

PART 3 – LOCAL MITIGATION PLANS

Local Mitigation Plan requirements in 44 CFR, Part 201.6 of the Interim Final Rule (the Rule) apply to both local jurisdictions and Tribal governments that elect to participate in FEMA mitigation grant programs as a subapplicant or subgrantee (henceforth referred to as local jurisdictions). The local mitigation planning requirements in this section encourage agencies at all levels, local residents, businesses, and the non-profit sector to participate in the mitigation planning and implementation process. This broad public participation enables the development of mitigation actions that are supported by these various stakeholders and reflect the needs of the community. Private sector participation, in particular, may lead to identifying local funding that would not otherwise have been considered for mitigation activities.

As with State plans, the Disaster Mitigation Act of 2000 (DMA2000) requires that communities address only natural hazards in their local plan. FEMA recommends, however, that local mitigation plans address manmade and technological hazards as well. In many instances, natural disasters have secondary effects, such as dam or levee breaks due to floods, or hazardous material releases due to tornadoes. Multi-hazard mitigation plans will better serve communities in the event of such disasters.

The information contained in local mitigation plans is especially useful for States. They refer to local plans to improve the level of detail and comprehensiveness of statewide risk-assessments. In addition, States must also coordinate and link State hazard mitigation goals and objectives with local goals and objectives, which are based on local risk assessments.

The Community Rating System (CRS)¹ 10-step planning process is consistent with the multi-hazard planning regulations; therefore FEMA also encourages jurisdictions to integrate the CRS planning steps into their multi-hazard mitigation plans. This means that an *approved* multi-hazard mitigation plan that addresses floods will automatically qualify for the minimum CRS credit. However, if jurisdictions undertake additional steps within each phase as outlined in the CRC criteria within each phase (Planning Process, Risk Assessment, Mitigation Strategy, and Plan Maintenance) of the multi-hazard mitigation planning regulations, more points can be awarded by CRS, thus possibly lowering insurance rates.

¹ The Community Rating System (CRS) is a part of the National Flood Insurance Program (NFIP). When communities go beyond the NFIP's minimum standards for floodplain management, the CRS can provide discounts on flood insurance premiums policy holders in those communities.

The table below illustrates how the CRS 10-step planning process relates to the 4-steps of multi-hazard mitigation planning process. Each section of this document also provides basic guidance on working toward increased CRS points by integrating the CRS 10-step planning process into the 5-steps of the multi-hazard mitigation plan. Even more detailed information can be found in Activity 510 of the CRS Coordinator's Manual or in CRS Example Plans which can be accessed on the web at Plans which can be accessed on the web at <http://training.fema.gov/EMIWeb/CRS/>.

DMA 2000 Planning Requirements	CRS Planning Steps	CRS Maximum Points
44 CFR §201.6		
Step 1: Prerequisites		
201.6 (c)(5)	9. Adopt the plan	2
Step 2: Planning Process		
201.6(c)(1)	1. Organize	10
201.6(c)(1)	2. Involve the Public	85
201.6(b) (2) & (3)	3. Coordinate	25
Step 3: Risk Assessment		
201.6 (c)(2)(i)	4. Assess the hazard	20
201.6 (c)(2) (ii) & (iii)	5. Assess the problem	35
Step 4: Mitigation Strategy		
201.6 (c)(3) (i)	6. Set Goals	2
201.6 (c)(3) (ii)	7. Review possible activities	30
201.6 (c)(3) (iii)	8. Draft an action plan	70
Step 5: Plan Maintenance		
201.6 (c)(4)	10. Implement, evaluate, revise	15
	Total:	294

The sections covered in Part 3 – Local Mitigation Plans include:

- Prerequisites
- Planning Process
- Risk Assessment
- Mitigation Strategy
- Plan Maintenance Process

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PREREQUISITES

The local jurisdictions submitting the plan **must** satisfy the following prerequisites before the plan can receive **final approval** by FEMA.

ADOPTION BY THE LOCAL GOVERNING BODY

**Requirement
§201.6(c)(5):**

[The local hazard mitigation plan shall include] documentation that the plan has been formally adopted by the governing body of the jurisdiction requesting approval of the plan (e.g., City Council, County Commissioner, Tribal Council).

