Bangor Borough, Northampton County Annex

Hazard Mitigation Plan Points-of-Contact

Primary:

Stephen Reider Borough Manager 197 Pennsylvania Avenue, Bangor, PA 18013 610-588-2216 sreider@bangorborough.org

Alternate:

James Kresge Council President 197 Pennsylvania Avenue, Bangor, PA 18013 610-588-2216 jwk8375@gmail.com

Municipal Profile

Bangor Borough is located in the northeastern part of Northampton County. It encompasses an area of approximately 1.6 square miles and has a population of 5,187 (2020 Census). The borough is bordered by the Borough of Roseto to the north and the Borough of East Bangor to the northeast. Bangor is otherwise surrounded by Washington Township.

Martin's Creek passes north south through the middle of the Borough. There are also several small bodies of water in former mine pits.

PA Route 191 (1st Street) and Main Street / Ridge Road are the major north-south roadways. PA Route 512 also runs north-south from East Bangor Borough to the middle of Bangor Borough, where it turns westward towards Pen Argyl Borough. Broadway is the other major east-west roadway through the borough.

Municipal Participation

1. 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.

Stephen Reider, Borough Manager Role: Primary Contact	James Kresge, Council President Role: Council President		
Teddy Reed, Public Works Role: as needed	Heather Major, Emergency Management Role: as needed		
Jeff Ott, Engineer Role: as needed			

2. 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.

We will reach out to our organizations and hold meetings as necessary.

3. 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: With social media as a major outreach to the community, we will be utilizing this tool to reach out to the community.

Past: Same

Compliance with the National Flood Insurance Program (NFIP)

Topic	Identify 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	3 rd party enforcement
What are the barriers to running an effective NFIP program in the community, if any?	Community FPA	Staff, money and time
2. Compliance History		
Is the community in good standing with the NFIP?	State NFIP Coordinator, FEMA NFIP Specialist, or community records	Yes
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)?		Unknown
Is a CAV or CAC scheduled or needed?		No
3. Regulation		
When did the community enter the NFIP?	NFIP Community Status Book	1/25/1974
Are the Flood Insurance Rate Maps (FIRMs) digital or paper? How are residents assisted with mapping?	Community FPA	Digital and paper, we do our best to help or refer them to FEMA regional office.
Do floodplain regulations meet or exceed FEMA or State minimum requirements? If so, in what ways?	Community FPA	Meet as set forth by ordinance
Describe the permitting process	Community FPA, State, FEMA NFIP	3 rd party enforcement
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	As of 9/22/2023 – 31 policies & \$62,051 in premiums
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	As of 9/22/2023 – 57 claims & \$1,422,065.59 paid to claims
How many structures are exposed to flood risk within the community?	Community FPA or GIS Analyst	Unknown
Describe any areas of flood risk with limited NFIP policy coverage	Community FPA or FEMA Insurance Specialist	Unknown

Compliance with the National Flood Insurance Program (NFIP) – continued

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.

Market & N. Main Streets Murray & Chestnut Streets

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

90 Eisenhart Boulevard	Broadway & State Route 191
Community events – approx. 6 per year	

2. Economy

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

Downtown Historic District

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.

Riparian buffers for stream/stormwater flooding control

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.

Downtown historic area due to flooding and age of structures

Community Assets – continued

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

Water – PA American	Sewer – Borough
Power – Met-Ed	Busing – Lanta
Cell Towers – AT&T and Verizon	

