

Section 18. Plan Maintenance 18-1

- 18.1 Monitoring, Evaluating and Updating the Plan 18-1
 - 18.1.1 Responsibilities for Plan Maintenance 18-1
 - 18.1.2 Plan Reviews and Updates 18-1
- 18.2 Monitoring Project Implementation and Closeout 18-3
- 18.3 Monitoring Planning and the 2013 Update Review 18-4
- 18.4 Ongoing Public Participation and Coordination 18-5

SECTION 18. PLAN MAINTENANCE

18.1 MONITORING, EVALUATING AND UPDATING THE PLAN

The Massachusetts State Hazard Mitigation Plan is a living document that will be reviewed, updated, and adopted by state officials and submitted to FEMA for approval every three years. Per the statewide mitigation strategy outlined in this plan, the plan will be revised more frequently as multi-jurisdictional and local plans are completed and if conditions under which the plan was developed change, such as a major disaster or a new or revised state policy.

This section describes the process for updating the SHMP. Federal hazard mitigation planning regulations (44 CFR 201.4) require the SHMP to be reviewed, revised and submitted to the FEMA regional director for approval every three years. The regulations require a plan maintenance process that establishes a method and schedule for monitoring, evaluating, and updating the plan, a system for monitoring implementation of mitigation actions and project closeouts, and a system for reviewing progress on achieving goals identified in the mitigation strategy.

Based on the capabilities assessment, the Commonwealth will develop a range of activities to enhance its capabilities and reduce identified gaps or shortfalls. The Commonwealth will use the SMRT Tool to evaluate risk reduction yielded by specific projects or programs. This is beginning to be done for non-natural hazards as the SMRT Tool is rolled out this year. For each potential investment related to non-natural hazards, the Commonwealth can identify core capabilities and individual capability indicators that will be impacted by the investment. The Commonwealth can then revise those indicators' values to show the level of capability that the Commonwealth will maintain after the investment is made. Running the SMRT analysis using the new capability indicators will provide revised consequence and risk values. The Commonwealth can compare the new values to the pre-investment values to determine the risk reduction associated with each project. Comparing the cost of the investment to the reduced risk will allow the Commonwealth to make risk-informed decisions to support homeland security strategic planning and future grant investments. More important, this allows return-on-investment analyses on potential investments in the context of reduced risk to the Commonwealth.

WHY THIS SECTION?

This section of the State Hazard Mitigation Plan meets the requirements of 44 CFR §201.4(c)(5)(i), which states the following:

Plan Content. To be effective the plan must include a Plan Maintenance Process that includes an established method and schedule for monitoring, evaluating, and updating the plan.

18.1.1 Responsibilities for Plan Maintenance

The SHMT is responsible for developing and maintaining the SHMP, under the oversight of the team's State Hazard Mitigation Planner. Additional participants in plan maintenance include the following:

- The SHMIC (see Section 2 for a list of participants)
- MEMA staff
- Representatives from regional planning agencies
- Representatives of local jurisdictions whose hazard mitigation plans were used in the development of the multi-jurisdictional plans or who developed a stand-alone" local plan.

18.1.2 Plan Reviews and Updates

The state plan review will include the following:

- Annual reviews for progress made on mitigation actions identified in the statewide mitigation strategy (see Section 17)

Annual Progress Review

The SHMP will be reviewed annually to reflect significant policy changes that took place during the preceding year and to report on progress made on funded statewide hazard mitigation projects. This annual review will take place at the end of each calendar year. The SHMIC and other participants will perform this review as follows:

- Examine progress or changes in natural hazards and disaster occurrences.
- Examine progress on mitigation actions in the statewide mitigation strategy, especially progress on multi-jurisdictional and local plans.
- Identify any implementation problems (financial, technical, political, and legal).
- Recommend how to solve such problems and to increase involvement of state agencies, local jurisdictions, and the private sector in hazard mitigation planning.
- Review, revise, and update the state capability assessment and the statewide mitigation strategy in Section 17 to reflect major changes in policies, priorities, programs, and funding.
- Review hazard profiles for which significant new information is available that could change the risk ranking or area of impact.

Post-Disaster Review

After each presidential disaster declaration and in coordination with FEMA, the SHMT will assist in documenting the effects of the disaster. The SHMT will convene a meeting of the SHMIC and other stakeholders to share observations and data related to the disaster and to review specific hazard mitigation needs related to the disaster-affected area. This will allow for development of hazard mitigation recommendations to FEMA during the disaster recovery operation and for updating the statewide mitigation strategy as needed. This will be especially important in assisting with expediting recovery efforts in impacted areas. This post-disaster review may replace an annual review in any year that a major disaster occurs, depending on the disaster event's severity and time of year.