Explanation:

Adoption by the local governing body demonstrates the jurisdiction's commitment to fulfilling the mitigation goals and objectives outlined in the plan. Adoption legitimizes the plan and authorizes responsible agencies to execute their responsibilities. The plan **shall** include documentation of plan adoption, usually a resolution.

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If the local jurisdiction has not passed a formal resolution, or used some other documentation of adoption, the clerk or city attorney must provide written confirmation that the action meets their community's legal requirements for official adoption and/or the highest elected official or their designee must submit written proof of the adoption. The signature of one of these officials is required with the explanation or other proof of adoption.

Minutes of a council or other meeting during which the plan is adopted may be sufficient if local law allows meeting records to be submitted as documentation of adoption. The clerk of the governing body, or city attorney, must provide a brief, written explanation such as, "in accordance with section ___ of the city code/ordinance, this constitutes formal adoption of the measure," with an official signature.

For a plan to be approved by FEMA, it must be formally adopted by the local governing body within one (1) calendar year of receipt of FEMA's "Approval Pending Adoption"² designation indicating that the plan meets all other requirements of §201.6.

The updated plan shall include a copy of the resolution or other documentation of formal adoption of the updated plan, regardless of the

² Approval Pending Adoption: A recommended and potentially time-saving process by which jurisdictions submit the *final draft* mitigation plan to the State prior to adoption for a *review*. If the plan meets the local plan requirements, the plan would then be forwarded by the State to FEMA, who would conduct a separate *review*. If both the State and FEMA agree that the plan *meets requirements*, the plan would be returned to the jurisdiction with *approvable pending adoption* status. Upon adoption and resubmittal by the local governing body, the plan will then be formally *reviewed* by the State and FEMA for *final approval*. Note: The plan's crosswalk may contain *recommended revisions*, suggesting improvements to the plan. If the jurisdiction opts to incorporate all or some of the *recommendations* then the plan would be resubmitted for another *review*.

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degree of modification.

Multi-Hazard Planning Step	A Comparison of the Community Rating System & Hazard Mitigation Planning		CRS Step
<p>Step 1: Adopt the Plan</p> <p>The plan shall include documentation of plan adoption, usually a resolution.</p>	<p>Difference?</p> <p>CRS: The documentation must say that the plan was adopted rather than approved for CRS and the documentation must be either a resolution or ordinance.</p>	<p>Step 9:</p> <p>Documentation that the plan has been formally adopted by the governing body of the jurisdiction requesting approval of the plan. The adoption must be either a resolution or ordinance.</p>	

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MULTI-JURISDICTIONAL PLAN ADOPTION

Requirement
§201.6(c)(5):

For multi-jurisdictional plans, each jurisdiction requesting approval of the plan must document that it has been formally adopted.

Explanation:

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In order for multi-jurisdictional plans to be approved, each jurisdiction that is included in the plan **must** have its governing body adopt the plan before submission to the State and FEMA for **final approval**, even when a regional agency has the authority to prepare such plans.

As with single jurisdictional plans (see p. 3-2), in order for FEMA to give final approval to a multi-jurisdictional plan, at least one (1) of the participating jurisdictions **must** formally adopt the plan within one (1) calendar year of FEMA's designation of the plan as "approvable pending adoption" (see footnote #2 on p. 3-3 for an explanation of this process). While the ideal situation would be for all participating jurisdictions to formally adopt the plan as soon as it receives "approvable pending adoption" status, experience has shown that participating jurisdictions often formally adopt the plan at different times.

FEMA's policy is that "final approval" of the plan starts the 5-year "clock."³ based upon the receipt of documentation the first jurisdiction's formal adoption. This means that the plan expires five (5) years from the date of FEMA's approval.

The "clock" does not get "re-set" each time another participating jurisdiction subsequently adopts the plan. For example, if jurisdiction #1, the first jurisdiction to formally adopt the Blue County Multi-Jurisdictional Hazard Mitigation Plan, receives FEMA's "final approval" of the plan on January 15, 2008, the plan will expire on January 15, 2013, exactly 5-years later. If jurisdiction #2 does not formally adopt the plan until July 15, 2008, its eligibility would expire on January 15, 2013, the same exact date that Blue County's plan received "final approval" when the plan was first approved. Thus, jurisdiction #2 does not benefit from the full 5-year window, but only four and one-half (4.5) years.

