business administrator do not want to answer calls from residents why this wasn't completed when they have no sewer service.
<b>Legal</b>	1	We are our own sewer department
<b>Fiscal</b>	1	We can plan to encumber funding for the project with a grant but we can not sustain the cost all ourselves.
<b>Environmental</b>	1	There will be no environmental impact.
<b>Social</b>	1	This project will only positively help all residents in the Borough.
<b>Administrative</b>	1	We will utilize borough engineers who are on staff. All contractual work will be completed by qualified outside vendors.
<b>Multi-Hazard</b>	1	This project will be a benefit to all with no risk.
<b>Timeline</b>	1	This project can be completed within a short period of time if all funding is made available.
<b>Agency Champion</b>	1	The governing body is looking to achieve no sewer outages and also to reduce the astronomical amount of flood insurance premiums they are paying
<b>Other Community Objectives</b>	1	This project fits into the overall community objectives
<b>Total</b>	14	
<b>Priority (High/Med/Low)</b>	High	



**Name of Jurisdiction:** Borough of Palmyra  
**Name and Title Completing Worksheet:** Tracy Kilmer, Deputy OEM Coordinator  
**Action Number:** B. Palmyra - 3  
**Mitigation Action/Initiative:** Critical Infrastructure Flood Hazard Mitigation for Borough of Palmyra Public Works Department Office/Digester Building

Assessing the Risk	
<b>Hazard(s) addressed:</b>	Flooding, Utility Failure
<b>Specific problem being mitigated:</b>	<p>The Borough is currently paying over \$46,000 in flood insurance premiums for buildings in the Department of Public Works (DPW) facility that are in the flood zone.</p> <p>The facilities have received flood damage in the past but no losses have occurred that have required us to establish a claim.</p>
Evaluation of Potential Actions/Projects	
<b>Actions/Projects Considered (name of project and reason for not selecting):</b>	<p>No action: Problem continues</p> <p>Relocation: Not feasible</p>
Action/Project Intended for Implementation	
<b>Description of Selected Action/Project</b>	Office/Digester Building: Work Recommended: There must be at least two (2) vents on different walls per enclosed area below the Base Flood Elevation (BFE). Filling of the basement/crawlspace of this building by adding seven (7) feet and ten (10) inches of fill or excavating seven (7) seven feet and ten (10) inches from the adjacent ground level.
<b>Action/Project Category</b>	Structure and Infrastructure Project (SIP)
<b>Goals Met</b>	1, 2, 3
<b>Applies to existing and or new development, or not applicable</b>	This project would apply to the existing buildings contained within the DPW.
<b>Benefits (losses avoided)</b>	<p>The losses avoided would be total shut down of sewer services to over 8,000 residents and a regional shelter for emergency management. It would create a public health crisis by causing a harmful level of bacteriological agent by waste water and excrement build-up and eventual overflow.</p> <p>Without the borough sewer functioning properly sewage or effluent will collect, overflow causing a public health alert.</p> <p>It would promote the release of toxic constituents</p> <p>Disruption in the sewer system would cause a shutdown of all commercial businesses in the Borough.</p>
<b>Estimated Cost</b>	High
<b>Priority*</b>	High
Plan for Implementation	
<b>Responsible Organization</b>	Borough of Palmyra has engineers on staff/site who could be responsible for the project.
<b>Local Planning Mechanism</b>	Hazard mitigation planning
<b>Potential Funding Sources</b>	Grant funding with local cost share including but limited to federal, state, and local sources





<b>Timeline for Completion</b>	Long Term/On-going Program: Depending on funding available. Project can be phased-in per building.
<b>Reporting on Progress</b>	
<b>Date of Status Report/ Report of Progress</b>	Date: March 16, 2018 Progress on Action/Project: This is a new project. As stated above, the entire project would be the lifting/elevation and vent placement for the above mentioned building. This project is funding dependent. With that being said, we could phase each building into NFIP compliance.

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**Action Number:**

B. Palmyra - 3

**Mitigation Action/Initiative:**

Critical Infrastructure Flood Hazard Mitigation for Borough of Palmyra Public Works Department Office/Digester Building

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
<b>Life Safety</b>	1	Prevents public health hazards of sewage into homes and commercial businesses.
<b>Property Protection</b>	1	Buildings listed are in a flood zone. Reducing damages to structures would be significant for protecting health and public welfare.
<b>Cost-Effectiveness</b>	1	Providing for no disruption in public services provided by the Borough to residents and business owners.
<b>Technical</b>	1	I have quotes from a contractor who specializes in flood mitigation and protection of structures.
<b>Political</b>	1	Our local politicians and business administrator do not want to answer calls from residents why this wasn't completed when they have no sewer service.
<b>Legal</b>	1	We are our own sewer department
<b>Fiscal</b>	1	We can plan to encumber funding for the project with a grant but we can not sustain the cost all ourselves.
<b>Environmental</b>	1	There will be no environmental impact.
<b>Social</b>	1	This project will only positively help all residents in the Borough.
<b>Administrative</b>	1	We will utilize borough engineers who are on staff. All contractual work will be completed by qualified outside vendors.
<b>Multi-Hazard</b>	1	This project will be a benefit to all with no risk.
<b>Timeline</b>	1	This project can be completed within a short period of time if all funding is made available.
<b>Agency Champion</b>	1	The governing body is looking to achieve no sewer outages and also to reduce the astronomical amount of flood insurance premiums they are paying
<b>Other Community Objectives</b>	1	This project fits into the overall community objectives
<b>Total</b>	14	
<b>Priority (High/Med/Low)</b>	High	



