

Upper Milford Township, Lehigh County Annex

Hazard Mitigation Plan Points-of-Contact

Primary:

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Alternate:

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Municipal Profile

Upper Milford Township is a mixed-use community ranging from residential suburban areas adjacent to the Borough of Emmaus to rural residential areas along the easterly and southerly portions of the Township. Inter disbursed within the Township are several small village areas containing higher density population centers. The major village areas are Vera Cruz, Shimerville, Old Zionsville and Zionsville. Upper Milford Township is bordered by; Emmaus Borough, Salisbury Township and Upper Saucon Township to the north; Lower Milford Township to the east; Montgomery and Berks Counties to the south; and Lower Macungie Township and Macungie Borough to the west. The area of the Township is approximately 18.5 square miles with a population of 7,777 (2020 Census).

The South Mountain is the predominant physical feature within the Township running north-south direction and bisecting the Township.

Sitting on the South Mountain, the Township is located within three major watersheds. The Little Lehigh Creek on the westerly and central Vera Cruz village area of the Township, the Perkiomen Creek area consisting of the southerly and easterly portions of the Township, and the Saucon Creek water shed which is a relatively small headwater area located in the northeasterly portion of the Township. Due to predominately being in the headwater areas of the watersheds, flooding is minimal and significant only when rainfall intensity is over 2.5 inches per hour. Significant areas of the Township are heavily wooded and steeply sloped making many portions of the Township susceptible to winter storm and hurricane events, which result in lengthy power outages and road closures.

The main transportation routes passing through Upper Milford Township are PA Route 100 and Route 29. The Pennsylvania Turnpike (I-476) also passes through the Township but does not have any public access points located within the township. To a lesser degree (State Route 2023), Saint Peters Road, Shimerville Road, Main Road East and Main Road West and Brunner Road provide east-west access through the township. The township is also generally accessed from the Emmaus area via Pennsylvania Avenue and Vera Cruz Road and South 5th Street.

Municipal Participation

Identify municipal stakeholders to be involved in the planning process such as, floodplain administrator, public works, emergency management, engineers, planners, etc., and include their specific role in the process.

Kyle Walbert, Zoning Officer Role: Updating the plan	Edward Carter, Township Manager Role: Updating the plan
Brent Fegley, Public Works Foreman Role: Informing use on field hazards	Brian Miller, Planning Coordinator Role: Updating the plan

**please update table as needed*

1. Identify community stakeholders such as; neighborhood groups, religious groups, major employers / businesses, etc., that will be informed and / or involved in the planning process and describe how they will be involved.

Buckeye Pipelines

2. Describe how the public **will be engaged** in the current planning process (examples, newsletters, social media, etc.), **and how they were engaged** since the 2018 Hazard Mitigation Plan.

Current: Upcoming newsletters and website

Past: Same

Compliance with the National Flood Insurance Program (NFIP)

Topic	Identify the source of information, if different from the one listed.	Additional Comments
1. Staff Resources		
Is the Community Floodplain Administrator (FPA) or NFIP Coordinator certified?	Community FPA	No
Is floodplain management an auxiliary function?	Community FPA	Yes
Provide an explanation of NFIP administration services (e.g., permit review, GGIS, education or outreach, inspections, engineering capability)	Community FPA	Township Code Enforcement Officer/ Zoning officer
What are the barriers to running an effective NFIP program in the community, if any?	Community FPA	N/A
2. Compliance History		
Is the community in good standing with the NFIP?	State NFIP Coordinator, FEMA NFIP Specialist, or community records	N/A
Are there any outstanding compliance issues (i.e., current violations)?		No
When was the most recent Community Assistance Visits (CAV) or Community Assistance Contact (CAC)?		N/A
Is a CAV or CAC scheduled or needed?		No
3. Regulation		
When did the community enter the NFIP?	NFIP Community Status Book	11/1/1974
Are the Flood Insurance Rate Maps (FIRMs) digital or paper? How are residents assisted with mapping?	Community FPA	Digital
Do floodplain regulations meet or exceed FEMA or State minimum requirements?	Community FPA	Meets