Update:

Each jurisdiction that is seeking final approval for the plan **must** have its governing body adopt the updated plan, regardless of the degree of modifications.

Resources:

For more information about adopting the mitigation plan, see:

- ✓ *Bringing the Plan to Life* (FEMA 386-4), Step 1.
- ✓ *Multi-Jurisdictional Mitigation Planning* (FEMA 386-8), p. 4.

Example:

Note: New examples will be developed that take into account the update guidance. Please use this space to suggest themes that you think will

³ Plans must be reviewed, revised...and resubmitted for approval within five years in order to continue to be eligible for...grant project funding. CFR 44 §201.6(d)(3)

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be useful to the reader to further illustrate, through example, what is required or recommended under this section.

Multi-Hazard Planning Step	A Comparison of the Community Rating System & Hazard Mitigation Planning		CRS Step
<p>Step 1: Prerequisites: Multi-Jurisdictional Plan Adoption</p> <p>Each jurisdiction requesting approval of the plan must document that the plan has been formally adopted.</p>	<p>Difference?</p> <p>CRS: For CRS the adoption must either be a resolution or an ordinance.</p>	<p>Step 9: Adopt the Plan</p> <p>When a multi-jurisdictional plan is prepared, it must be adopted by the governing body of each community seeking CRS or multi-hazard mitigation plan credit. The adoption must either be a resolution or ordinance.</p>	

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MULTI-JURISDICTIONAL PLANNING PARTICIPATION

**Requirement
§201.6(a)(3):**

Multi-jurisdictional plans (e.g., watershed plans) may be accepted, as appropriate, as long as each jurisdiction has participated in the process ... Statewide plans will not be accepted as multi-jurisdictional plans.

Explanation:

A multi-jurisdictional plan, as prepared by regional planning and development authorities (e.g. watershed/river basin commission) is acceptable as a local mitigation plan. However, those jurisdictions within the planning area that do not participate in its development will not be eligible for future mitigation project grant assistance from FEMA⁴. Therefore, the new and updated plan **must** document how each jurisdiction that is requesting FEMA recognition of the plan participated in the planning process.

Plan Update:

If jurisdictional participation has changed since approval of the previous plan, it may be useful to discuss these changes in planning process section of the updated plan. Regardless, the updated plan must identify the following:

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- Those jurisdictions that participated in the previously approved plan but did not participate in the updated plan; and
- Those jurisdictions that did not participate in the previously approved plan but participated in the updated plan.

Resources:

For more information on initiating a comprehensive local mitigation planning process, see:

- ✓ *Getting Started* (FEMA 386-1), Steps 1-3
- ✓ *Multi-Jurisdictional Mitigation Planning* (FEMA 386-8), p. 8

Example:

Note: New examples will be developed that take into account the update guidance. Please use this space to suggest themes that you think will be useful to the reader to further illustrate, through example, what is required or recommended under this section.

⁴ In addition to participating in the plan, jurisdictions must adopt the Approvable Pending Adoption plan in order to be eligible for future mitigation assistance within the prescribed timeline.

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Multi-Hazard Planning Step	A Comparison of the Community Rating System & Hazard Mitigation Planning		CRS Step
<p>Step 1: Prerequisites Multi-Jurisdictional Participation</p> <p>A new and updated plan must document how each jurisdiction that is requesting FEMA recognition of the plan participated in the planning process.</p>	<p>Difference?</p> <p>CRS: Requires that at least one representative from each community seeking CRS credit is involved on the planning committee.</p>	<p>Step 1: Adopt the Plan</p> <p>When a multi-jurisdictional plan is prepared, at least one representative from each community seeking CRS credit must be involved on the planning committee.</p>	

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PLANNING PROCESS

The planning process is as important as the plan itself. Hence, the Rule requires a narrative description of the process used to develop the mitigation plan—a systematic account about how the mitigation plan evolved from the moment the planning team was created, to how each section of the plan was developed, to what plans or studies were incorporated into the plan and how it will be implemented, evaluated, and updated.

