



9.29 Borough of Pemberton

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

9.29.1 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
Chad Bozoski, EMC/Fire Chief 609.668.8876 Gwfd1900@yahoo.com	Donna Mull, Borough Clerk/Administrator 609.894.8222 x5 dmull@pemberton.comcastbiz.net

9.29.2 Municipal Profile

Like many other Burlington County towns, Pemberton owes the initial impetus for its development to water powered industry. In December of 1826, the Borough of Pemberton was officially incorporated by an act of the New Jersey Legislature. There was a store, a school, and three hotels, which may have served as boarding houses for unmarried workers.

By 1785, there were about 70 dwellings in the town; by 1834, the number had increased to about 100. Industry continued to flourish.

Pemberton's economy shifted during the second half of the 19th century from industry to processing of agricultural products and services for the surrounding area. Situated between fertile farmland to the west and the pine barrens to the east, and with a good transportation system, Pemberton became a distribution point for such products as cranberries and blueberries. It was only after World War II that the business district began to decline because of competition from office parks and shopping malls.¹

Pemberton Borough 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.

Pemberton Borough is surrounded by Pemberton Township in the central portion of Burlington County. The Borough is comprised of approximately 0.60 square miles, of which, 0.585 square miles of it is land and 0.017

¹ <http://www.pembertonborough.us/historical-information.html>



square miles of it is water.² The center of the Borough of Pemberton is located on a ridge of land between the North Branch of the Rancocas to the south and Budd's Run to the north.³ According to the 2010 Census, the community's population was 1,409.

Growth/Development Trends

The Borough of Pemberton 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 9.29-1. Growth and Development

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

* Only location-specific hazard zones or vulnerabilities identified.

9.29.3 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 9.29-2. 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	Downed trees and wires, power outages, road closures
June 23, 2015	Severe Storm (DR-4231)	Yes	Downed trees and wires, power outages, road closures
January 22-24, 2016	Severe Winter Storm (DR-4264)	Yes	Downed trees and wires, power outages, road closures

Notes:

- EM Emergency Declaration (FEMA)
- FEMA Federal Emergency Management Agency
- DR Major Disaster Declaration (FEMA)

² http://www.census.gov/geo/maps-data/data/docs/gazetteer/2010_place_list_34.txt

³ <http://www.pembertonborough.us/historical-information.html>



N/A Not applicable

9.29.4 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 Pemberton. 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 Pemberton. During the review of the hazard/vulnerability risk ranking, the Borough indicated the following:

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

Table 9.29-3. Hazard Risk/Vulnerability Risk Ranking

Hazard type	Estimate of Potential Dollar Losses to Structures Vulnerable to the Hazard ^{a, c}	Probability of Occurrence	Risk Ranking Score (Probability x Impact)	Hazard Ranking ^b
Coastal Erosion	RCV Exposed to CE Hazard Area: \$0	Rare	6	Low
Drought	Damage estimate not available.	Frequent	30	Medium
Earthquake	100-Year GBS: \$0 500-Year GBS: \$204,133 2,500-Year GBS: \$2,950,703	Occasional	28	Medium
Flood*	1% Annual Chance: \$0	Frequent	18	Medium
Landslide	RCV Exposed to Landslide Hazard Area \$0	Rare	6	Low
Severe Storm	100-year MRP: \$178,587 500-year MRP: \$715,940 Annualized: \$12,225	Frequent	48	High
Severe Winter Weather	1% GBS: \$2,074,329 5% GBS: \$10,371,643	Frequent	51	High
Wildfire	Estimated Value in the Extreme, Very High, and High Hazard Areas: \$253,071	Occasional	22	Medium

Notes:

- Building damage ratio estimates based on FEMA 386-2 (August 2001)
 - 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
 - Loss estimates for the severe storm and severe winter storm hazards are structural values only and do not include the value of contents.
 - Loss estimates for the flood and earthquake hazards represent both structure and contents.
 - The HAZUS-MH earthquake model results are reported by Census Tract.
- * The Borough of Pemberton changed the risk ranking for flood from low to medium.

National Flood Insurance Program (NFIP) Summary

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





Table 9.29-4. 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 Pemberton	2	3	\$458.74	0	0	0

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 9.29-6. 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
None identified.					

Source: FEMA 2017, Burlington County

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

Other Vulnerabilities Identified

The municipality has identified the following vulnerabilities within their community:

- Rancocas Creek North Branch - primary flooding source due to torrential rains during summer and autumn months.