Compliance with the National Flood Insurance Program (NFIP) - *continued*

Topic	Identify source of information, if different from the one listed.	Additional Comments
If so, in what ways?		
Describe the permitting process	Community FPA, State, FEMA NFIP	Building inspector reviews plans
4. Insurance Summary		
How many NFIP policies are in the community? What is the total premium and coverage?	State NFIP Coordinator or FEMA NFIP Specialist	N/A
How many claims have been paid in the community? What is the total amount of paid claims? How many substantial damage claims have there been?	FEMA NFIP or Insurance Specialist	N/A
How many structures are exposed to flood risk within the community?	Community FPA or GIS Analyst	N/A
Describe any areas of flood risk with limited NFIP policy coverage	Community FPA or FEMA Insurance Specialist	N/A
5. Community Rating System (CRS)		
Does the community participate in CRS?	Community FPA, State, or FEMA NFIP	No
If so, what is the community's CRS Class Ranking?	Flood Insurance Manual (http://www.fema.gov/floodinsurancemanual.gov)	N/A
What categories and activities provide CRS points and how can the Class be improved?		N/A
Does the plan include CRS planning requirements?	Community FPA, FEMA CRS Coordinator, or ISO representative	N/A

Community Assets

Community assets are defined to include anything that is important to the character as well as the function of a community, and can be described in four categories, they are; people, economy, natural environment and built environment. Please identify the community assets and location under each category.

1. People

- Concentrations of vulnerable populations such as the elderly, physically or mentally disabled, non-English speaking, and the medically or chemically dependent.

None

- Types of visiting populations where large numbers of people are concentrated such as visitors for special events and students.

None

2. Economy

- Major employers, primary economic sectors such as agriculture and commercial centers where losses would have a severe impact on the community.

None

3. Natural Environment

- Those areas / features that can provide protective functions that reduce the magnitude of hazard events such as, wetlands or riparian areas, and other environmental features important to protect.

None

4. Built Environment

- Existing structures such as, concentrations of buildings that may be more vulnerable to hazards based on location, age, construction type and / or condition of use.

None

- Infrastructure systems such as water and wastewater facilities, power utilities, transportation systems, communication systems, energy pipelines and storage.

Buckeye Pipelines and storage tanks
Power lines

- High potential loss facilities such as, dams, locations that house hazardous materials, military and / or civilian defense installations.

None

- Critical facilities such as, hospitals, medical facilities, police and fires stations, emergency operations centers, shelters, schools and airports / heliports.

None

- Cultural / historical resources such as, museums, parks, stadiums, etc.

None

Capability Assessment

Capability	<ul style="list-style-type: none"> ✓ Regulatory ✓ Tools ✓ Programs 	Status			Department / Agency Responsible	Effect on Hazard Loss Reduction: -Supports -Neutral -Hinders	Change since 2018 Plan? + Positive - Negative	Has the 2018 Plan been integrated into the Regulatory Tool/Program ? If so, how?	How can these capabilities be expanded and improved to reduce risk?	Additional Comments
		In Place	Date Adopted or Updated	Under Development						
1. Planning & Regulatory	Comprehensive Plan	X	5/19/05		Zoning/ Planning	S				
	Capital Improvement Plan									
	Economic Development Plan									
	Continuity of Operations Plan									
	Stormwater Management Plan / Ordinance	X	12/29/10		Zoning	S				
	Open Space Management Plan (or Parks/Rec., Greenways Plan)	X	2008		Zoning/ Planning	S				
	Natural Resource Protection Plan	X	3/18/10		Zoning	S				
	Transportation Plan									
	Historic Preservation Plan									
	Floodplain Management Plan									
	Farmland Preservation	X	3/18/10		Zoning	S				
	Evacuation Plan									
	Disaster Recovery Plan									
	Hazard Mitigation Plan	X	2018		County	S				
	Emergency Operations Plan	X	5/27/05		Township Board of Supervisors	S				
	Zoning Regulations	X	3/18/10		Zoning/ Planning	S				
	Floodplain Regulations	X	3/18/10		Zoning	S				
	NFIP Participation	X	2004							
	Building Code	X	2009							
	Fire Code									
	Other									