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

N/A

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

Police	Fire
Emergency Operations Center	

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

Wy-Hi-Tuk & Roosevelt Parks

Heritage Center	Park / Stadium
Public Library	

Capability Assessment

		Status				Effect on Hazard Loss	Change	Has the 2024	How can	
Capability	✓ Regulatory✓ Tools✓ Programs	In Place	Date Adopted or Updated	Under Development	Department / Agency Responsible	Reduction: - <u>S</u> upports - <u>N</u> eutral - <u>H</u> inders	since 2024 Plan? + Positive - Negative	Plan been integrated into the Regulatory Tool/Program ? If so, how?	these capabilities be expanded and improved to reduce risk?	Additional Comments
	Comprehensive Plan	X	2025		Administration					
	Capital Improvement Plan									
	Economic Development Plan									
	Continuity of Operations Plan									
	Stormwater Management Plan / Ordinance	X	09/2022		Administration					
	Open Space Management Plan (or Parks/Rec., Greenways Plan)	X	2009		Administration					
	Natural Resource Protection Plan									
2	Transportation Plan									
Regulatory	Historic Preservation Plan									
ng	Floodplain Management Plan									
	Farmland Preservation									
න් ත	Evacuation Plan									
Ę.	Disaster Recovery Plan									
1. Planning	Hazard Mitigation Plan	X	2024		Emergency Management Coordinator			N/A		
	Emergency Operations Plan	X	03/2025		Emergency Management Coordinator		+			
	Zoning Regulations	X	2018		Administration		+			
	Floodplain Regulations	X	1994		Administration					
	NFIP Participation	Χ	1974		Administration					
	Building Code	X	2004		Administration					
	Fire Code	Х	2004		Administration					
	Other									

Capability Assessment – continued

Capability	✓ Staff ✓ Personnel ✓ Resources	Yes	No	Department / Agency	Change since 2024 Plan? + Positive - Negative	How can these capabilities be expanded and improved to reduce risk?	Additional Comments
	Planners (with land use / land development knowledge)	X		Engineer			
logy	Planners or engineers (with natural and / or human caused hazards knowledge)	Х		Engineer			
chnology	Engineers or professionals trained in building and / or infrastructure construction practices (including building inspectors)	Х		3 rd Party			
Te	Emergency Manager	X		Appointed			
ive &	Floodplain administrator / manager	X		Manager/3 rd Party			
trat	Land surveyors						
nist	Staff familiar with the hazards of the community	X		Administration			
Administrative	Personnel skilled in Geographical Information Systems (GIS) and / or FEMA's HAZUS program	X		Engineer			
7.	Grant writers or fiscal staff to handle large / complex grants	X		Administration			
	Other		_				

Capability		Yes	No	Department / Agency	Change since 2024 Plan? + Positive - Negative	How can these capabilities be expanded and improved to reduce risk?	Additional Comments
	Capital improvement programming	X		Administration			
Se	Community Development Block Grants (CDBG)	X		Administration			
urce	Special purposes taxes	X		Fire			
So	Gas / Electricity utility fees						
Re	Water / Sewer fees	X		Administration			
cial	Stormwater utility fees						
Finan	Development impact fees						
Fi	General obligation, revenue, and / or special tax bonds						
S	Partnering arrangements or intergovernmental agreements	X		Administration			
	Other						

Capability Assessment – continued

Capability	✓ Program ✓ Organization	Yes	No	Department / Agency	Change since 2024 Plan? + Positive - Negative	How can these capabilities be expanded and improved to reduce risk?	Additional Comments
	Firewise Communities Certification						
ach	StormReady Certification						
Outreach	Natural disaster or safety-related school programs						
∞ ర	Ongoing public education or information programs such as, responsible water use, fire safety, household preparedness, and environmental education.	X		Fire, Nurture Nature Center			
atic	Public-private partnership initiatives addressing disaster related issues.						
4. Education	Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc.						
	Other						

Capability		_	ree of Capab		Change since the 2024 Hazard Mitigation Plan? If so, how?	Additional Comments
ర		Limited	Moderate	High	,	
ŧ	Planning and Regulatory		X			
Self –	Administrative and Technical		Х			
5. Sess	Financial			Х		
¥	Education and Outreach	Х				

Known or Anticipated Future Development / Redevelopment

Development / Property Name	Type of Development Number of Structures Location		Location	Known Hazard Zone	Description / Status
Ridge Road	Townhomes	205 units	Ridge Road, Bangor, PA 18013		SALDO Process
Slate Belt Veterans	Apartment Complex	32 Units	Market Street, Bangor, PA 18013		SALDO Process
Equalization Tank	Wastewater Treatment	1	900 Lower S Main Street		In Construction