9.29.5 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 Pemberton.



Table 9.29-7. 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.)
Planning Capability				
Master Plan	Yes	Local	Administrator CFO	
Capital Improvements Plan	Yes	Local	CFO	
Floodplain Management / Basin Plan	No			
Stormwater Management Plan	12/19/05	Local	Borough	Chapter 174
Open Space Plan	4/16/79	Local	Planning Board	Chapter 179
Stream Corridor Management Plan	12/19/05	Local	Borough	Chapter 174
Watershed Management or Protection Plan	No			
Economic Development Plan	10/4/67	Local	Borough	Chapter 117-2
Comprehensive Emergency Management Plan	No			
Emergency Operation Plan	No			
Post-Disaster Recovery Plan	No			
Transportation Plan	No			
Strategic Recovery Planning Report	No			
Other Plans:	No			
Regulatory Capability				
Building Code	3/21/77	State & Local	Construction Office	Chapter 77
Zoning Ordinance	1/29/79	Local	Zoning	Chapter 210
Subdivision Ordinance	4/16/79	Local	Planning Board	Chapter 179
NFIP Flood Damage Prevention Ordinance	9/17/79	Federal, State, Local	Borough	Chapter 105
NFIP: Cumulative Substantial Damages	No			
NFIP: Freeboard	Yes	State, Local		
Growth Management Ordinances	4/16/79	Local	Planning Board	Chapter 179
Site Plan Review Requirements	4/16/79	Local	Borough	Chapter 165
Stormwater Management Ordinance	12/19/05	Local	Borough	Chapter 174
Municipal Separate Storm Sewer System (MS4)	12/19/2005	Local		Chapter 173
Natural Hazard Ordinance	No			
Post-Disaster Recovery Ordinance	No			
Real Estate Disclosure Requirement	Yes	State		



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.)
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 Pemberton.

Table 9.29-8. Administrative and Technical Capabilities

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

Fiscal Capability

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



Table 9.29-9. 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	No
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	No
Other	No

Community Classifications

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

Table 9.29-10. Community Classifications

Program	Do you have this? (Yes/No)	Classification (if applicable)	Date Classified (if applicable)
Community Rating System (CRS)	No	N/A	N/A
Building Code Effectiveness Grading Schedule (BCEGS)	No		
Public Protection (ISO Fire Protection Classes 1 to 10)	Yes	05	7/1/2014
Storm Ready Certification	No	N/A	N/A
Firewise Communities classification	No	N/A	N/A
Natural disaster/safety programs in/for schools	No		
Organizations with mitigation focus (advocacy group, non-government)	No		
Public education program/outreach (through website, social media)	No		
Public-private partnership initiatives addressing disaster-related issues	No		

Note:

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

The classifications listed above relate to the community’s ability to provide effective services to lessen its vulnerability to the hazards identified. These classifications can be viewed as a gauge of the community’s capabilities in all phases of emergency management (preparedness, response, recovery and mitigation) and are used as an underwriting parameter for determining the costs of various forms of insurance. The CRS class applies to flood insurance while the BCEGS and Public Protection classifications apply to standard property insurance. CRS classifications range on a scale of 1 to 10 with class 1 being the best possible classification, and





class 10 representing no classification benefit. Firewise classifications include a higher classification when the subject property is located beyond 1000 feet of a creditable fire hydrant and is within 5 road miles of a recognized Fire Station.

Criteria for classification credits are outlined in the following documents:

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

Self-Assessment of Capability

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

Table 9.29-11. 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	
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)

Harry Wetterskog, Construction Official

Flood Vulnerability Summary

At this time, the municipality does not maintain a list or inventory of properties that have been flood damaged, and does not have a record of the number of homes that may have been damaged during Hurricane Sandy or other storm events. The municipality does not make sustainable damage estimates and does not have a count for a given storm event. Funding sources for potential mitigated properties can include local budget or grant funding with aid from the property owner.

Resources

The FPA is the sole person assuming the responsibilities of floodplain administration for the Borough. NFIP administration services and functions provided by the FPA include, permit review, inspections, and education and outreach. The Borough provides education and outreach to the community regarding the flood hazard; information and links to flood maps and insurance information is available on the website. The FPA is adequately supported and trained to fulfill the responsibilities as the FPA, but would consider attending continuing education and/or certification training on floodplain management if it were offered in the County.





