

LOCAL MITIGATION PLAN REVIEW TOOL - Final

City of Brockton, MA

The *Local Mitigation Plan Review Tool* demonstrates how the Local Mitigation Plan meets the regulation in 44 CFR §201.6 and offers States and FEMA Mitigation Planners an opportunity to provide feedback to the community.

- The Regulation Checklist provides a summary of FEMA’s evaluation of whether the Plan has addressed all requirements.
- The Plan Assessment identifies the plan’s strengths as well as documents areas for future improvement.
- The Multi-jurisdiction Summary Sheet is an optional worksheet that can be used to document how each jurisdiction met the requirements of each Element of the Plan (Planning Process; Hazard Identification and Risk Assessment; Mitigation Strategy; Plan Review, Evaluation, and Implementation; and Plan Adoption).

The FEMA Mitigation Planner must reference this *Local Mitigation Plan Review Guide* when completing the *Local Mitigation Plan Review Tool*.

Jurisdiction: City of Brockton, MA	Title of Plan: Brockton Natural Hazard Mitigation Plan	Date of Plan: Jan 1, 2022
Single or Multi-jurisdiction plan? Single jurisdiction		New Plan or Plan Update? Plan Update
Local Point of Contact & Title: Chike Odunukwe, City Engineer Engineering Division, Department of Public Works 45 School Street Brockton, MA 02301 508-897-6437 codunukwe@cobma.us		Regional Point of Contact:

State Reviewer: Jeffrey Zukowski	Title: Hazard Mitigation Planner	Date: May 19, 2022; 8/15/2022 & 12/5/2022
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FEMA Reviewer: Claire Fetters Brigitte Ndikum-Nyada	Title: CERC Planner FEMA Community Planner	Date: 6/1/2022 6/24/22-6/27/22; 8/25/22; 12/12- 12/15/22
Date Received in FEMA Region I	5/19/2022; 8/15/2022 & 12/5/2022	
Plan Not Approved	6/27/2022	
Plan Approvable Pending Adoption	8/25/2022	
Plan Adopted	12/1/2022	
Plan Approved	12/14/2022	
Plan will expire	12/13/2027	

**SECTION 1:
REGULATION CHECKLIST**

INSTRUCTIONS: The Regulation Checklist must be completed by FEMA. The purpose of the Checklist is to identify the location of relevant or applicable content in the Plan by Element/sub-element and to determine if each requirement has been ‘Met’ or ‘Not Met.’ The ‘Required Revisions’ summary at the bottom of each Element must be completed by FEMA to provide a clear explanation of the revisions that are required for plan approval. Required revisions must be explained for each plan sub-element that is ‘Not Met.’ Sub-elements should be referenced in each summary by using the appropriate numbers (A1, B3, etc.), where applicable. Requirements for each Element and sub-element are described in detail in this *Plan Review Guide* in Section 4, Regulation Checklist.

1. REGULATION CHECKLIST		Location in Plan (section and/or page number)	Met	Not Met
Regulation (44 CFR 201.6 Local Mitigation Plans)				
ELEMENT A. PLANNING PROCESS				
A1. Does the Plan document the planning process, including how it was prepared and who was involved in the process for each jurisdiction? (Requirement §201.6(c)(1))	Ch. 1, p. 2; Ch. 2, pp. 3-4 (revisions done)	X		
A2. Does the Plan document an opportunity for neighboring communities, local and regional agencies involved in hazard mitigation activities, agencies that have the authority to regulate development as well as other interests to be involved in the planning process? (Requirement §201.6(b)(2))	Ch. 2, pp. 3-4	X		
A3. Does the Plan document how the public was involved in the planning process during the drafting stage? (Requirement §201.6(b)(1))	Ch. 1, p. 2; Ch. 2, p. 4; (revision done)	X		
A4. Does the Plan describe the review and incorporation of existing plans, studies, reports, and technical information? (Requirement §201.6(b)(3))	Ch. 7, pp. 113-114; References included throughout the plan	X		
A5. Is there discussion of how the community(ies) will continue public participation in the plan maintenance process? (Requirement §201.6(c)(4)(iii))	Ch. 8, p. 130	X		
A6. Is there a description of the method and schedule for keeping the plan current (monitoring, evaluating and updating the mitigation plan within a 5-year cycle)? (Requirement §201.6(c)(4)(i))	Ch. 8, pp. 127-128; (revision done)	X		
<u>ELEMENT A: REQUIRED REVISIONS</u>				
ELEMENT B. HAZARD IDENTIFICATION AND RISK ASSESSMENT				
B1. Does the Plan include a description of the type, location, and extent of all natural hazards that can affect each jurisdiction(s)? (Requirement §201.6(c)(2)(i))	Ch. 4, pp. 16-66; Ch. 5, pp. 67-107 pa.110 (revised-no coastal flooding)	X		