It is useful to remember that a comprehensive process description informs citizens and other readers (who may not have been involved in the creation of the plan) about the plan's development. It can serve as a permanent record that explains how consensus was reached regarding the development of a strategy to reduce losses. Because leadership, staffing, and in-house knowledge in local government fluctuates over time, the description of the planning process provides a clear picture to future leaders about how the plan was prepared. They can look to the plan with confidence that it was developed with citizen's input in a methodical and reasonable way. Leaders can then continue to make decisions in a post-disaster environment that decrease vulnerability to community hazards.

Any successful planning activity, such as the development of a comprehensive plan, involves bringing together a cross-section of the public to reach consensus on how to achieve a desired outcome or resolve a community problem. Using this inclusive process, the public gains a better understanding of the problem or issue and strives to develop a vision along with goals, priorities, and actions. The result is a common set of community values and widespread support for directing financial, technical, and human resources to an agreed upon course of action, usually identified in a plan. The same is true for mitigation planning. An effective and open public involvement process ensures that all citizens understand risks and vulnerability so that they will work with the jurisdiction and support policies, actions, and tools that over the long-term will lead to a reduction in *future* losses.

Section 201.6(c)(1) requires the documentation of the planning process, including how the plan was prepared, who was involved in the process, and how the public was involved.

This section includes the following subsection:

- Documentation of the Planning Process

DOCUMENTATION OF THE PLANNING PROCESS

Requirements §201.6(b) and §201.6(c)(1):

An open public involvement process is essential to the development of an effective plan. In order to develop a more comprehensive approach to reducing the effects of natural disasters, the planning process shall include:

- (1) An opportunity for the public to comment on the plan during the drafting stage and prior to plan approval;
- (2) An opportunity for neighboring communities, local and regional agencies involved in hazard mitigation activities, and agencies that have the authority to regulate development, as well as businesses, academia and other private and non-profit interests to be involved in the planning process; and
- (3) Review and incorporation, if appropriate, of existing plans, studies, reports, and technical information.

[The plan shall document] the planning process used to develop the plan, including how it was prepared, who was involved in the process, and how the public was involved.

Explanation:

The description of the planning process **shall**:

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- Indicate how the public (residents, businesses, and other interested parties) was given the opportunity to comment on the plan during the drafting stage and prior to plan approval (e.g. public meetings, Web pages, storefronts, toll-free telephone lines, etc.);
- Include a discussion of the opportunity provided to neighboring communities, governmental agencies, businesses, academia, and other relevant private and non-profit interests to be involved in the hazard mitigation planning process; and
- Describe the review of any existing plans, studies, reports, and technical information and how these are incorporated into the plan.

The plan **shall** document how the plan was prepared (e.g., the time period to complete the plan, the type and outcome of meetings), who was involved in the planning process (e.g., the composition of the planning team), and how the public was involved.

The plan *should* also document how the planning team was formed and how each party represented contributed to the process. Ideally, the local mitigation planning team is composed of local, State, and Federal agency representatives, as well as community representatives, local business leaders, and educators.

The plan *should* describe how public comments and concerns were considered and incorporated into the plan.

Plan Update:

The updated plan **shall** describe the process used to review and analyze each section of the plan. If the planning team or committee finds that some sections of the plan warrant an update, and others do not, the process the team undertook to make that determination **must** be documented in the plan.

The plan maintenance section, **p. 3-57**, requires a description about how the community was kept involved during the plan maintenance process⁵ over the previous five (5) years. Since this contributes to the continued planning process, the community may choose to describe this within the planning process section of the plan update rather than the plan maintenance section. The plan maintenance section is intended to be forward-thinking and emphasize future community involvement.

Special Considerations:

The planning team *should* consider **including a current** description of the jurisdiction in this section or in the introduction of the plan. The **general** description can include a socio-economic, historic, and geographic profile to provide a context for understanding the mitigation actions that will be implemented to reduce the jurisdiction's vulnerability.

Resources:

For more information on the planning process; ideas on identifying stakeholders and building the planning team, generating public interest, enlisting partners, and choosing an appropriate public participation model; and advice to local governments seeking to initiate a comprehensive local mitigation planning process, see:

- ✓ *Getting Started* (FEMA 386-1), Steps 1 – 3.
- ✓ *Multi-Jurisdictional Mitigation Planning* (FEMA 386-8), p. 17
- ✓ *Integrating Manmade Hazards into Mitigation Planning* (FEMA 386), Phase 3, Step 4.