Natural & Non-Natural Event History Specific to Bangor Borough

Type of Event and Date(s)	FEMA Disaster # (if applicable)	Local Damage(s) or Loss(es)
Pennsylvania COVID-19 Pandemic – 1/2020	DR-4506-PA	Emergency Protective measures to combat COVID-19 Pandemic.
Remnants of Hurricane Ida	DR-4618-PA	Assistance to eligible individuals and families affected by this disaster.
Flooding	N/A	July 16-17 2023; significant damage to homes and businesses on Messinger and S Main Streets

2018 Municipal Action Plan Status

				Status					
	Existing Mitigation Action (from 2018 Hazard Mitigation Plan)	No Progress / Unknown	In Progress	Continuous	Completed	Discontinued	Additional Comments		
•	Continue to implement the findings and recommendations of the 2003 Borton Lawson "Stormwater Facilities Study" which analyzes stormwater facilities and identifies specific upgrades throughout the Borough.			X					
2	Retrofit structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. 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						
;	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. 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.	Х							
4	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.			Х					

2018 Municipal Action Plan Status – *continued*

				Status			
	Existing Mitigation Action (from 2018 Hazard Mitigation Plan)	No Progress / Unknown	In Progress	Continuous	Completed	Discontinued	Additional Comments
5	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 County/municipal homepage(s) referencing the HMP webpages. - Prepare and distribute informational letters to 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.			Х			
6	Begin and/or continue the process to adopt higher regulatory standards to manage flood risk (i.e. increased freeboard, cumulative substantial damage/improvements) sinkhole risk (e.g. carbonate bedrock standards).				X		Action relates to NFIP compliance, carried through to 2023 Actions.
7	Determine if a Community Assistance Visit (CAV) or Community Assistance Contact (CAC) is needed, and schedule if needed.					Χ	Action relates to NFIP compliance, carried through to 2023 Actions
8	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	Action relates to NFIP compliance, carried through to 2023 Actions
9	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	Action relates to NFIP compliance, carried through to 2023 Actions
10	· · · · · · · · · · · · · · · · · · ·	X					
11	Continue to support the implementation, monitoring, maintenance, and updating of this Plan, as defined in Section 7.0.			Х			
12	Complete the ongoing updates of the Comprehensive Emergency Management Plans.			X			

2018 Municipal Action Plan Status – *continued*

				Status			
	Existing Mitigation Action (from 2018 Hazard Mitigation Plan)	No Progress / Unknown	In Progress	Continuous	Completed	Discontinued	Additional Comments
13	Create/enhance/maintain mutual aid agreements with neighboring communities for continuity of operations.			Χ			
14	Develop & maintain capabilities to process FEMA/PEMA paperwork after disasters; qualified damage assessment personnel – Improve post-disaster capabilities – damage assessment; FEMA/PEMA paperwork compilation, submissions, record keeping.		X				
15	Work with regional agencies (i.e. County and PEMA) to help develop damage assessment capabilities at the local level through such things as training programs, certification of qualified individuals (e.g. code officials, floodplain managers, engineers).		X				
16	Provide training and education for first responders to ensure effective emergency care.			X			
17	Provide education and outreach, especially in K12, regarding drug abuse prevention.			Х			
18	Provide assistance for those individuals seeking treatment.			X			

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.

2024 Mitigation Action Plan

Mitigation Action	Mitigation 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
Continue to implement the findings and recommendations of the 2003 Borton-Lawson "Stormwater Facilities Study" which analyzes stormwater facilities and identifies specific upgrades throughout the Borough.	16	Structure & Infrastructure	Flood	High	High	Borough; potentially FEMA mitigation grants	Borough	Ongoing	Existing
Retrofit structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. 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.	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) w/ support from PEMA, FEMA	Long-term (depending on funding)	Existing

	Mitigation Action	Mitigation 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
3	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. 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.	2	Structure & Infrastructure	Flood	High	High	FEMA Mitigation Grant Programs and local budget (or property owner) for cost share	Municipality (via Munici Engineer/NFIP Floodplain Administrator) w/ support from PEMA, FEMA pal	Long-term (depending on funding)	Existing
4	Maintain compliance with and good standing in the NFIP including adoption & enforcement of floodplain management requirements (e.g. regulating all new & substantially improved construction in Special Hazard Flood Areas), floodplain identification & mapping, & 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) w/ support from PEMA, ISO FEMA	Ongoing	New & Existing