Capability Assessment - *continued*

Capability	✓ Staff ✓ Personnel ✓ Resources	Yes	No	Department / Agency	Change since 2018 Plan? + Positive - Negative	How can these capabilities be expanded and improved to reduce risk?	Additional Comments
2. Administrative & Technology	Planners (with land use/land development knowledge)	X		Planning	No		
	Planners or engineers (with natural and/or human-caused hazards knowledge)	X		Township Engineer consultant	No		
	Engineers or professionals trained in building and/or infrastructure construction practices (including building inspectors)	X		Building depart 3rd party consultant	No		
	Emergency Manager	X		Emergency Management Coordinator	No		
	Floodplain administrator / manager	X		3 rd party	No		
	Land surveyors	X		Township Engineer consultant	No		
	Staff familiar with the hazards of the community	X		Public Works	No		
	Personnel skilled in Geographical Information Systems (GIS) and/or FEMA's HAZUS program	X		Planning/Zoning	No		
	Grant writers or fiscal staff to handle large/complex grants	X		General administration w/ consultant if needed	No		
	Other						

Capability Assessment - *continued*

Capability	<ul style="list-style-type: none"> ✓ Staff ✓ Personnel ✓ Resources 	Yes	No	Department / Agency	Change since 2018 Plan? + Positive - Negative	How can these capabilities be expanded and improved to reduce risk?	Additional Comments
3. Financial Resources	Capital improvement programming	X		General Administration	No		
	Community Development Block Grants (CDBG)	X		General Administration	No		
	Special purposes taxes	X		General Administration	No		
	Gas / Electricity utility fees			N/A	No		
	Water / Sewer fees			Lehigh County Authority	No		
	Stormwater utility fees			N/A	No		
	Development impact fees	X		General Administration	No		
	General obligation, revenue, and / or special tax bonds	X		General Administration	No		
	Partnering arrangements or intergovernmental agreements	X		General Administration & Public Works	No		
	Other						
4. Education & Outreach	Firewise Communities Certification						
	StormReady Certification						
	Natural disaster or safety-related school programs						
	Ongoing public education or information programs such as, responsible water use, fire safety, household preparedness, and environmental education.	X		Environmental Advisory Council			
	Public-private partnership initiatives addressing disaster related issues.						
	Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc.	X		Environmental Advisory Council			
	Other						

Capability Assessment - continued

Capability		Degree of Capability			Change since the 2018 Hazard Mitigation Plan? If so, how?	Additional Comments
		Limited	Moderate	High		
5. Self – Assessment	Planning and Regulatory		X			
	Administrative and Technical		X			
	Financial		X			
	Education and Outreach		X			

Known or Anticipated Future Development / Redevelopment

Development / Property Name	Type of Development	Number of Structures	Location	Known Hazard Zone	Description / Status
Fields at Indian Creek	55 and Over Community	176 houses	Between Indian Creek and Chestnut Street	Flooding on Indian Creek Road	
Fields at Jasper Ridge	Twins & Townhomes	44 twins/ 79 townhomes	Between West Minor Street and Mink Road		
Maple Ridge	Single House	42 houses	Off Main Road West		

Natural & Non-Natural Event History Specific to Upper Milford Township

Type of Event and Date(s)	FEMA Disaster # (if applicable)	Local Damage(s) or Loss(es)
Winter Storm Jonas – 1/2016	DR-4267-PA	N/A
Pennsylvania COVID-19 Pandemic – 1/2020	DR-4506-PA	Emergency Protective measures to combat COVID-19 Pandemic.

2018 Municipal Action Plan Status

Existing Mitigation Action (from 2018 Hazard Mitigation Plan)		Status					Additional Comments
		No Progress / Unknown	In Progress	Continuous	Completed	Discontinued	
1	Work along with electric utility to improve electric utility primary and secondary line clearing.	X					
2	Maintain an adequate fleet of vehicles and equipment to handle anticipated emergency response.			X			
3	Retrofit (e.g. elevate, flood-proof) structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Specifically identified are the following: - Residences on Chestnut Street between Batman and Toll Gate Phase 1: Identify appropriate candidates for retrofitting based on cost-effectiveness versus relocation. Phase 2: Where retrofitting is determined to be a viable option, work with property owners toward implementation of that action based on available funding from FEMA and local match availability.	X					
4	Purchase, or relocate structures located in hazard- prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Specifically identified are the following: - Residences on Chestnut Street between Batman and Toll Gate	X					

