

LOCAL MITIGATION PLAN REVIEW TOOL - Final

Town of Pepperell, 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: Town of Pepperell, MA	Title of Plan: Town of Pepperell Hazard Mitigation Plan February 2021	Date of Plan: February 2021
New Plan or Plan Update? UPDATE <i>(previously approved under the Northern Middlesex COG multi-jurisdiction plan)</i>		Single or Multi-jurisdiction plan? SINGLE
Local Point of Contact: Andrew MacLean, Town, Administrator Town of Pepperell Town Hall, One Main Street Pepperell, MA 01463 amaclean@pepperell.ma.us (978) 433-0333		Regional Point of Contact: N/A

State Reviewer: Jeffrey Zukowski	Title: Hazard Mitigation Planner	Date: 6/23/2021; 9/16/2021
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FEMA Reviewer: Marie-Annette (Nan) Johnson Brigitte Ndikum-Nyada	Title: R1 Community Planner Community Planner	Date: 6/24/2021 – 8/13/2021 8/16/2021 – 8/17/2021; 9/20/2021
Date Received in FEMA Region I	6/23/2021; 9/16/2021	
Plan Not Approved		
Plan Approvable Pending Adoption	8/17/2021	
Plan Adopted	9/13/2021	
Plan Approved	9/20/2021	

**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))	Section 2 Appendices	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))	Sections 2, 8 Appendices	X		
A3. Does the Plan document how the public was involved in the planning process during the drafting stage? (Requirement §201.6(b)(1))	Section 2 Appendices	X		
A4. Does the Plan describe the review and incorporation of existing plans, studies, reports, and technical information? (Requirement §201.6(b)(3))	Sections 1, 6 Appendices	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))	Section 8	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))	Section 8	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))	Section 3	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))	Sections 1, 3	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))	Sections 1, 4, 5 Appendices	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))	Section 3, p. 3-13	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))	Section 6 Appendix D	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))	Section 6	X		
C3. Does the Plan include goals to reduce/avoid long-term vulnerabilities to the identified hazards? (Requirement §201.6(c)(3)(i))	Section 7	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))	Section 7 Appendices	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))	Section 7, Table 7.3 Appendices	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))	Section 8 Appendices	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))	Section 4	X		
D2. Was the plan revised to reflect progress in local mitigation efforts? (Requirement §201.6(d)(3))	Section 7 (7.2.1)	X		

1. REGULATION CHECKLIST		Location in Plan (section and/or page number)	Met	Not Met
Regulation (44 CFR 201.6 Local Mitigation Plans)				
D3. Was the plan revised to reflect changes in priorities? (Requirement §201.6(d)(3))		Section 7, Table 7.1	X	
<u>ELEMENT D: REQUIRED REVISIONS</u>				
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))		Pepperell adopted Plan on 9/13/2021 . Signed copy of Adoption is on file.	X	
E2. For multi-jurisdictional plans, has each jurisdiction requesting approval of the plan documented formal plan adoption? (Requirement §201.6(c)(5))		This is a single jurisdiction plan.	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 Correction: Would like to see the Plan's front cover page enlarge the Town's two Seals (symbols) to make them more legible and draw the attention to this being the Town's Plan. The contractor's logo is fully legible and larger than the Town's Seals.

Element A: Planning Process

Strengths:

- The incorporation of the Municipal Vulnerability Preparedness planning process for climate change resiliency ensured a more comprehensive approach to mitigation.
- The fact that the planning process was able to continue through the 2020 Covid-19 pandemic is a major success! The Town was able to utilize the various available virtual tools to maintain the momentum and commit towards risk reduction with its communities during these difficult challenges.
- Well done on assembling not only the MVP/HMP Core Team, but also the Advisory Group. This Group consists of local residents representing different sectors in the community. This is considered a best practice and should be used as a good example of community involvement!
- Community officials and stakeholders were effectively engaged in the MVP/HMP planning process. Their feedback shaped the content of the plan.
- Excellent readability, plan organization, and use of graphics. Great maps and good documentation throughout and good citations for the sources of information. Excellent description and documentation of the planning process.