Examples:

Note: New examples will be developed that take into account the update guidance. Please use this space to suggest themes that you think will be useful to the reader to further illustrate, through example, what is required under this section.

⁵ CFR §201.6(c)(4)(iii) The plan shall describe what opportunities the broader public (i.e., stakeholders who are not part of the planning team) would have during the plan's periodic review to comment on the progress made to date and the proposed plan revisions.

Multi-Hazard Planning Step	A Comparison of the Community Rating System & Multi-Hazard Mitigation Planning			CRS Step
Step: 2 Document the Planning Process	Difference?			Step: 1 Organize to Prepare the Plan
	[The plan shall document] the planning process used to develop the plan, including how it was prepared, who was involved in the process, and how the public was involved.	None.	Credit is based on how the community organizes to prepare its floodplain management plan.	
Step: 2 Public Comment	An open public involvement process is essential to the development of an effective plan. (1) An opportunity for the public to comment on the plan during the drafting stage and prior to plan approval.	None.	The planning process must include an opportunity for the public to comment on the plan during the drafting stage and before plan approval. The term "public" includes residences, businesses, property owners, and tenants, as well as stakeholders in the community such as business leaders, civic groups, academia, nonprofit organizations, and major employers.	Step: 2 Involve the Public
Step: 2 Public Involvement	An open public involvement process is essential to the development of an effective plan. (2) An opportunity for neighboring communities, local and regional agencies involved in hazard mitigation activities, and agencies that have the authority to regulate development, as well as businesses, academia and other private and non-profit interests to be involved in the planning process; and	None.	Other agencies and organizations must be contacted to see if they are doing anything that may affect the community's program and to see if they could support the community's efforts. Coordination with neighboring communities, local and regional agencies involved in hazard mitigation activities, and agencies that have the authority to regulate development as well as businesses, academia, and other nonprofit interests.	Step 3: Coordinate
Step 2: Existing Plans, Studies, Reports, Technical Information	(3) Review and incorporation, if appropriate, of existing plans, studies, reports, and technical information.	Multi-Hazard Mitigation Plan The multi-hazard plan includes all hazards, while CRS only requires that plans address flood hazards.	CRS requires that a plan include a review of existing studies, reports, and technical information and of the community's needs, goals, and plans for the area.	Step 3 Coordinate

RISK ASSESSMENT

Section 201.6(c)(2) of the Rule requires local jurisdictions to provide sufficient information from which to develop and prioritize appropriate mitigation actions to reduce losses from identified hazards. This includes detailed descriptions of all the hazards that could affect the jurisdiction along with an analysis of the jurisdiction's vulnerability to those hazards. Specific information about numbers and types of structures, potential dollar losses, and an overall description of land use and development trends should be included in this analysis. For multi-jurisdictional plans, any risks that affect only certain sections of the planning areas must also be assessed in the context of the affected area.

While the Rule does not require that plans address manmade hazards, jurisdictions are encouraged to assess risk to these hazards by using FEMA's How-to-Guide 386-7, *Integrating Manmade Hazards into Mitigation Planning*. This guide is designed to help jurisdictions identify specific actions that can be taken to reduce loss of life and property from manmade hazards by modifying the built environment to reduce the risk and potential consequences of these hazards. It is not intended to help jurisdictions establish procedures to respond to disasters, write an emergency operations plan, or create a counter-terrorism program. In this context, the goal of mitigation is to decrease the need for response as opposed to simply increasing response capability.

The local risk assessment is intended to generate sufficient information to enable the jurisdiction to identify and prioritize appropriate mitigation actions that reduce losses from vulnerability. It is also used by States to confirm and establish the regional and statewide implications of hazards as State goals are developed. Local risk assessments, coupled the local mitigation strategies, is the basis by which States evaluate their resources and establish statewide hazard reduction policies and goals.

To assist communities in hazard vulnerability analysis, FEMA has developed HAZUS (HAZUS-MH), a nationally standardized geographic information system (GIS) software that can be used to assess vulnerability by estimating losses from multiple hazard events. While not required, communities are encouraged to use HAZUS to form a scientific basis from which the mitigation strategy is developed. HAZUS is designed to provide loss estimations for three types of natural hazards:

- Riverine/Coastal Floods
- Earthquakes
- Hurricane Winds

HAZUS, compiled from national databases, describes the distribution of buildings by their use, construction material, replacement cost, among other characteristics. It also includes data about the location and characteristics of utilities, transportation, populations, and other information that can help communities understand their risk from hazards. It is also possible to use HAZUS to incorporate locally developed hazard data as well as information about the built and social environment into the risk assessment process. It is recommended that communities take advantage of this capability in order to produce loss estimations that reflect their local conditions as accurately as possible.