1. REGULATION CHECKLIST		Location in Plan (section and/or page number)	Met	Not Met
Regulation (44 CFR 201.6 Local Mitigation Plans)				
B2. Does the Plan include information on previous occurrences of hazard events and on the probability of future hazard events for each jurisdiction? (Requirement §201.6(c)(2)(i))	Ch. 4, pp. 16-66; Ch. 5, pp. 67-107 Pg. 66-68 (revision approved)	X		
B3. Is there a description of each identified hazard's impact on the community as well as an overall summary of the community's vulnerability for each jurisdiction? (Requirement §201.6(c)(2)(ii))	Ch. 4, pp. 16-66; Ch. 5, pp. 67-107	X		
B4. Does the Plan address NFIP insured structures within the jurisdiction that have been repetitively damaged by floods? (Requirement §201.6(c)(2)(ii))	Ch. 4, pp. 29-30	X		
<u>ELEMENT B: REQUIRED REVISIONS.</u>				
ELEMENT C. MITIGATION STRATEGY				
C1. Does the plan document each jurisdiction's existing authorities, policies, programs and resources and its ability to expand on and improve these existing policies and programs? (Requirement §201.6(c)(3))	Ch. 6, pp. 109-111; Ch. 7, pp. 113-116	X		
C2. Does the Plan address each jurisdiction's participation in the NFIP and continued compliance with NFIP requirements, as appropriate? (Requirement §201.6(c)(3)(ii))	Ch. 4, pp. 27-29; Ch. 7, p. 119	X		
C3. Does the Plan include goals to reduce/avoid long-term vulnerabilities to the identified hazards? (Requirement §201.6(c)(3)(i))	Ch. 4, p. 16; Ch. 7, p. 112- pg. 115 (revised)	X		
C4. Does the Plan identify and analyze a comprehensive range of specific mitigation actions and projects for each jurisdiction being considered to reduce the effects of hazards, with emphasis on new and existing buildings and infrastructure? (Requirement §201.6(c)(3)(ii))	Ch. 7, pp. 112-113, 118-125	X		
C5. Does the Plan contain an action plan that describes how the actions identified will be prioritized (including cost benefit review), implemented, and administered by each jurisdiction? (Requirement §201.6(c)(3)(iv)); (Requirement §201.6(c)(3)(iii))	Ch. 7, pp. 116-129 Table 51 (revision approved)	X		
C6. Does the Plan describe a process by which local governments will integrate the requirements of the mitigation plan into other planning mechanisms, such as comprehensive or capital improvement plans, when appropriate? (Requirement §201.6(c)(4)(ii))	Ch. 7, pp. 113-116; Ch. 8, pp. 128-129	X		
<u>ELEMENT C: REQUIRED REVISIONS</u>				
ELEMENT D. PLAN REVIEW, EVALUATION, AND IMPLEMENTATION (applicable to plan updates only)				
D1. Was the plan revised to reflect changes in development? (Requirement §201.6(d)(3))	Ch. 1, p. 1; Ch. 3, pp. 5-15; Ch. 5, pp. 94-96	X		