Compliance History

The Borough is currently in good standing with the NFIP; however, the date of the most recent compliance audit is unknown.

Regulatory

The Borough's floodplain management regulations/ordinances meet the FEMA and State minimum requirements. The planning board and zoning board consider efforts to reduce flood risk when reviewing variances such as height restrictions. The Borough has considered joining the Community Rating System (CRS) and would attend a CRS seminar if offered locally.

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.

Regulatory and Enforcement (Ordinances)

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 the 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 www.nj.gov/dep/dwq/msrp_home.htm. The Borough of Pemberton is a Tier A municipality.

Stormwater Management: Chapter 174 of the municipal code discusses stormwater management. The policy of this chapter is: Flood control, groundwater recharge, and pollutant reduction through nonstructural or low-impact techniques shall be explored before relying on structural BMPs. Structural BMPs should be integrated with nonstructural stormwater management strategies and proper maintenance plans. Nonstructural strategies include both environmentally sensitive site design and source controls that prevent pollutants from being placed on the site or from being exposed to stormwater. Source control plans should be developed based upon physical site conditions and the origin, the nature, and the anticipated quantity or amount of potential pollutants. Multiple stormwater management BMPs may be necessary to achieve the established performance standards for water quality, quantity, and groundwater recharge. The purpose of this chapter is to establish minimum stormwater management requirements and controls for major development.

Flood Hazard Areas: The purpose of the flood hazard areas ordinance (chapter 105 of the municipal code) is 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:

- Protect human life and health.
- Minimize expenditure of public money for costly flood control projects.



- Minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public.
- Minimize prolonged business interruptions.
- Minimize damage to public facilities and utilities, such as water and gas mains, electric, telephone and sewer lines, and streets and bridges located in areas of special flood hazard.
- Help maintain a stable tax base by providing for the second use and development of areas of special flood hazard so as to minimize future flood blight areas.
- Ensure that potential buyers are notified that property is in an area of special flood hazard.
- Ensure that those who occupy the areas of special flood hazard assume responsibility for their actions.

Operational and Administration

The Borough of Pemberton has the following board and departments:

- Clerk
- Fire Department
- Municipal Court
- Planning and Zoning Board
- Police Department
- Recycling
- Tax Collector

Funding

The Township has access to Capital Improvements project funding and is eligible to apply for Community Development Block Grants, FEMA Pre-Disaster Mitigation or Flood Mitigation Assistance grant funding, or other state/federal grants to fund mitigation projects.

Education and Outreach

The Borough of Pemberton has a website where one can access information about the government, departments, community links, historical information, and the calendar of events.