2018 Municipal Action Plan Status - continued

Existing Mitigation Action (from 2018 Hazard Mitigation Plan)		Status					Additional Comments
		No Progress / Unknown	In Progress	Continuous	Completed	Discontinued	
	Phase 1: Identify appropriate candidates for relocation based on cost-effectiveness versus retrofitting. Phase 2: Where relocation is determined to be a viable option, work with property owners toward implementation of that action based on available funding from FEMA and local match availability.						
5	Maintain compliance with and good standing in the NFIP including adoption and enforcement of floodplain management requirements (e.g. regulating all new and substantially improved construction in Special Hazard Flood Areas), floodplain identification and mapping, and flood insurance outreach to the community. Further, continue to meet and/or exceed the minimum NFIP standards and criteria through the following NFIP- related continued compliance actions identified below.			X			
6	Conduct and facilitate community and public education and outreach for residents and businesses to include, but not be limited to, the following to promote and effect natural hazard risk reduction: Provide and maintain links to the HMP website, and regularly post notices on the /municipal homepage(s) referencing the HMP webpages. Prepare and distribute informational letters to flood vulnerable property owners and			X			

2018 Municipal Action Plan Status - *continued*

Existing Mitigation Action (from 2018 Hazard Mitigation Plan)		Status					Additional Comments
		No Progress / Unknown	In Progress	Continuous	Completed	Discontinued	
	neighborhood associations, explaining the availability of mitigation grant funding to mitigate their properties, and instructing them on how they can learn more and implement mitigation. Use email notification systems and newsletters to better educate the public on flood insurance, the availability of mitigation grant funding, and personal natural hazard risk reduction measures. Work with neighborhood associations, civic and business groups to disseminate information on flood insurance and the availability of mitigation grant funding.						
7	Begin and/or continue the process to adopt higher regulatory standards to manage flood risk (i.e. increased freeboard, cumulative substantial damage/improvements).			X			
8	Determine if a Community Assistance Visit (CAV) or Community Assistance Contact (CAC) is needed, and schedule if needed.	X					
9	Have designated NFIP Floodplain Administrator (FPA) become a Certified Floodplain Manager through the ASFPM and/or pursue relevant continuing education training such as FEMA Benefit-Cost Analysis.	X					

2018 Municipal Action Plan Status - *continued*

Existing Mitigation Action (from 2018 Hazard Mitigation Plan)		Status					Additional Comments
		No Progress / Unknown	In Progress	Continuous	Completed	Discontinued	
10	Participate in the Community Rating System (CRS) to further manage flood risk and reduce flood insurance premiums for NFIP policyholders. This shall start with the submission to FEMA-DHS of a Letter of Intent to join CRS, followed by the completion and submission of an application to the program once the community's current compliance with the NFIP is established.	X					
11	Obtain and archive elevation certificates for NFIP compliance.		X				
12	Continue to support the implementation, monitoring, maintenance, and updating of this Plan, as defined in Section 7.0.			X			
13	Complete the ongoing updates of the Comprehensive Emergency Management Plans.			X			
14	Create/enhance/maintain mutual aid agreements with neighboring communities for continuity of operations.		X				
15	Identify and develop agreements with entities that can provide support with FEMA/PEMA paperwork after disasters; qualified damage assessment personnel – Improve post-disaster capabilities – damage assessment; FEMA/PEMA paperwork compilation, submissions, and record-keeping.	X					
16	Develop and maintain capabilities to process FEMA/PEMA paperwork after disasters; qualified damage assessment personnel – Improve post-disaster capabilities – damage assessment; FEMA/PEMA paperwork compilation, submissions, and record keeping.	X					

2018 Municipal Action Plan Status - *continued*

Notes:

1. Actions not carried through to the 2023 Action Plan are so noted.
2. To maintain National Flood Insurance Program (NFIP) compliance, actions related to the NFIP were carried through to the 2023 Action Plan even if identified by the municipality as completed.

2023 Mitigation Action Plan

Mitigation Action		Regional Action Category	Mitigation Technique Category	Hazard(s) Addressed	Priority (H / M / L)	Estimated Cost	Potential Funding	Lead Agency / Department	Implementation Schedule	Applies to New and/or Existing Structures
1	Work along with electric utility to improve electric utility primary and secondary line clearing.	21	Structure & Infrastructure	Windstorm/ Tornado, Winter Storm, Utility Interruption	High	Medium	Private Sector, Municipal Budget	Township, working with electric utilities	Short Term	Existing
2	Maintain an adequate fleet of vehicles and equipment to handle anticipated emergency response.	19	Structure & Infrastructure	All Hazards	High	High	Municipal Budget; Homeland Security Grant and public protection emergency services grant programs	Municipality	Ongoing	N/A
3	Retrofit (e.g. elevate, flood-proof) structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Specifically identified are the following: - Residences on Chestnut Street between Batman and Toll Gate Phase 1: Identify appropriate candidates for retrofitting based on cost-effectiveness versus relocation.	1	Structure & Infrastructure	Flood	High	High	FEMA Mitigation Grant Programs and local budget (or property owner) for cost share	Municipality (via Municipal Engineer/NFIP Floodplain Administrator) with support from PEMA, FEMA	Long Term DOF	Existing

