

## SECTION 7 - ACTION ITEM EVALUATION AND PRIORITIZATION

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This section includes information regarding the methodology and process followed by participating jurisdictions to evaluate and prioritize unique hazard mitigation actions for their particular communities. The guidance states that after considering a wide range of actions and projects for reducing the effects of each hazard (Part 201.6(c)(3)(ii), the plan must describe the subset of mitigation actions to be included in the mitigation strategy/action plan including how they will be prioritized, implemented and administered by the local jurisdictions (Part 201.6(c)(3)(iii). And for multi-jurisdictional plans such as this plan for Rensselaer County, that there must be identifiable action items specific to each jurisdiction requesting FEMA approval or credit of the plan (Part 201.6(c)(3)(iv). *It states that the “STAPLEE” method (considering each project’s social, technical, administrative, political, legal, economic and environmental aspects) can be used to evaluate potential actions for the mitigation strategy/action plan, and to prioritize those actions that the community selects as its mitigation actions.*

As stated in Section 6, Core Planning Group members **analyzed** the full range of possible actions identified in Table 6-1 according to this three-step process:

1. First, CPG members evaluated the actions in Table 6-1 against the hazards identified in their community (as presented in Section 3 Table 3-1). FEMA Region 2 requires that actions addressing each identified hazard (regardless of the degree of risk) shall be included in each local municipal mitigation strategy / action plan for each municipality.
2. Next, Core Planning Group Members conducted a **preliminary analysis** of each action item in Table 6-1, considering the action item in relation to the results of the risk assessment and unique local considerations to identify a subset of preferred action items that would be analyzed in more detail. The results of this preliminary analysis are presented in Table 6-2.
3. Finally, for the subset of preferred action items, Core Planning Group Members conducted a **detailed analysis and prioritization** using FEMA’s STAPLEE approach.

**This plan section speaks to Step 3 of the process outlined above, documenting the detailed analysis of preferred potential actions and their prioritization** as undertaken during a working session of the Core Planning Group on November 30, 2010 and by individual JATs.

#### Working Session Warm-Up Activity

*To initiate the evaluation and prioritization of potential mitigation actions, jurisdictional representatives who attended the working session were asked to complete a brief survey ranking six generic types of mitigation actions according to how they perceived each type of action would be preferred or appropriate to their community. The six categories of action types were taken from FEMA 386-3 “Developing the Mitigation Plan – Identifying Mitigation Actions and Implementation Strategies.” At the working session, the consultant reminded CPG members that FEMA’s mitigation planning guidance specifically states that any emergency services actions that are response, preparedness, or recovery (instead of true mitigation) can be included in the plan; however, they do not substitute for the mitigation action requirements of a Local Mitigation Plan and may not meet eligibility requirements for FEMA’s mitigation grant programs. Surveys were completed at the working session or returned shortly after, in which jurisdiction representatives ranked the measures in the order that they were considered to be most preferred by the community, with a score of “1” being most preferred, and a score of “6” being the least preferred. The Mitigation Options Survey form is reproduced on the next page.*

*\*Note: This group warm-up activity was not intended to address any FEMA plan review criterion. It merely served to initiate the day’s discussion, and paint a broad-brush picture of where local preferences may tend to lie on a county-wide basis in the area of hazard mitigation.*

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### Rensselaer County Multi-Jurisdictional Hazard Mitigation Planning Project

#### Mitigation Options Survey

Municipality.....

Your name.....

Please rank the following generic descriptions of mitigation measures in the order that you estimate them to be most preferred by the members of your community, with 1 = most preferred, through 6 = least preferred. Your responses will be used to help paint a broad-brush picture of where local preferences may tend to lie across the planning area (on a county-wide basis) in the area of hazard mitigation.