**Name of Jurisdiction:** Borough of Palmyra  
**Name and Title Completing Worksheet:** Tracy Kilmer, Deputy OEM Coordinator  
**Action Number:** B. Palmyra - 4  
**Mitigation Action/Initiative:** Critical Infrastructure Flood Hazard Mitigation for Borough of Palmyra Public Works Department Salt Storage Building

Assessing the Risk	
<b>Hazard(s) addressed:</b>	Flooding, Utility Failure
<b>Specific problem being mitigated:</b>	<p>The Borough is currently paying over \$46,000 in flood insurance premiums for buildings in the Department of Public Works (DPW) facility that are in the flood zone.</p> <p>The facilities have received flood damage in the past but no losses have occurred that have required us to establish a claim.</p>
Evaluation of Potential Actions/Projects	
<b>Actions/Projects Considered (name of project and reason for not selecting):</b>	<p>No action: Problem continues</p> <p>Relocation: Not feasible</p>
Action/Project Intended for Implementation	
<b>Description of Selected Action/Project</b>	Salt Storage Building: Work Recommended: The best mitigation is to lift the finished floor three (3) feet above the ground level. This could be lifted on piers or a crawlspace, as long as the crawlspace is properly flood vented. There must be at least two flood vents on different walls per enclosed area below the Base Flood Elevation (BFE). The mechanicals of the building need to be elevated above the BFE for protection.
<b>Action/Project Category</b>	Structure and Infrastructure Project (SIP)
<b>Goals Met</b>	1, 2, 3
<b>Applies to existing and or new development, or not applicable</b>	This project would apply to the existing buildings contained within the DPW.
<b>Benefits (losses avoided)</b>	<p>The losses avoided would be total shut down of sewer services to over 8,000 residents and a regional shelter for emergency management. It would create a public health crisis by causing a harmful level of bacteriological agent by waste water and excrement build-up and eventual overflow.</p> <p>Without the borough sewer functioning properly sewage or effluent will collect, overflow causing a public health alert.</p> <p>It would promote the release of toxic constituents</p> <p>Disruption in the sewer system would cause a shutdown of all commercial businesses in the Borough.</p>
<b>Estimated Cost</b>	High
<b>Priority*</b>	High
Plan for Implementation	
<b>Responsible Organization</b>	Borough of Palmyra has engineers on staff/site who could be responsible for the project.
<b>Local Planning Mechanism</b>	Hazard mitigation planning
<b>Potential Funding Sources</b>	Grant funding with local cost share including but limited to federal, state, and local sources





<b>Timeline for Completion</b>	Long Term/On-going Program: Depending on funding available. Project can be phased-in per building.
<b>Reporting on Progress</b>	
<b>Date of Status Report/ Report of Progress</b>	Date: March 16, 2018 Progress on Action/Project: This is a new project. As stated above, the entire project would be the lifting/elevation and vent placement for the above mentioned building. This project is funding dependent. With that being said, we could phase each building into NFIP compliance.

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**Action Number:**

B. Palmyra - 4

**Mitigation Action/Initiative:**

Critical Infrastructure Flood Hazard Mitigation for Borough of Palmyra Public Works Department Salt Storage Building

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
<b>Life Safety</b>	1	Prevents public health hazards of sewage into homes and commercial businesses.
<b>Property Protection</b>	1	Buildings listed are in a flood zone. Reducing damages to structures would be significant for protecting health and public welfare.
<b>Cost-Effectiveness</b>	1	Providing for no disruption in public services provided by the Borough to residents and business owners.
<b>Technical</b>	1	I have quotes from a contractor who specializes in flood mitigation and protection of structures.
<b>Political</b>	1	Our local politicians and business administrator do not want to answer calls from residents why this wasn't completed when they have no sewer service.
<b>Legal</b>	1	We are our own sewer department
<b>Fiscal</b>	1	We can plan to encumber funding for the project with a grant but we can not sustain the cost all ourselves.
<b>Environmental</b>	1	There will be no environmental impact.
<b>Social</b>	1	This project will only positively help all residents in the Borough.
<b>Administrative</b>	1	We will utilize borough engineers who are on staff. All contractual work will be completed by qualified outside vendors.
<b>Multi-Hazard</b>	1	This project will be a benefit to all with no risk.
<b>Timeline</b>	1	This project can be completed within a short period of time if all funding is made available.
<b>Agency Champion</b>	1	The governing body is looking to achieve no sewer outages and also to reduce the astronomical amount of flood insurance premiums they are paying
<b>Other Community Objectives</b>	1	This project fits into the overall community objectives
<b>Total</b>	14	
<b>Priority (High/Med/Low)</b>	High	