2023 Mitigation Action Plan - *continued*

Mitigation Action		Regional Action Category	Mitigation Technique Category	Hazard(s) Addressed	Priority (H / M / L)	Estimated Cost	Potential Funding	Lead Agency / Department	Implementation Schedule	Applies to New and / or Existing Structures
	Phase 2: Where retrofitting is determined to be a viable option, work with property owners toward implementation of that action based on available funding from FEMA and local match availability.									
4	<p>Purchase, or relocate structures located in hazard- prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Specifically identified are the following:</p> <ul style="list-style-type: none"> - Residences on Chestnut Street between Batman and Toll Gate <p>Phase 1: Identify appropriate candidates for relocation based on cost-effectiveness versus retrofitting.</p> <p>Phase 2: Where relocation is determined to be a viable option, work with property owners toward implementation of that action based on available funding from FEMA and local match availability.</p>	2	Structure & Infrastructure	Flood	High	High	FEMA Mitigation Grant Programs and local budget (or property owner) for cost share	Municipality (via Municipal Engineer/NFIP Floodplain Administrator) with support from PEMA, FEMA	Long Term DOF	Existing

2023 Mitigation Action Plan - *continued*

Mitigation Action		Regional Action Category	Mitigation Technique Category	Hazard(s) Addressed	Priority (H / M / L)	Estimated Cost	Potential Funding	Lead Agency / Department	Implementation Schedule	Applies to New and / or Existing Structures
5	Maintain compliance with and good standing in the NFIP including adoption and enforcement of floodplain management requirements (e.g. regulating all new and substantially improved construction in Special Hazard Flood Areas), floodplain identification and mapping, and flood insurance outreach to the community. Further, continue to meet and/or exceed the minimum NFIP standards and criteria through the following NFIP- related continued compliance actions identified below.	3	Local plans & Regulations	Flood	High	Low - Medium	Municipal Budget	Municipality (via Municipal Engineer/NFIP Floodplain Administrator) with support from PEMA, ISO FEMA	Ongoing	New & Existing
6	Conduct and facilitate community and public education and outreach for residents and businesses to include, but not be limited to, the following to promote and effect natural hazard risk reduction: Provide and maintain links to the HMP website, and regularly post notices on the /municipal homepage(s) referencing the HMP webpages. Prepare and distribute informational letters to	4	Education & Awareness	All Hazards	High	Low-Medium	Municipal Budget	Municipality with support from Planning Partners, PEMA, FEMA	Short Term	N/A

2023 Mitigation Action Plan - continued

Mitigation Action		Regional Action Category	Mitigation Technique Category	Hazard(s) Addressed	Priority (H / M / L)	Estimated Cost	Potential Funding	Lead Agency / Department	Implementation Schedule	Applies to New and / or Existing Structures
	flood vulnerable property owners and neighborhood associations, explaining the availability of mitigation grant funding to mitigate their properties, and instructing them on how they can learn more and implement mitigation. Use email notification systems and newsletters to better educate the public on flood insurance, the availability of mitigation grant funding, and personal natural hazard risk reduction measures. Work with neighborhood associations, civic and business groups to disseminate information on flood insurance and the availability of mitigation grant funding.									
7	Begin and/or continue the process to adopt higher regulatory standards to manage flood risk (i.e. increased freeboard, cumulative substantial damage/improvements).	5	Local plans & Regulations	Flood	High	Low	Municipal Budget	Via Municipal Engineer / NFIP Floodplain Admin. w/ support from PEMA, FEMA	Short Term	New & Existing
8	Determine if a Community Assistance Visit (CAV) or Community Assistance Contact	3	Local plans & Regulations	Flood	High	Low	Municipal Budget	NFIP Floodplain Administrator with support	Short Term	N/A