- **Preventive measures**, such as:
  - Regulations
  - Building codes
  - Zoning
  
- **Asset protection measures**, such as:
  - Structure elevation/retrofit
  - Hurricane clips
  - Fireproof treatments
  
- **Emergency services measures**, such as: \* see below \*
  - Redundant communications systems
  - Hazard warning systems
  - Response resources
  
- **Structural projects**, such as:
  - Floodwalls/levees
  - Channel improvements
  - Drainage
  - Dams
  
- **Natural resource protection**, such as:
  - Set aside flood prone land for parks/open space
  - Wetland/wildland restoration
  
- **Public information activities**, such as:
  - Newsletters
  - Information at civic association meetings
  - Public notices
  - Local media

*\* **Emergency Services Note:** FEMA's mitigation planning guidance specifically states that any emergency services actions that are response, preparedness, or recovery (instead of true mitigation) can be included in the plan; however, they do not substitute for the mitigation action requirements of a Local Mitigation Plan and may not meet eligibility requirements for FEMA's mitigation grant programs.*

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The overall results of the completed surveys which were returned by all participating jurisdictions indicated that the most favored type of actions across the planning area were likely to be preventive measures, followed by structural projects and emergency services measures; while the least favored types of actions across the planning area were likely to be those related to public information activities, natural resource protection, and asset protection measures.

Mitigation Activity	Rank	Total Score
<b><i>Most preferred / appropriate:</i></b>		
Preventive Measures	1	44
Structural Projects	2	56
Emergency Services Measures	3	65
<b><i>Least preferred / appropriate:</i></b>		
Public Information Activities	4	88
Natural Resource Protection	5	92
Asset Protection Measures	6	96

### Detailed Analysis of Preferred Potential Actions and their Prioritization

The working session continued **detailed analysis** and prioritization of the subset of preferred action items. In order to further evaluate and ultimately prioritize the subset of preferred mitigation actions that were identified in the last step (that is, identified after the preliminary analysis discussed in Section 6), participants identified the **benefits** and **costs** of each preferred action using a planning concept called “STAPLEE”. FEMA Guidance recommends that their “STAPLEE” method (considering each project’s social, technical, administrative, political, legal, economic and environmental aspects) can be used to evaluate potential actions for the mitigation strategy/action plan, and also to prioritize those actions that the community selects as its mitigation actions. STAPLEE criteria are presented on the next page in Table 7-1. FEMA breaks these criteria down into a series of 23 detailed considerations. These considerations were discussed at the working session as part of the explanation of how to complete the prioritization exercise.

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<b>Table 7-1 STAPLEE Criteria and Detailed Considerations</b>		
<u>Criteria</u>	<u>Detailed Considerations</u>	<u>Sample Benefit and Cost Scenarios</u>
<b>S</b> <u>S</u> ocial	<ul style="list-style-type: none"> <li>• Community acceptance</li> <li>• Affect on segment of population</li> </ul>	Is the action unfair to one section of the community over others? If yes, it is a social cost associated with the action. If the implementation of the action helps achieve a social goal of the community, it is a social <i>benefit</i> associated with the action.
<b>T</b> <u>T</u> echnical	<ul style="list-style-type: none"> <li>• Technical feasibility</li> <li>• Long-term solution</li> <li>• Secondary impacts</li> </ul>	Is the action a good technical solution to the problem? If yes, it is a <i>benefit</i> associated with the action. The better the solution, the higher the <i>benefits</i> .
<b>A</b> <u>A</u> ministrative	<ul style="list-style-type: none"> <li>• Staffing</li> <li>• Funding allocation</li> <li>• Maintenance/operations</li> </ul>	Is the action difficult to implement because of the administrative problems associated? If yes, it is an administrative <i>cost</i> .
<b>P</b> <u>P</u> olitical	<ul style="list-style-type: none"> <li>• Political support</li> <li>• Local champion</li> <li>• Public support</li> </ul>	Is the action politically favored? If yes, it is a <i>benefit</i> . If the action is likely to be politically unacceptable, it is a <i>cost</i> associated with the action.
<b>L</b> <u>L</u> egal	<ul style="list-style-type: none"> <li>• State authority</li> <li>• Existing local authority</li> <li>• Potential legal challenge</li> </ul>	Are there perceived legal problems in implementing the action? If yes, it is a <i>cost</i> associated with the action.
<b>E</b> <u>E</u> conomic	<ul style="list-style-type: none"> <li>• Benefit of action</li> <li>• Cost of action</li> <li>• Contributes to economic goals</li> <li>• Outside funding required</li> </ul>	Does implementing the action make economic sense? Are the <i>costs</i> too prohibitive? If yes, it is a cost associated with the action.
<b>E</b> <u>E</u> nvironmental	<ul style="list-style-type: none"> <li>• Effect on land/water</li> <li>• Effect on endangered species</li> <li>• Effect on HAZMAT/waste sites</li> <li>• Consistent with community environmental goals</li> <li>• Consistent with federal laws</li> </ul>	Does the action have adverse environmental effects? If yes, it is a <i>cost</i> associated with the action.