9.29.6 Mitigation Strategy and Prioritization

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

Past Mitigation Initiative Status

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



Table 9.29-12. 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.
PBB-1	Install new bulkhead and retaining wall next to fire house.	Borough of Pemberton /OEM/ Fire Dept	No Progress	Budget constraints	1. Include in 2019 HMP 2. Secure funding
PBB-2	Install generators in the firehouse, public works yard, pump houses and water wells.	Borough of Pemberton OEM, DPW	No Progress	Budget constraints	1. Include in 2019 HMP 2. Secure funding
PBB-3	Conduct Public Outreach/Education in storm and flood preparedness and notification procedures.	OEM	No Progress	Budget constraints	1. Include in 2019 HMP 2. Secure funding
PBB-4	Provide public education and outreach on proper installation and/or use of backup power	Municipal Clerk, OEM and government	No Progress	Budget constraints	1. Include in 2019 HMP 2. Secure funding
PBB-5	Develop contingency plan for possible water tower failure and explore funding for upgrade	Municipal Clerk, OEM	No Progress	Budget constraints	1. Include in 2019 HMP 2. Secure funding
PBB-6	Evaluate benefits of participating in CRS program	Twp. Committee, Planning, OEM, Floodplain Adm.	In Progress	Ongoing.	1. Include in 2019 HMP 2. Continue evaluating the efficacy of joining CRS and securing funding to do so
PBB-7	Conduct and facilitate community and public education and outreach for residents and businesses to promote natural hazard risk reduction to include: • Disaster preparedness • Hazard mitigation	Municipality with support from Planning Partners, County Planning, NJOEM, FEMA	Complete	Complete	1. Discontinue 2. 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 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.
PBB-8	Improve municipal communication systems to include information sharing with county and surrounding municipalities.	OEM with support from County, NJOEM and FEMA	No Progress	Budget constraints	1. Include in 2019 HMP 2. Seek funding
PBB-9	Obtain and install backup power sources at all critical facilities to include shelters.	Municipality engineering, OEM with support from County, NJOEM and FEMA	No Progress	Budget constraints	1. Include in 2019 HMP 2. Seek funding
PBB-10	Create/Enhance/Maintain Mutual Aid agreements with neighboring communities for continuity of operations	Municipal Government, OEM with support from County, NJOEM, FEMA and surrounding communities	Complete	Working with neighboring communities to enhance and maintain agreements	1. Discontinue
PBB-11	Continue to support the implementation, monitoring, maintenance, and updating of this Plan through participating in the 5 year Plan Update	Municipal Government, OEM with support from Planning Partners, County Planning, NJOEM, FEMA	Complete	Complete	1. Discontinue 2. Participating in plan update
PBB-12	Continue to promote the participation of Floodplain Administrator within the planning process and other related activities.	Municipal Government with support from County, NJOEM and FEMA	Complete		1. Discontinue 2. 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 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.
PBB-13	Enhance community resilience to severe storms (incl. severe winter storms) by joining the NOAA "Storm Ready" program.	OEM with support from County, NJOEM and FEMA	No Progress	Budget constraints	1. Include in 2019 HMP 2. Determine benefit of joining the program
PBB-14	Provide public education and outreach on proper installation and/or use of backup power	Municipal Clerk, OEM and government	No Progress	Budget constraints	1. Include in 2019 HMP 2. Seek funding
PBB-15	Address dangerous trees threatening people and property through proactive tree-trimming (vegetation management) programs in conjunction with property owners and utility companies.	Municipal DPW	Complete	Complete	1. Discontinue 2. Ongoing capability
PBB-16	Evaluate benefits of participating in the Firewise Program	Municipal OEM	No Progress	Budget constraints	1. Include in 2019 HMP 2. Seek funding



Completed Mitigation Initiatives not Identified in the Previous Mitigation Strategy

The Borough of Pemberton 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 by the municipality.

Proposed Hazard Mitigation Initiatives for the Plan Update

The municipality 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 9.29-13 summarizes the comprehensive-range of specific mitigation initiatives the Borough of Pemberton 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 9.29-14 provides a summary of the prioritization of all proposed mitigation initiatives for the Plan update.



Table 9.29-13. Proposed Hazard Mitigation Initiatives

Initiative	Mitigation Initiative	Critical Facility (Yes / No)	Hazard(s) Mitigated	Goals and Objectives Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category	CRS Category
PBB-1 (Former PBB-1)	Install new bulkhead and retaining wall next to fire house.	Yes	All	1, 2, 3, 6	Borough of Pemberton /OEM/ Fire Dept	High	High	Municipal Budget, HMA programs with local or county match	Short Term	High	SIP	SP
PBB-2 (Former PBB-2)	Install generators in the firehouse, public works yard, pump houses and water wells.	Yes	All	1, 2, 6	Borough of Pemberton OEM, DPW	High	High	Municipal Budget, HMA programs with local or county match	Short Term	High	SIP	ES
PBB-3 (Former PBB-3)	Conduct Public Outreach/Education in storm and flood preparedness and notification procedures.	No	All	1, 2, 5	OEM	Medium	Low	Municipal Budget	Short Term	Medium	EAP	PI
PBB-4 (Former PBB-4)	Provide public education and outreach on proper installation and/or use of backup power	No	Severe Storm	1, 2, 5	Municipal Clerk, OEM and government	Medium	Low	Municipal Budget	Short Term	High	EAP	PI
PBB-5 (Former PBB-5)	Develop contingency plan for possible water tower failure and explore funding for upgrade	Yes	All Hazards	1, 6	Municipal Clerk, OEM	High	Low-High	Federal Grants to include Homeland Security	Long Term	Medium	LPR	PR
PBB-6 (Former PBB-6)	Evaluate benefits of participating in CRS program	No	All	All	Twp. Committee, Planning, OEM, Floodplain Adm.	Medium	Low	Municipal Government, OEM and Floodplain Admin.	Short Term	Medium	LPR	PR
PBB-7 (Former PBB-8)	Improve municipal communication systems to include information sharing with county and surrounding municipalities.	No	All Hazards	All	OEM with support from County, NJOEM and FEMA	Medium	Medium	Municipal Budget	Short Term	Medium	LPR	ES, PR
PBB-8 (Former PBB-9)	Obtain and install backup power sources at all critical facilities to include shelters.	Yes	All Hazards	1, 2, 6	Municipality engineering, OEM with	Medium	Medium	Municipal Budget	Short Term	Medium	SIP	ES