During an update to the risk assessment, communities are required to consider current and expected future vulnerability to all hazards and to integrate any new scientific hazard data such as flood studies, etc. They are encouraged to incorporate updated estimated of cost of living and replacement costs for vulnerable buildings and reduction in vulnerability due to the

completion of mitigation actions or projects. Communities should also address the impact of population growth or loss and its implication on vulnerable areas.

When the initial local mitigation plans were being formulated, FEMA recognized that data needed to complete the risk assessment may not have been readily available in order for jurisdictions to meet the planning requirements. Therefore, FEMA recommended that previously approved plans point out any data limitations, and identify actions to obtain the data in the mitigation strategy. If the previously approved plan identified data deficiencies that would be addressed at a later time, then FEMA would expect the new information to be incorporated in the updated risk assessment. However, if the data deficiencies have not been resolved, they must be addressed in the updated plan, accompanied by an explanation of why they remain and an updated schedule to resolve the issue.

While the Rule does not require the use or inclusion of maps as part of the plan, FEMA recommends the use of maps to illustrate the required risk assessment information. Note that any maps included in the updated plan must be consistent with the updated information.

For helpful definitions of risk assessment and related terms, please refer to *Understanding Your Risks* (FEMA 386-2), Appendix A, Glossary.

This section includes the following [] subsections as follows:

- Identifying Hazards
- Profiling Hazards
- Assessing Vulnerability: Overview
- Assessing Vulnerability: Identifying Structures
-
- Assessing Vulnerability: Estimating Potential Losses
- Assessing Vulnerability: Analyzing Development Trends
- Multi-jurisdictional Risk Assessment

IDENTIFYING HAZARDS

Requirement
§201.6(c)(2)(i): [The risk assessment shall include a] description of the type ... of all natural hazards that can affect the jurisdiction ...

Explanation: The local risk assessment **shall** identify and describe the hazards likely to affect the **planning** area. It is critical that the plan identify all the natural hazards that can affect the jurisdiction, because the hazard identification is the foundation for the plan's risk assessment, which in turn is the factual basis for the mitigation strategy. If the hazard identification omits (without explanation) any hazards commonly recognized as threats to the jurisdiction, this part of the plan cannot receive a "Satisfactory" score.

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While not required by the Rule, the plan *should* describe the sources used to identify hazards, and provide an explanation for eliminating any hazards from consideration. The process for identifying hazards could involve the following:

- Reviewing the State hazard mitigation plan **and local or regional** reports, plans, flood ordinances, and land use regulations, among others;
- Talking to experts from Federal, State, and local agencies and universities;
- Searching the Internet and newspapers; and
- Interviewing long-time residents **and consulting historical societies or museums.**

Events which contain multiple hazards (hurricane, thunderstorm, winter storm) should describe each hazard separately to provide sufficient information to enable the jurisdiction to identify and prioritize appropriate mitigation actions. It is important to consider the multiple aspects of each identified hazard. For instance, hurricanes have distinctly different types of impacts from high winds than flooding and storm surges. When considering how to approach hazard identification, jurisdictions should refer to the State's risk assessment and approach hazard identification similarly.

Plan Update: The local risk assessment update **shall** address any newly identified hazards that have been determined to pose a more significant threat than was apparent when the previously approved plan was prepared. If improved descriptions of hazards are available, they *should* be incorporated into this section.

Resources: ✓ *Integrating Manmade Hazards into Mitigation Planning (FEMA 386, Phase 2, Step 1.*

Using HAZUS-MH to Identify Hazards:

HAZUS can be used to define the area at risk (the planning area) as well as the degree of risk from potential flood, earthquake, and wind hazards. Since HAZUS is based on a geographic information system platform, it is possible to overlay information about other hazards on HAZUS maps in order to better understand risk from those hazards.