Three-Year Plan Review and Revision

The SHMT will facilitate the review and revision of the Massachusetts SHMP every three years. The review and revision will begin approximately 18 months before plan expiration and will involve the SHMIC and other stakeholders, especially regional planning agencies that have completed single and multi-jurisdictional plans. This process will incorporate all revisions made during the annual and post-disaster reviews, particularly new hazard identification and risk assessment information from completed single and multi-jurisdictional plans. The SHMIC and planning partners develop the update as follows:

- Revise the hazard identification and risk assessment section to remain current and accurate. New data from completed single and multi-jurisdictional plans will be vital to updating these sections of the SHMP.
- Examine the progress on, and determine the effectiveness of, the mitigation actions outlined in the statewide mitigation strategy and in single and multi-jurisdictional plans and local annexes. Determine how the performance of such recommendations will influence the statewide mitigation strategy. Local governments and regional planning agencies, pending available funding, will review and revise their plans and annexes using processes that they identify in those plans and annexes.

- Examine the effectiveness of funded local mitigation projects and determine how the performance of those projects should influence the statewide mitigation strategy (see the following sections on monitoring projects and plans).
- Examine the overall implementation of the SHMP, identify problems (financial, technical, political, and legal), and develop recommendations to overcome them.
- Recommend ways to increase participation by state agencies and local jurisdictions in the hazard mitigation planning process.
- Recommend any necessary revisions to the risk assessment and to the statewide mitigation strategy to reflect changes in federal and state policies, priorities, programs, and funding. Incorporate new information following major disaster events.
- Following review and revision of the SHMP, analyze the plan maintenance process and the project monitoring process, and make changes to improve these processes as needed.

The 2013 update used a new template and layout and included a comprehensive, page-by-page review of the SHMP's content to ensure that all relevant revisions or changes were made. For the 2016 update, a page-by-page review of the plan's content will again occur. For future updates of the SHMP, new information will be highlighted in the executive summary and the introduction section.

The 2010 plan addressed "Future Natural Hazards" (page 114 in the 2010 plan), focusing on the inclusion of climate change impacts. Climate change has been addressed in the 2013 update, including the THIRA, with the assimilation of new relevant data and an enhanced risk assessment. Many of the hazard profiles contain climate change information. The Coastal Erosion profile maintains a significant amount of information related to the impacts of climate change.

18.2 MONITORING PROJECT IMPLEMENTATION AND CLOSEOUT

In addition to SHMIC monitoring activities, the SHMT will monitor the progress of hazard mitigation plans and projects, with regular site visits and reports at least quarterly. Project sub-applicants will document expenses for review by the SHMT during periodic inspection visits or audit. All records must be maintained for a minimum of six years from the date of project closeout. Quarterly reports on project status will identify how grant funds are being spent.

MEMA project files will be maintained in accordance with FEMA grant requirements. MEMA will create, maintain, and organize a separate project file for each project approved for FEMA HMA funding. The project file will include individual files for state contract, application, payments, FEMA award (including environmental review), quarterly reporting, and general correspondence.

WHY THIS SECTION?

This section of the State Hazard Mitigation Plan meets the requirements of 44 CFR §201.4(c)(5)(ii & iii), which state the following:

Plan Content. To be effective the plan must include a Plan Maintenance Process that includes:

- A system for monitoring implementation of mitigation measures and project closeouts.
- A system for reviewing progress on achieving goals as well as activities and projects identified in the Mitigation Strategy.

The project sub-applicant will submit a final accounting and reporting to MEMA upon project completion. This will include a thorough assessment of project accomplishments and shortfalls. MEMA will review all project costs and resolve any outstanding issues of non-compliance prior to final project payment. MEMA grant management will comply with all administrative and audit requirements outlined in 44 CFR Parts 13, 14 and §206 subparts M & N. At this time there are no major changes to the system or procedures of internal project management. As regulations change, the SHMT will update the

Mitigation Administration Plan as needed (see the current Administration Plan for the most current regulations).

18.3 MONITORING PLANNING AND THE 2013 UPDATE REVIEW

In order to adequately track and modify the statewide mitigation strategy presented in this plan, the strategy will be available at each SHMT meeting for discussion. A matrix has been developed for ongoing use as changes and notations are needed. This matrix will be regularly updated as an ongoing effort of the SHMT. For this plan update, the strategy was modified to detail all changes and accomplishments. The 2013 updated hazard mitigation strategy as presented in Table 17-1 includes a column in which the Commonwealth can indicate all changes made since the last update. During this update cycle, no mitigation actions were removed, eight new actions were developed, and 31 actions remained as continual (perpetual) actions. A number of actions were revised to more closely mirror the intended purpose or to reflect changes as a result of activities that occurred in the 2010-2012 timeframe.