Jurisdictions conducted a *detailed analysis of their preferred action items* by rating the overall benefits and costs of each action against the STAPLEE criteria identified above according to FEMA How-To # 386-5 STAPLEE Method B (modified). Using this methodology, to determine overall “*benefits*” for a certain action, each jurisdiction considered qualitatively the individual social, technical, administrative, political, legal, economic, and environmental benefits for the action and then indicated whether the net benefits, overall, could be characterized as high, medium, or low. To determine overall “*costs*” for a certain action, each jurisdiction considered qualitatively individual social, technical, administrative, political, legal, economic, and environmental costs for that action and then indicated whether the net costs, overall, could be characterized as high, medium, or low. These overall ‘*benefits*’ and ‘*costs*’ were noted on the worksheet, and the jurisdictions concluded by prioritizing each preferred action based on its overall benefits and costs.

It is important to note that a modified version of FEMA How-To #386-5 STAPLEE Method B was used. Because FEMA 386-5 included sample methodologies for applying a weighted score for only the two most complex STAPLEE methodologies (Methods C and D) but not for the more straightforward Method B, the consultant guided the CPG through a slightly modified Method B which used the methodology as presented in FEMA 386-5, but with a special weight placed on three factors: ease of implementation, achievement of multiple mitigation objectives, and how quickly the action can be implemented. During

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future plan updates, the CPG will reevaluate FEMA How-To #5 to determine if the currently selected modified Method B continues to be deemed most appropriate for this planning project, or if a collective desire exists amongst CPG members to switch to one of the more complex Methods C or D.

Since a qualitative approach was taken for the evaluation and prioritization of mitigation actions, jurisdictions were permitted to apply their own internal weightings to the costs and benefits of actions under each category, hence on the completed worksheets the overall priority of an action may not reflect a straightforward arithmetic comparison of its total “benefits” and total “costs”.

All action items not selected for prioritization by a given community after considering the STAPLEE factors received a low priority. In the future, communities may still seek to pursue other actions which they evaluated but did not select for prioritization at this time, including but not limited to those discussed in Section 6 (and associated studies, funding, etc. for these actions).

In addition to hazard mitigation projects, FEMA requires that each jurisdiction evaluate a set of actions specifically aimed at continuing participation in and compliance with FEMA’s National Flood Insurance Program (per FEMA guidance released in July 2008, Part 201.6(c)(3)(ii)). These actions include updating floodplain management ordinances to comply with the latest FEMA regulations and adopted flood maps, additional employment/training of staff to enforce the ordinances, and participation in FEMA’s Community Rating System (CRS).

**Appendix D contains a detailed analysis and prioritization worksheets (STAPLEE) completed by each participant for their selected actions. Each participant identified at least two action items for implementation. The action items ultimately selected address every profiled hazard, for every participating jurisdiction.**

**Appendix F contains prioritization and implementation strategy worksheets for those actions specifically related to continued and/or enhanced compliance with FEMA’s National Flood Insurance Program.** During subsequent plan updates, jurisdictions should consider FEMA’s new Toolkit file, A Guide to NFIP Requirements (“4-strat-3-nfip-requirements”), provided herein at the end of Appendix F. Jurisdictions with questions about the NFIP, or who are seeking information about the procedure to join or rejoin the NFIP, should contact NYSDEC State NFIP Coordinator, Bill Nechamen at 518-402-8146 and/or FEMA Region 2, Chief of Floodplain Management & Flood Insurance Branch, Mary Colvin at 212-680-3622.

*Note to the reviewer: The next section in this plan, entitled “Implementation Strategy,” will expand upon the prioritization step by identifying the hazard addressed, if the action applies to new and/or existing assets, the primary agency responsible for action item completion, any existing local planning mechanisms through which the action item will be implemented, target date for completion, estimated cost, and funding source.*