2023 Mitigation Action Plan - continued

Mitigation Action		Regional Action Category	Mitigation Technique Category	Hazard(s) Addressed	Priority (H / M / L)	Estimated Cost	Potential Funding	Lead Agency / Department	Implementation Schedule	Applies to New and / or Existing Structures
	(CAC) is needed, and schedule if needed.							from PA DEP, PEMA, FEMA		
9	Have designated NFIP Floodplain Administrator (FPA) become a Certified Floodplain Manager through the ASFPM and/or pursue relevant continuing education training such as FEMA Benefit-Cost Analysis.	6	Local plans & Regulations	Flood	Medium	Low	Municipal Budget	NFIP Floodplain Administrator	Short Term DOF	N/A
10	Participate in the Community Rating System (CRS) to further manage flood risk and reduce flood insurance premiums for NFIP policyholders. This shall start with the submission to FEMA-DHS of a Letter of Intent to join CRS, followed by the completion and submission of an application to the program once the community's current compliance with the NFIP is established.	7	Local plans & Regulations	Flood	High	Low	Municipal Budget	NFIP Floodplain Administrator with support from PA DEP, PEMA, FEMA	Short Term	N/A
11	Obtain and archive elevation certificates for NFIP compliance.	8	Local plans & Regulations	Flood	Low	Low	Municipal Budget	NFIP Floodplain Administrator	Ongoing	N/A
12	Continue to support the implementation, monitoring, maintenance, and updating of this Plan, as defined in Section 7.0.	9	All Categories	All Hazards	High	Low – High (for 5-year update)	Municipal Budget, possibly FEMA Mitigation	Municipality (via mitigation planning point of contacts) with support	Ongoing	New & Existing

2023 Mitigation Action Plan - continued

Mitigation Action		Regional Action Category	Mitigation Technique Category	Hazard(s) Addressed	Priority (H / M / L)	Estimated Cost	Potential Funding	Lead Agency / Department	Implementation Schedule	Applies to New and / or Existing Structures
							Grant Funding for 5-year update	from Planning Partners (through their Points of Contact), PEMA		
13	Complete the ongoing updates of the Comprehensive Emergency Management Plans.	10	Local plans & Regulations	All Hazards	Medium	Low	Municipal Budget	Municipality with support from PEMA	Ongoing	New & Existing
14	Create/enhance/maintain mutual aid agreements with neighboring communities for continuity of operations.	11	All Categories	All Hazards	Medium	Low	Municipal Budget	Municipality with support from surrounding municipalities and County	Ongoing	New & Existing
15	Identify and develop agreements with entities that can provide support with FEMA/PEMA paperwork after disasters; qualified damage assessment personnel – Improve post-disaster capabilities – damage assessment; FEMA/PEMA paperwork compilation, submissions, record-keeping.	12	Education & Awareness	All Hazards	Low	Medium	Municipal budget	Municipality with support from County, PEMA, FEMA	Short Term	N/A
16	Develop and maintain capabilities to process FEMA/PEMA paperwork after disasters; qualified damage assessment personnel – Improve post-disaster capabilities	12	Education & Awareness	All Hazards	Low	Medium	Municipal budget, FEMA HMA grant programs	Municipality with support from County, PEMA	Short Term DOF	N/A

2023 Mitigation Action Plan - *continued*

Mitigation Action	Regional Action Category	Mitigation Technique Category	Hazard(s) Addressed	Priority (H / M / L)	Estimated Cost	Potential Funding	Lead Agency / Department	Implementation Schedule	Applies to New and / or Existing Structures
– damage assessment; FEMA/PEMA paperwork compilation, submissions, record keeping.									

Notes:

Estimated Costs:

- Where actual project costs have been reasonable 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.

Potential Funding (FEMA HMA):

- **BRIC** = Building Resilient Infrastructure and Communities
- **FMA** = Flood Mitigation Assistance Grant Program
- **HMGP** = Hazard Mitigation Grant Program
- **HSGP** = Homeland Security Grant Program
- **EMPG** = Emergency Management Performance Grant

Implementation Schedule:

- **Short Term** = 1 to 5 years
- **Long Term** = 5 years or greater
- **DOF** = Depending on Funding

Applies to New and/or Existing Structures:

- **N/A** = Not Applicable