The SHMT held a workshop on January 25, 2013 to evaluate existing mitigation goals and actions. The SHMIC gave concurrence to the results of this workshop at its February 6, 2013 meeting. The SHMIC also met on May 22, 2013, to review the draft 2013 SHMP and to discuss potential additions for future updates to the plan, including ways to increase stakeholder involvement and enhance the development of mitigation actions. The meeting also included a review and confirmation of ranking of the mitigation actions and pending grant applications. A facilitated process was conducted to review the plan, capture data to be included or modified, and gain concurrence for the plan. The SHMIC approved the plan as written, with slight modifications that have been incorporated. The February and May SHMIC meetings also served as brainstorming sessions to set forth actions for the 2016 plan update. The SHMT is confident that mitigation actions will continue to be addressed as resources and time become available.

The STAPLEE planning criteria, described in Section 17 and Appendix G, were applied to all of the actions to ensure consistency and that priorities are sound and justifiable. These criteria were also used by the SHMT to evaluate the implementation of actions that are in progress in the current statewide mitigation strategy. This system is recognizable and provides team members with uniform criteria.

During this plan update cycle, the Commonwealth's planning resources were challenged by several disaster events and by the task of completing a THIRA document. In addition, due to fiscal restraints and other staffing issues, not all of the state's hazard mitigation actions were addressed in the past three years. However, the SHMT is committed to the goals and actions in this plan and will continue to implement actions as resources and time become available. To help ensure continued focus on implementation of the actions, the Commonwealth developed two new grant coordinator positions to assist in the development, implementation, and monitoring of mitigation projects. These positions will provide added resources to help the Commonwealth work toward completion of more of the listed action items.

The following additional items will be considered for inclusion in future updates of the SHMP:

- Net SLOSH models were released as drafts in April 2013. These new models will be used during the update cycle to enhance risk profiles affected by the new information.
- DCAMM data continue to be enhanced and will be used to continue validating the potential risk to state-owned and leased facilities associated with each hazard.
- The SHMT may review a new method of prioritizing state agency mitigation actions, based on the intent to increase state-agency involvement (see discussion in Section 17).
- SHMT members will continue to provide recommendations for the Massachusetts Emergency Management Strategic Plan and to ensure that consistency is maintained between the SHMP and the Strategic Plan.

- SHMT members will conduct one-on-one outreach with state agencies that are not currently involved in the SHMP planning process in an effort to increase involvement. Information gained from the survey developed during the 2013 update cycle will help determine which agencies are interested in becoming involved but have not yet done so.
- The potential for a more refined analysis at the community level for the Coastal Erosion profile will be considered.
- Enhanced analysis using the Northeast Wildfire Risk Assessment Geospatial Workgroup fire risk layer (discovered too late in the process to incorporate in the 2013 update) will be incorporated into the wildfire risk assessment.

New studies underway that would be considered for inclusion in future editions include the following:

- Landslide data enhancement through the University of Massachusetts
- The Buzzards Bay Estuary Program—The Massachusetts Office of Coastal Zone Management is estimating the increase in flooding that would result from 1-foot, 2-foot, and 4-foot increases in sea level for Buzzards Bay municipalities (Fairhaven, Westport, Dartmouth, New Bedford, Mattapoisett, Marion, and Wareham). Using recent assessor's data, the number of buildings, their assessed values, and the number of municipal structures are being enumerated within various sea level rise expansion scenarios. (For more information and for the status of the reports and maps, refer to: <http://buzzardsbay.org/floodzone-expansion-slr.html>) These data should be reviewed and incorporated as appropriate to support future plan updates.
- Boston Harbor Coastal Flooding Analysis—The Boston Harbor Association is evaluating Boston's vulnerability to coastal flooding for three water levels above mean higher high water: 2.5 feet above, 5 feet above, and 7.5 feet above. For each scenario, the area of land affected by flooding was calculated. For future plan updates, depth grid data should be obtained to allow MEMA to conduct a spatial analysis for state owned/leased buildings. (During the 2013 update, access to these data was not available). For information, see: www.tbha.org/sites/tbha.org/files/documents/preparing_for_the_rising_tide_final.pdf.
- Fluvial erosion studies—Ongoing studies concerning fluvial erosion will be incorporated into the flood hazard profile, addressing its geomorphic impact on flood events throughout the Commonwealth.
- NEHRP Soil Data—Incorporate statewide NEHRP soils data as they become available to enhance earthquake modeling and assessment.

18.4 ONGOING PUBLIC PARTICIPATION AND COORDINATION

This plan will be posted on the Massachusetts Emergency Management Agency website at www.mass.gov/mema (link to Disaster Recovery and Mitigation) for comments from stakeholders prior to plan approval and throughout the next three years. In Section 2, information is provided relating to the ongoing participation of the public and coordination of stakeholders. Comments, questions, corrections or suggestions concerning any part of this plan should be addressed to the following:

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