Multi-Hazard Planning Step	A Comparison of the Community Rating System & Hazard Mitigation Planning		CRS Step
<p>Step 3: Risk Assessment</p> <p>[The risk assessment shall include a] description of the type ... of all natural hazards that can affect the jurisdiction ...</p>	<p>Difference?</p> <p>All appropriate hazards must be identified and described in the multi-hazard mitigation plan, while the plan for CRS must only identify and describe the flood hazard.</p>		<p>Step 4: Assess the Hazard</p> <p>CRS requires at the minimum that the flood hazard be identified including addressing the repetitive loss areas. However, additional credit can be earned for including discussion of all other natural hazards.</p>

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PROFILING HAZARDS

Requirement
§201.6(c)(2)(i):

[The risk assessment shall include a] description of the ... location and extent of all natural hazards that can affect the jurisdiction. The plan shall include information on previous occurrences of hazard events and on the probability of future hazard events.

Explanation:

The description of each hazard **shall** include a narrative (and an optional map) of the following information:

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- The **location** or geographical areas in the community that would be affected. If a hazard location cannot be geographically determined, such as tornados that can strike any where in the community, the plan must say that the entire planning area is affected by the hazard. However, hazards known geographic boundaries (e.g., flood, earthquake) must specifically identify where the hazard can occur. For example, floodplains indicate areas potentially affected by flooding; urban interface⁶ areas designate areas potentially affected by wildfire, inundation⁷ zones specify areas likely to be affected by dam and levee failure.
- The **extent** (i.e., magnitude⁸ or severity) of potential hazard events. For each identified hazard, plans **shall** indicate the range of magnitude or severity that could be experienced. Discussion of what the community could anticipate may be enhanced with scientific scales, such as the Fujita Scale, TORRO Hail Scale, Richter Scale, Beaufort Wind Scale, Saffir-Simpson Scale, and the Palmer Index or by using quantitative measurements such as, miles per hour, flood depth, inches of rain, Fire Danger Rating, and acres burned. Many communities illustrate extent by describing how wide in terms of land area a hazard event could cover. Others classify hazards using terms like high, medium, or low (or major, minor, minimum). The plan should clearly define any classification methods used to illustrate extent.
- The **probability**⁹, likelihood, or frequency that the hazard event would occur in an area.

⁶ Urban Interface: where residential, commercial or other land uses in an urban area meet non-urban land uses.

⁷ Inundation: The boundary on a Flood Insurance Rate Map (FIRM) that shows the rising of a body of water and its overflowing onto normally dry land.

⁸ Magnitude: A measure of the strength or a hazard event. The magnitude (also referred to as severity) of a given hazard event is usually determined using technical measures specific to the hazard. (FEMA 433: Using HAZUS-MH for Risk Assessment)

⁹ Probability: A statistical measure of the likelihood that a hazard event will occur. (FEMA 433: Using HAZUS-MH for Risk Assessment)

The plan **shall** also provide a discussion of **past occurrences** of hazard events in or near the community. **For example, in areas where tornadoes occur, plans shall indicate the recorded intensities and dates of previous events.** This discussion *should* include:

- Information on the damages that occurred (e.g., costs of recovery, property damage, and lives lost) to the extent **available**.
- Level of severity (i.e., flood depth or extent, wind speeds, earthquake intensity, etc.).
- Duration of event.
- Date of occurrence.
- Sources of information used or consulted for assembling a history of past occurrences.

The hazard analysis *should* also identify on a map the areas affected by each identified hazard. Additionally, a composite map (i.e., a map showing combined information from different thematic map layers) *should* be provided for hazards with a recognizable geographic boundary (i.e., hazards that are known to occur in particular areas of the jurisdiction, such as floods, coastal storms, wildfires, tsunamis, and landslides).

The characterization of hazards *should* describe the conditions, such as topography, soil characteristics, meteorological conditions, etc., in the area that may exacerbate or mitigate the potential effects of hazards.

The hazard analysis *should* be detailed enough to allow identification of the areas of the jurisdiction that are most severely affected by each hazard.

The plan *should* describe the analysis or sources used to determine the probability, likelihood, or frequency of occurrence as well as the severity or magnitude of future hazard events.

The plan *should* note any data limitations and identify and include in the mitigation strategy actions for obtaining the data to complete and improve future risk analysis efforts.