1. REGULATION CHECKLIST		Location in Plan (section and/or page number)	Met	Not Met
Regulation (44 CFR 201.6 Local Mitigation Plans)				
D2. Was the plan revised to reflect progress in local mitigation efforts? (Requirement §201.6(d)(3))	Ch. 6, pp. 109-111; Ch. 7, pp. 118-126 (see text insert below)		X	
D3. Was the plan revised to reflect changes in priorities? (Requirement §201.6(d)(3))	Ch. 1, p. 1; Ch. 4, p. 16; Ch. 7, p. 112		X	
<u>ELEMENT D: REQUIRED REVISIONS</u>				
<p><u>D2-a.</u> – The following information was provided by the City of Brockton, to address the deficiency of this element: Table 51 updated to clarify status of mitigation actions.</p> <p>“The actions on this table were primarily carried forward from the 2015 Plan; however, because the 2015 Plan was multi-jurisdictional, many actions did not apply to Brockton or were beyond Brockton’s jurisdiction and were dropped from the table for this update. During the revisions to address these comments, two additional actions related to wildfire prevention were determined to be not relevant (due to Brockton’s urban setting). These have been left in the table since they were included in previous revisions, but the status has been changed to indicate that they will be dropped from the list of actions and will not be included in future updates.”</p>				
ELEMENT E. PLAN ADOPTION				
E1. Does the Plan include documentation that the plan has been formally adopted by the governing body of the jurisdiction requesting approval? (Requirement §201.6(c)(5))	Signed Adoption Certificate is on file. Formal Approval 12/14/2022		X	
E2. For multi-jurisdictional plans, has each jurisdiction requesting approval of the plan documented formal plan adoption? (Requirement §201.6(c)(5))	N/A			
<u>ELEMENT E: REQUIRED REVISIONS</u>				
ELEMENT F. ADDITIONAL STATE REQUIREMENTS (OPTIONAL FOR STATE REVIEWERS ONLY; NOT TO BE COMPLETED BY FEMA)				
F1.				
F2.				
<u>ELEMENT F: REQUIRED REVISIONS</u>				

SECTION 2: PLAN ASSESSMENT

A. Plan Strengths and Opportunities for Improvement

This section provides a discussion of the strengths of the plan document and identifies areas where these could be improved beyond minimum requirements.

Recommended Corrections:

- The Pre-Disaster Mitigation (PDM) program has been replaced by the Building Resilient Infrastructure and Communities (BRIC) program. Update all PDM references throughout the plan with BRIC. Additional information regarding BRIC can be found at <https://www.fema.gov/grants/mitigation/building-resilient-infrastructure-communities>.

Element A: Planning Process

Strengths:

- A diverse group of stakeholders was involved in the planning process. This ensured a range of perspectives and a comprehensive analysis.

Opportunities for Improvement:

- When the [new policy guidance](#) is in effect in Apr. 2023, the plan must include how underserved communities and vulnerable populations within the planning area were provided an opportunity to be involved.
- Consider expanding public engagement in the planning process for future updates. Other communities have found success offering periodic presentations, distributing questionnaires or surveys, conducting public meetings, and posting on social media and interactive websites.
- Provide more detail about what stakeholder feedback was received in April 2021. Include how it was incorporated into the plan. Documenting feedback will help you evaluate the plan during future updates.
- Describe any limitations in the available data. Identifying limitations will help inform plan updates and can identify the need for additional studies.

Element B: Hazard Identification and Risk Assessment

Strengths:

- The hazard profiles are well defined. There is detailed information about the context of the hazard and the risk it presents to the community.
- Excellent use of scales shows the magnitude/extent of the hazard.
- The plan does a great job of showing how the probability or severity of future hazard events may change due to changes in climate, population or land use.

Opportunities for Improvement:

- When the [new policy guidance](#) is in effect in Apr. 2023, the plan must include the effects of future conditions, including climate change (e.g., long-term weather patterns, average temperature and sea levels), on the type, location and range of anticipated intensities of identified hazards. It appears the climate change content already within the plan is an

excellent first step in meeting the forthcoming climate change requirements

- This is a direct quote from the HMP page 5, “Brockton’s municipal drinking water supply comes from two sources, Silver Lake in Kingston, Pembroke and Plympton (supplemented by diversions from Furnace Pond in Pembroke and Monponsett Pond in Halifax).” There is a disconnect when these two communities Pembroke and Halifax were not invited to the planning process meeting or was the HMP sent or circulate for their feedback. Communities service by Brockton’s state of the art wastewater treatment plant should be considered as stakeholders/partners and be invited to HMP public planning process meetings.
- The maps provided; the quality can be improved.
- Identify dams in upstream communities that may pose a risk to neighborhoods and assets.
- Provide a longer timeframe when discussing previous occurrences. This can give a more accurate picture of future risks. On page 51-52 the timeframe provided for Wildfires is 2012 to 2018. This needs to be re-examined or provide justification to this short timeframe.

Element C: Mitigation Strategy

Strengths:

- The plan gives a comprehensive, detailed description of the community's existing programs, plans and policies related to mitigation.
- The plan lists several other plans into which mitigation is already/can be incorporated. It also lists the responsible party or department that oversees those updates and the timeframe they must follow.