	Mitigation Action	Mitigation 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	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 County/municipal homepage(s) referencing the HMP webpages Prepare and distribute informational letters to 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.	4	Education & Awareness	All Hazards	High	Low- Medium	Municipal Budget	Municipality w/ support from Planning Partners, PEMA, FEMA	Short-term	N/A

Mitigation Action	Mitigation 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
Begin and/or continue the process to adopt higher regulatory standards to manage flood risk (i.e. increased freeboard, cumulative substantial damage / improvements) sinkhole risk (e.g. carbonate bedrock standards).	5	Local plans & Regulations	Flood	High	Low	Municipal Budget	Municipality (Mun. Engineer / NFIP Floodplain Adm.) w/ support from PEMA, FEMA	Short-term	New & Existing
Determine if a Community Assistance Visit (CAV) or Community Assistance Contact (CAC) is needed, and schedule if needed.	3	Local plans & Regulations	Flood	High	Low	Municipal Budget	NFIP Floodplain Administrator w/ support from PADEP, PEMA, FEMA	Short-term	N/A
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 (depending on funding)	N/A
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 w/ support from PADEP, PEMA, FEMA	Short-term	N/A

	Mitigation Action	Mitigation 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
10	Obtain and archive elevation certificates for NFIP compliance.	8	Local Plans and Regulations	Flood, Windstorm / Tornado, Winter Storm	Low	Low	Municipal Budget	NFIP Floodplain Administrator	Ongoing	N/A
11	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 Grant Funding for 5-year update	Municipality (via mitigation planning point of contacts) w/ support from Planning Partners (through their Points of Contact), PEMA	Ongoing	New & Existing
12	Complete the ongoing updates of the Comprehensive Emergency Management Plans.	10	Local plans & Regulations	All Hazards	Medium	Low	Municipal Budget	Municipality w/ support from PEMA	Ongoing	New & Existing
13	Create/enhance/maintain mutual aid agreements with neighboring communities for continuity of operations.	11	All Categories	All Hazards	Medium	Low	Municipal Budget	Municipality w/ support from surrounding municipalities and County	Ongoing	New & Existing
14	Develop & maintain capabilities to process FEMA/PEMA paperwork after disasters; qualified damage assessment personnel – Improve post disaster capabilities – Damage assessment; FEMA/PEMA paperwork compilation, submissions, record keeping.	12	Structure & Infrastructure	All Hazards	Low	Medium	Municipal Budget	Municipality w/ support from County, PEMA, FEMA	Short-term	N/A

	Mitigation Action	Mitigation 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
15	Work with regional agencies (i.e. County and PEMA) to help develop damage assessment capabilities at the local level through such things as training programs, certification of qualified individuals (e.g. code officials, floodplain managers, engineers).	13	Structure & Infrastructure	All Hazards	Medium	Medium	Municipal Budget, FEMA HMA and HLS grant programs	Municipality w/ support from County, PEMA	Short-, long- term (depending on funding)	N/A
16	Provide training and education for first responders to ensure effective emergency care.	27	Education & Awareness	Drug Overdose Crisis	High	Low	Municipal Budget	Municipality	Ongoing	N/A
17	Provide education and outreach, especially in K12, regarding drug abuse prevention.	27	Education & Awareness	Drug Overdose Crisis	High	Low	Municipal Budget	Municipality/ School District	Ongoing	N/A
18	Provide assistance for those individuals seeking treatment.	27	Education & Awareness	Drug Overdose Crisis	High	Low	Municipal Budget	Municipality	Ongoing	N/A
19	Coordinate with Washington Township to scope a project to address drainage issues. There is a large drain field / floodplain / swampy area north of Bangor Borough in Washington Township, which all drains into an undersized 48" pipe (also in Washington township). The overflow all flows into Bangor Borough.	15	Structure & Infrastructure	Flood	High	High	Municipal Budget, possibly FEMA grant programs	Municipality	Short-term	N/A

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):

- **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