Table 9.29-13. Proposed Hazard Mitigation Initiatives

Initiative	Mitigation Initiative	Critical Facility (Yes / No)	Hazard(s) Mitigated	Goals and Objectives Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category	CRS Category
					support from County, NJOEM and FEMA							
PBB-9	During future updates of the Master Plan, Capital Improvements Plan, Open Space Plan, Economic Development Plan, work to integrate hazard mitigation principles and recommendations into the plans. Additionally, use these hazard mitigation principles and plan recommendations to update local building and zoning codes to create a more resilient community.	No	All Hazards	All	Municipality	High	Low	Municipal Budget	Short Term, Depending on update schedule	High	LPR	PR, PI

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:

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:





Costs:

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

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

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

Benefits:

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

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

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

Mitigation Category:

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

CRS Category:

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





Table 9.29-14. 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
PBB-1 (Former PBB-1)	Install new bulkhead and retaining wall next to fire house.	1	1	1	1	1	1	-1	1	0	1	1	1	1	0	10	High
PBB-2 (Former PBB-2)	Install generators in the firehouse, public works yard, pump houses and water wells.	1	1	1	1	1	1	-1	0	0	1	1	1	1	0	9	High
PBB-3 (Former PBB-3)	Conduct Public Outreach/Education in storm and flood preparedness and notification procedures.	1	1	1	1	1	1	-1	1	1	1	1	1	1	0	12	Medium
PBB-4 (Former PBB-4)	Provide public education and outreach on proper installation and/or use of backup power	1	1	1	1	1	0	-1	0	1	1	1	0	1	0	8	High
PBB-5 (Former PBB-5)	Develop contingency plan for possible water tower failure and explore funding for upgrade	1	0	1	1	0	0	-1	1	0	1	1	1	1	0	7	Medium
PBB-6 (Former PBB-6)	Evaluate benefits of participating in CRS program	1	1	1	0	1	1	-1	0	0	1	1	1	1	0	8	Medium
PBB-7 (Former PBB-8)	Improve municipal communication systems to include information sharing with county and surrounding municipalities.	0	0	1	1	1	1	-1	0	0	1	1	1	1	0	8	Medium
PBB-8 (Former PBB-9)	Obtain and install backup power sources at all critical facilities to include shelters.	1	1	1	1	1	1	-1	0	0	1	1	1	1	0	9	Medium
PBB-9	During future updates of the Master Plan,	1	1	1	1	1	1	1	0	0	1	1	0	1	0	10	High





Table 9.29-14. 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
	Capital Improvements Plan, Open Space Plan, Economic Development Plan, work to integrate hazard mitigation principles and recommendations into the plans. Additionally, use these hazard mitigation principles and plan recommendations to update local building and zoning codes to create a more resilient community.																

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



9.29.7 Future Needs To Better Understand Risk/Vulnerability

None at this time.

9.29.8 Hazard Area Extent and Location

Hazard area extent and location maps have been generated for the Borough of Pemberton 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 Pemberton has significant exposure. These maps are illustrated in the hazard profiles within Section 5.4, Volume I of this Plan.

9.29.9 Additional Comments

None at this time.