Opportunities for Improvement:

- When the [new policy guidance](#) is in effect in Apr. 2023, the plan must include a discussion of the existing building codes and land use and development ordinances or regulations in the capability assessment. Also, the range of mitigation actions considered *should* include those that benefit underserved communities and socially vulnerable populations.
- Give more detail about the costs and benefits of each mitigation action. Consider adding a cost estimate and describe the different factors involved (social, technical, political, legal, environmental, etc.).
- Further develop the analysis of how existing capabilities could be expanded. Specify what is currently lacking (funding, personnel, equipment, regulations, authority, community consensus, etc.).
- Identify alternative funding sources for projects. Consider resources that may be available through FEMA, other federal agencies, state programs, regional planning agencies, non-profits, etc.
- Existing **capabilities** were briefly described. Describe existing authorities, policies, programs and resources **and the ability to expand and improve upon** them. A discussion on any need for modifications on how they could be expanded and improved upon, to further reduce risk. **See** FEMA Local Mitigation Planning Handbook page 4-1 for Capability Assessment and the **worksheet** on pages 4-16 to 4-28. [Local Mitigation Planning Handbook \(fema.gov\)](#) A plan must provide a comprehensive, detailed description of the community's existing programs, plans, and policies that relate to mitigation. One good way is by utilizing the

worksheets in the Local Mitigation Planning Handbook (link provided above) to develop this information. Some important capabilities were not profiled.

Element D: Plan Update, Evaluation, and Implementation (*Plan Updates Only*)

Strengths:

- The plan connects changes in development directly to changes in risk.
- The discussion of lessons learned, and success stories will be able to inform future implementation efforts.

Opportunities for Improvement:

- Describe general land use changes in neighboring areas that may affect the community's risk.
- Inform FEMA when the flood control structures or other development that changes the Special Flood Hazard Area or the Base Flood Elevation are completed, as per 44 CFR 65.3.
- Continue to get specific when identifying all forms of changes in development whether its expansions or improvements to existing structures and infrastructure, changes in use, future development plans and policies, or just building permit increases and changes in population. Be sure these changes are always connected to whether it is increasing, decreasing, or have no effect on the city's overall risk.
- Including a discussion of lessons learned about implementing mitigation actions would strengthen the plan, as would a short narrative on some "success stories" about their implementation.
- Ensure that the changes in priority are clearly identified. This can also include for example changes to priorities in public involvement, stakeholder engagement, use of key data or information, priorities on vulnerable key assets, expanding capabilities, and priorities in the plan's maintenance and implementation.
- Discuss the effect that recently completed mitigation work has had on reducing the community's risk. Especially if the city is successful in obtaining and implementing all prioritized mitigation projects (culverts upsizing etc.) and other measurements.
- Expand on and describe how the mitigation strategy has helped to meet community's overhaul new and old mitigation goals.
- Identification of barriers or obstacles to successful implementation or completion of mitigation actions, along with possible solutions for overcoming risk.
- Documentation and provide a narrative of annual reviews and committee involvement.
- Identification of a lead person to take ownership of, and champion the Plan. Such a champion would ensure the Hazard Mitigation **Plan never expires**.
- Reducing risks from natural hazards and serving as a guide for decisions makers as they commit resources to reducing the effects of natural hazards.
- An approach to evaluating future conditions (i.e., expanding mitigation and making connection to equity, socio-economic, environmental, demographic, change in built environment etc.).
- Discussion of how changing conditions and opportunities could impact community resilience in the long term; and the city is encouraged to continue to focus on any impacts new or redevelopments, redevelopments and future developments will or may have in

either increasing or decreasing community's vulnerabilities to all-natural hazards.

B. Resources for Implementing Your Approved Plan

Refer to the [Massachusetts Integrated State Hazard Mitigation and Climate Action Plan](#), [Resilient MA Climate Clearinghouse](#), and State's [Climate Action Page](#) to learn about hazards relevant to Massachusetts and the State's efforts and action plan.

Technical Assistance:

FEMA

- [FEMA Climate Change](#): Provides resources that address climate change.
- [FEMA Hazard Mitigation Planning Online Bibliography](#): This compilation of government and private online sites is a useful source of information for developing and implementing hazard mitigation programs and plans in New England.
- [FEMA Library](#): FEMA publications can be downloaded from the library website. These resources may be especially useful in public information and outreach programs. Topics include building and construction techniques, NFIP policies, and integrating historic preservation and cultural resource protection with mitigation.
- [FEMA Risk MAP](#): Technical assistance is available through Risk MAP to assist communities in identifying, selecting, and implementing activities to support mitigation planning and risk reduction. Attend Risk MAP discovery meetings that may be scheduled in the state, especially any in neighboring communities with shared watersheds boundaries.