Opportunities for Improvement:

- Element A5.a appears to not have been fully addressed. It may be in the plan, however a description of how the jurisdiction will continue to seek public participation after the plan has been approved and during the plan's maintenance was not evident.
- There was no reference to the previous approved plan (name, approval date) and that this plan is an update of that plan. It's important to explain the continuity from plan approval and update to the next plan. It was difficult to find that this plan was approved last under the Northern Middlesex COG Multi-Jurisdiction Hazard Mitigation Plan in 2015. Provide this explanation as part of the Introduction and the Planning Process description.
- To protect two well heads in Pepperell, cooperative efforts between Pepperell and Groton is required as stated in the Plan. Was the Town of Groton invited to the table for this HMP planning process? The Town of Pepperell is encouraged to invite and include on its of list of stakeholders the Town of Groton.

Element B: Hazard Identification and Risk Assessment

Strengths:

- The risk assessment is well organized, very comprehensive, and provides very thorough descriptions of the hazards and vulnerabilities that are easy to read and understand. It places the community's risk in the context of the surrounding areas and even within the state. Well done!
- The local plan utilizes and connects its update with the 2018 Massachusetts State Hazard Mitigation and Climate Action Plan (SHMCAP).
- Vulnerability and risk are described from several important aspects (society/vulnerable populations, health and economic impacts, infrastructure/assets, environment).
- Significant community input from the MVP process helped develop the vulnerability and risk assessment.
- Impacts from Climate Change are addressed in the Town's risk assessment.

Opportunities for Improvement:

- Ensure that the Risk Assessment connects with the Community Profile information. The Community Profile information provides a detailed look at the community in terms of its assets, population and development, and features.
- Further explore the root causes of the vulnerabilities by asking more "why" questions to get stronger vulnerability problem statements for mitigation. For example, why is the identified area of the town vulnerable say to flash flooding? Is it the construction of how the structures are built? Is it the drainage structures that are undersized or insufficient? Is this a result of outdated design standards and construction building codes, etc.? Then, the solutions can more effectively target actions that reduce or eliminate the risk for the long term.
- An effective plan clearly establishes the risk assessment's vulnerability problem statements of what needs to be mitigated, how, why, and what the priorities are of these to the community. Then, these problem statements are carried into the Mitigation Strategy and connected to show how the action(s) mitigates that problem (provides a long-term solution or alternative) and will meet the Town's goals. Through the updates, the connection then continues to show how the Town is making progress through its actions towards these identified problem statements.

Element C: Mitigation Strategy

Strengths:

- The plan provides a comprehensive, detailed description of the community's existing programs, plans, and policies that relate to mitigation.
- The plan highlights the different plans and programs into which the community can and has incorporate(-d) in the mitigation plan. There needs to be a specific narrative describing how the incorporation was achieved.

- The plan update validated the previously approved plan’s hazard mitigation goals with some adjustments to reflect a Town plan rather than being a regional plan. Good goals!

Opportunities for Improvement:

- Several of the proposed “Mitigation” actions in Section 7.2.4.1 [page 7-1(?)] extracted from Table 7-3 do not meet the definition of Mitigation that is so thoroughly defined in Section 7.2 on page 7-2. Therefore, this requirement (C4) was minimally met. Most actions were either studies or preparedness/response type of actions. Ensure that the focus of the mitigation strategy is on mitigation, rather than preparedness. Mitigation actions reduce or eliminate long-term risk and are different from actions taken to prepare for or respond to hazard events. Mitigation activities lessen or eliminate the need for preparedness or response resources in the future. If there are preparedness actions, it is helpful for the reader to identify these as such to clarify these differences.
- The greatest potential opportunity in the next plan updates lies in further understanding the root causes of the Town’s vulnerabilities and developing the solutions (actions) that target those root causes. Then demonstrate how progress is being made through these actions towards alleviating or minimizing the identified vulnerabilities (problem statements) for the long term and thus meeting the Town’s mitigation goals.
- The connection between the vulnerability problem statements under each hazard section and the solutions (mitigation actions) can be strengthened in future updates. This can be accomplished in the Mitigation Strategy section or as an appendix. Within the proposed actions table, the action can also be accompanied by the information that identifies which problem(s) the action is addressing. This added information then addresses how the action (solution) will reduce or eliminate the root cause of what’s creating the vulnerability in the first place (the problem statement) as identified in the risk assessment.
- Identify key NFIP related information such as variances, important site visits and floodplain management ordinance or model bylaw that are relative to the Town’s strategy for NFIP continued compliance. Recommend addressing actions that increase the number of properties with flood insurance policies. To expand and strengthen the NFIP continued compliance requirement, check the new MEMA’s Floodplain Management Model Bylaw. <https://www.mass.gov/guides/floodplain-management> Massachusetts 2020 Model Floodplain Bylaws. <https://msc.fema.gov/portal>
- Encourage proposed mitigation actions for the 15 repetitive loss properties that were noted in the plan on page 3-13.
- Consider mitigation actions which address the historic preservation needs, resources, goals, and actions.
- Show how the Town may be integrating its Mitigation Goals into the Town’s Comprehensive Plan goals and policies. There is an action to integrate this plan into the Town’s Open Space Plan. This can be considered another best practice and a successful example of an effective plan that’s being used!

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

Strengths:

- Priorities in the plan recognize current conditions. They are reflective of the planning process, risk assessment, and mitigation strategy.
- The participating municipalities continue to demonstrate their progress in implementing hazard mitigation measures since the previous plan approvals in 2007, 2015, and into 2021.

Opportunities for Improvement:

- The changes in development can be one of the biggest changes in a Town's risk to hazard even for a small more rural town. It can also be one of the greatest opportunities to stay ahead of the long-term risk reduction needs. 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 Town's risk. Encourage proposed mitigation actions for the 15 repetitive loss properties that were noted in the plan on page 3-13.
- Discuss the effect that recently completed mitigation work has had on reducing the community's risk.
- Expand on and describe how the mitigation strategy has helped to meet community's overhaul goals.
- 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.
- Expand and describe status of previously recommended mitigation actions. Ensure all mitigation actions have timeframes for completion. Ongoing timeframes may not provide the community an effective evaluation or success at the end of each five-year cycle when the plan expires.
- Identification of barriers or obstacles to successful implementation or completion of mitigation actions, along with possible solutions for overcoming risk.
- Documentation of annual reviews and committee involvement should be included in the Appendix.
- Identification of a lead person to take ownership of, and champion the Plan, is encouraged.
- 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.). Expand your stakeholders.
- Discussion of how changing conditions and opportunities could impact community resilience in the long term; and
- Discussion of how the mitigation goals and actions support the long-term community vision for increased resilience.

- The Town is encouraged to continue to focus on any impacts new or redevelopments and future developments will or may have in either increasing or decreasing community's vulnerabilities to all-natural hazards not just flooding.
- For continued compliance with the NFIP, check out this New MEMA Model Bylaw. <https://www.mass.gov/guides/floodplain-management> Massachusetts 2020 Model Floodplain Bylaws.
- Describe general land use changes in neighboring jurisdictions that may affect the community's risk.
- Consider including a discussion on how mitigation activities have increased the community's resilience and support other long-term community planning goals
- Describe general land use changes in neighboring jurisdictions that may affect the community's risk.
- Consider including a discussion on how mitigation activities have increased the community's resilience and support other long-term community planning goals.
- Clearly state what the changes in priorities are from the previous plan.

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 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 RiskMAP](#): Technical assistance is available through RiskMAP to assist communities in identifying, selecting, and implementing activities to support mitigation planning and risk reduction. Attend RiskMAP discovery meetings that may be scheduled in the state, especially any in neighboring communities with shared watershed 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.

- <https://www.mass.gov/guides/floodplain-management> Massachusetts 2020 Model Floodplain Bylaws. <https://msc.fema.gov/portal>
- [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.
- [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.