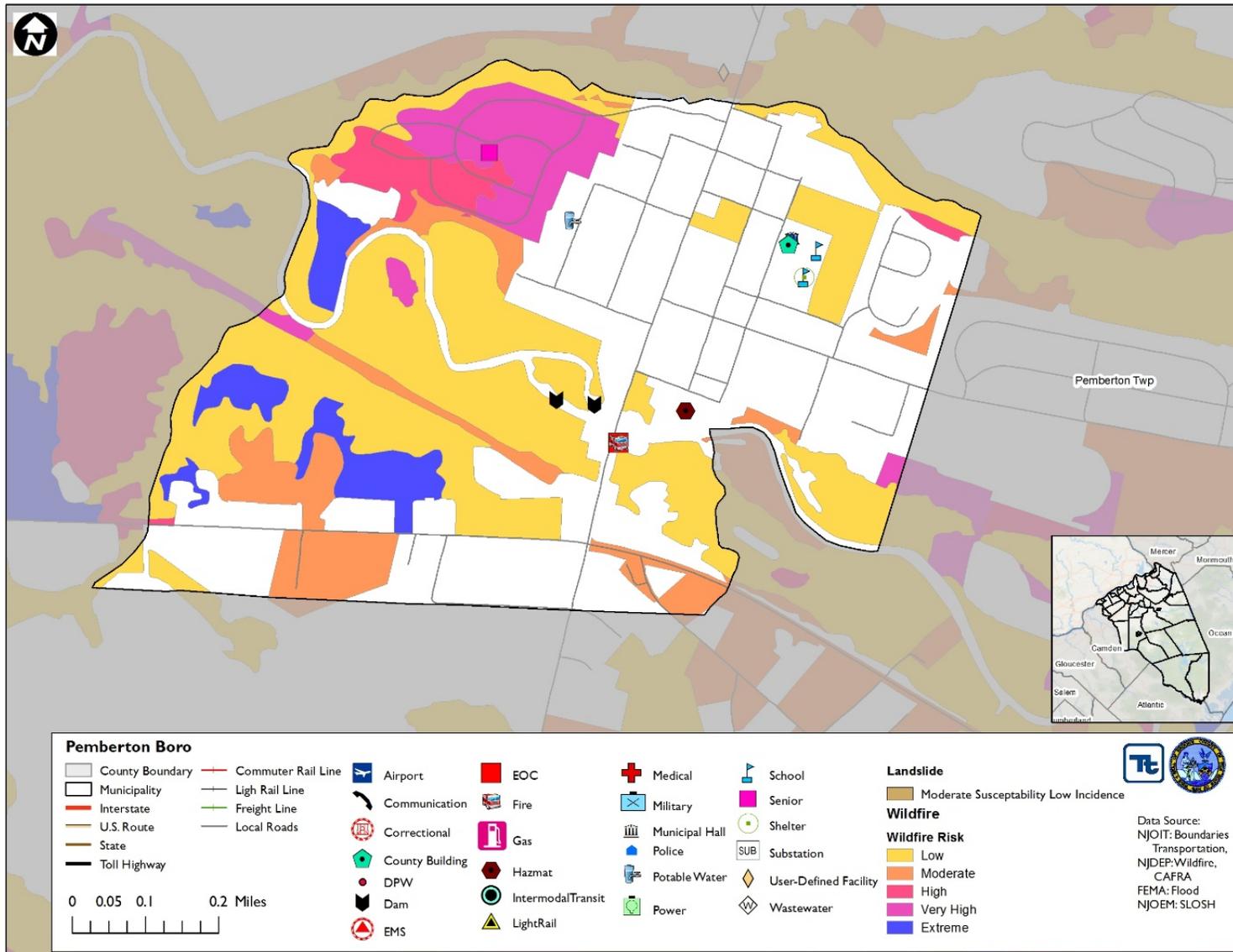


Figure 9.29-1. Borough of Pemberton Hazard Area Extent and Location Map 1





Figure 9.29-2. Borough of Pemberton Hazard Area Extent and Location Map 2





Action Number:

PBB-1 (Former PBB-1)

Mitigation Action Name:

Install new bulkhead and retaining wall next to fire house.

Assessing the Risk	
Hazard(s) addressed:	All
Specific problem being mitigated:	Existing infrastructure has lost structural integrity over time and may not provide adequate protection for the fire house.
Evaluation of Potential Actions/Projects	
Actions/Projects Considered (name of project and reason for not selecting):	No Action - current problem continues Relocate fire house – may be cost-prohibitive action and no other feasible location Deployable flood barrier – requires staff to deploy prior to an event and would not help mitigate erosion.
Action/Project Intended for Implementation	
Description of Selected Action/Project	Replacement of bulkhead and retaining wall
Mitigation Action Type	SIP
Goals Met	1, 2, 3, 6
Critical Facility (Y/N)	Yes
Benefits (losses avoided)	High
Estimated Cost	High
Priority*	High
Plan for Implementation	
Responsible Organization	Borough of Pemberton /OEM/ Fire Dept
Local Planning Mechanism	Hazard mitigation, emergency management
Potential Funding Sources	Municipal Budget, HMA programs with local or county match
Timeline for Completion	Short Term
Reporting on Progress	
Date of Status Report/ Report of Progress	Date: 1/31/18 Status: Budget constraints



Action Number:

PBB-1 (Former PBB-1)

Mitigation Action Name:

Install new bulkhead and retaining wall next to fire house.