Other Federal

- [EPA Resilience and Adaptation in New England \(RAINE\)](#): A collection of vulnerability, resilience and adaptation reports, plans, and webpages at the state, regional, and community levels. Communities can use the RAINE database to learn from nearby communities about building resiliency and adapting to climate change.
- [EPA Soak Up the Rain](#): Soak Up the Rain is a public outreach campaign focused on stormwater quality and flooding. The website contains helpful resources for public outreach and easy implementation projects for individuals and communities.
- [NOAA C-CAP Land Cover Atlas](#): This interactive mapping tool allows communities to see their land uses, how they have changed over time, and what impact those changes may be having on resilience.
- [NOAA Sea Grant](#): Sea Grant's mission is to provide integrated research, communication, education, extension and legal programs to coastal communities that lead to the responsible use of the nation's ocean, coastal and Great Lakes resources through informed personal, policy and management decisions. Examples of the resources available help communities plan, adapt, and recovery are the Community Resilience Map of Projects and the National Sea Grant Resilience Toolkit
- [NOAA Sea Level Rise Viewer](#) and [Union for Concerned Scientists Inundation Mapper](#): These interactive mapping tools help coastal communities understand how their hazard risks may be changing. The "Preparing for Impacts" section of the inundation mapper addresses policy responses to protect communities.
- [NOAA U.S. Climate Resilience Toolkit](#): This resource provides scientific tools, information, and expertise to help manage climate-related risks and improve resilience to extreme events. The "[Steps to Resilience](#)" tool may be especially helpful in mitigation planning and implementation.

State

- [Massachusetts Emergency Management Agency](#): The Massachusetts State Hazard Mitigation Officer (SHMO) and State Mitigation Planner(s) can provide guidance regarding grants, technical assistance, available publications, and training opportunities.
- Massachusetts Departments of [Conservation and Recreation](#) and [Environmental Protection](#) can provide technical assistance and resources to communities seeking to implement their hazard mitigation plans.
- [MA Mapping Portal](#): Interactive mapping tool with downloadable data

Not for Profit

- [Kresge Foundation Online Library](#): Reports and documents on increasing urban resilience, among other topics.
- [Naturally Resilient Communities](#): A collaboration of organizations put together this guide to nature-based solutions and case studies so that communities can learn which nature-based solutions can work for them.
- [Rockefeller Foundation Resilient Cities](#): Helping cities, organizations, and communities better prepare for, respond to, and transform from disruption.

Funding Sources:

- [Massachusetts Coastal Resilience Grant Program](#): Funding for coastal communities to address coastal flooding, erosion, and sea level rise.
- [Massachusetts Municipal Vulnerability Preparedness](#) program: Provides support for communities to plan for climate change and resilience and implement priority projects.
- [Massachusetts Water Quality Grants](#): Clean water grants that can be used for river restoration or other kinds of hazard mitigation implementation projects.
- [Federal Grants Resource Center](#) and [Grants.gov](#): Lists of grant opportunities from federal agencies (HUD, DOT/FHWA, EPA, etc.) to support rural development, sustainable communities and smart growth, climate change and adaptation, historic preservation, risk analyses, wildfire mitigation, conservation, Federal Highways pilot projects, etc.
- [FEMA Hazard Mitigation Assistance](#) (HMA): FEMA's Hazard Mitigation Assistance provides funding for projects under the Hazard Mitigation Grant Program (HMGP), Pre-Disaster Mitigation (PDM), and Flood Mitigation Assistance (FMA). States, federally recognized tribes, local governments, and some not-for-profit organizations are eligible applicants.
- [GrantWatch](#): The website posts current foundation, local, state, and federal grants on one website, making it easy to consider a variety of sources for grants, guidance, and partnerships. Grants listed include The Partnership for Resilient Communities, the Institute for Sustainable Communities, the Rockefeller Foundation Resilience, The Nature Conservancy, The Kresge Climate-Resilient Initiative, the Threshold Foundation's Thriving Resilient Communities funding, the RAND Corporation, and ICLEI Local Governments for Sustainability.
- USDA [Natural Resource Conservation Service](#) (NRCS) and [Rural Development Grants](#): NRCS provides conservation technical assistance, financial assistance, and conservation innovation grants. USDA Rural Development operates over fifty financial assistance programs for a variety of rural applications.