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	
Property Protection	1	Protect fire house from future storm damages
Cost-Effectiveness	1	
Technical	1	
Political	1	
Legal	1	
Fiscal	-1	Need funding to complete
Environmental	1	
Social	0	
Administrative	1	
Multi-Hazard	1	
Timeline	1	To be completed within 5 years
Agency Champion	1	
Other Community Objectives	0	
Total	10	
Priority (H/M/L)	High	



Action Number:

PBB-2 (Former PBB-2)

Mitigation Action Name:

Install generators in the firehouse, public works yard, pump houses and water wells.

Assessing the Risk	
Hazard(s) addressed:	All
Specific problem being mitigated:	Backup power to essential facilities is critical during an emergency event
Evaluation of Potential Actions/Projects	
Actions/Projects Considered (name of project and reason for not selecting):	No Action - current problem continues Solar panels: weather dependent and costly. Mobile generator: may lack sufficient power supply or run time.
Action/Project Intended for Implementation	
Description of Selected Action/Project	Installation of generators and backup power required to ensure the building's ability to remain functional during an event.
Mitigation Action Type	SIP
Goals Met	1, 2, 6
Critical Facility (Y/N)	Yes
Benefits (losses avoided)	High
Estimated Cost	High
Priority*	High
Plan for Implementation	
Responsible Organization	Borough of Pemberton OEM, DPW
Local Planning Mechanism	Hazard mitigation, emergency management
Potential Funding Sources	Municipal Budget, HMA programs with local or county match
Timeline for Completion	Short Term
Reporting on Progress	
Date of Status Report/ Report of Progress	Date: 1/31/18 Status: Budget constraints



Action Number:

PBB-2 (Former PBB-2)

Mitigation Action Name:

Install generators in the firehouse, public works yard, pump houses and water wells.

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Continuity of operations at facilities that provide essential services to residents
Property Protection	1	Continuity of operations at facilities that provide essential services to the borough
Cost-Effectiveness	1	
Technical	1	
Political	1	
Legal	1	
Fiscal	-1	Need funding to complete project
Environmental	0	
Social	0	
Administrative	1	
Multi-Hazard	1	All hazards
Timeline	1	
Agency Champion	1	
Other Community Objectives	0	
Total	9	
Priority (H/M/L)	High	



Action Number: PBB-8 (Former PBB-9)
Mitigation Action Name: Obtain and install backup power sources at all critical facilities to include shelters.

Assessing the Risk	
Hazard(s) addressed:	All Hazards
Specific problem being mitigated:	Backup power to essential facilities is critical during an emergency event
Evaluation of Potential Actions/Projects	
Actions/Projects Considered (name of project and reason for not selecting):	No Action - current problem continues Solar panels: weather dependent and costly. Mobile generator: may lack sufficient power supply or run time.
Action/Project Intended for Implementation	
Description of Selected Action/Project	Installation of generators and backup power required to ensure the building's ability to remain functional during an event.
Mitigation Action Type	SIP
Goals Met	1, 2, 6
Critical Facility (Y/N)	Yes
Benefits (losses avoided)	Medium
Estimated Cost	Medium
Priority*	Medium
Plan for Implementation	
Responsible Organization	Municipality engineering, OEM with support from County, NJOEM and FEMA
Local Planning Mechanism	Hazard mitigation, emergency management
Potential Funding Sources	Municipal Budget
Timeline for Completion	Short Term
Reporting on Progress	
Date of Status Report/ Report of Progress	Date: 1/31/18 Status: Budget constraints



Action Number:

PBB-8 (Former PBB-9)

Mitigation Action Name:

Obtain and install backup power sources at all critical facilities to include shelters.

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Continuity of operations at facilities that provide essential services to residents
Property Protection	1	
Cost-Effectiveness	1	
Technical	1	
Political	1	
Legal	1	
Fiscal	-1	Need funding to complete project
Environmental	0	
Social	0	
Administrative	1	
Multi-Hazard	1	All hazards
Timeline	1	
Agency Champion	1	
Other Community Objectives	0	
Total	9	
Priority (H/M/L)	Medium	