Plan Update:

The plan update **shall** continue to include occurrences of hazards addressed in the previously approved plan, and discuss new occurrences of hazard events. **As required under §201.6(b)(3) the updated plan shall incorporate any new (i.e., since the previous plan was approved) historical records, or hazard data related to profiling hazards, such as National Flood Insurance Program maps or studies, HAZUS studies, or reports from other Federal or State agencies that describe location, extent, probability, or previous occurrences of hazards.**

FEMA recommended that previously approved plans point out any data limitations, and identify actions to obtain the data in the mitigation strategy.

If the previously approved plan identified data deficiencies that would be addressed at a later time, then the deficiencies **shall** be incorporated in the updated risk assessment. However, if the data deficiencies have not been resolved, they must be addressed in the updated plan, accompanied by an explanation of why they remain and an updated schedule to resolve the issue.

Any maps included in the updated plan **must** be consistent with the updated information.

Special Considerations:

While the Rule does not require the inclusion of maps as part of the mitigation plan, they can be a valuable tool to illustrate the information provided in the risk assessment. Maps included in the plan should address hazards in the planning area specific to the jurisdictions represented in the plan. For example, maps at a State or regional scale may not adequately show information relevant on the local or County/Parish level. It may be useful to consider the following when determining the usefulness of maps:

- Avoid using state or national scale maps;
- Maps can have multiple layers to clarify each hazard. This is effective for hazards such as flood and hazmat;
- Maps should clearly show all participating jurisdictional boundaries;
- Maps should be readable at an 8 ½ by 11 inch letter size scale;
- Maps should include a readable legend to clearly identify parts of the map;
- Documentation on the limitations of the data used on the map should be described the plan.

Refer to *Understanding Your Risks*, (FEMA 386-2), Step 3, p. 2-5 to 2-7, for more information on maps and mapping techniques.

Resources:

For more information on profiling hazards, see:

- ✓ *Understanding Your Risks* (FEMA 386-2), Step 2.
- ✓ *Integrating Manmade Hazards into Mitigation Planning* (FEMA 386, Phase 2, Step 2).
- ✓ HAZUS-MH at www.fema.gov/plan/prevent/hazus.
- ✓ Firewise at www.firewise.org.
- ✓ *Multi-Jurisdictional Mitigation Planning* (FEMA 386-8), p. 23.

Using HAZUS-MH to Profile Hazards

- HAZUS establishes a **base map** for both single- and multi-jurisdictional boundaries and includes important features such as critical/essential facilities, lifeline facilities, high potential loss

facilities, bridges, hazardous materials facilities and limited utilities and road segment data. It is based on the geographic area that the risk assessment will address.

- HAZUS includes historical information about earthquake and hurricane hazards.

Examples:

Note: New examples will be developed that take into account the update guidance. Please use this space to suggest themes that you think will be useful to the reader to further illustrate, through example, what is required under this section.

Multi-Hazard Planning Step	A Comparison of the Community Rating System & Hazard Mitigation Planning		CRS Step
<p>Step 3: Risk Assessment</p> <p>[[The risk assessment shall include a] description of the ... location and extent of all natural hazards that can affect the jurisdiction. The plan shall include information on previous occurrences of hazard events and on the probability of future hazard events.</p>	<p>Difference?</p> <p>For CRS, the plan must identify and describe the flood hazard, including the repetitive loss areas. Conversely, the multi-hazard plan must describe the location and extent of all natural hazards that can affect the jurisdiction. The multi-hazard plan must also include information on previous occurrences and on the probability of future hazard events. (This is an option for CRS credit)</p>	<p>Step 4: Assess the Hazard</p> <p>Credit is based on what the community includes in its assessment of the hazard. The minimum requirement is for the flood hazard only. However, additional credit can be earned by identifying and including a description of all other natural hazards.</p>	

ASSESSING VULNERABILITY: OVERVIEW

Requirement **§201.6(c)(2)(ii):**

[The risk assessment shall include a] description of the jurisdiction's vulnerability to the hazards described in paragraph (c)(2)(i) of this section. This description shall include an overall summary of each hazard and its impact on the community.

Explanation: **(Rev. 2007)**

An overview of the community's vulnerability assessment is a summary of the hazard's impact on the community **and its** vulnerable structures. This summary **shall** include, by type of hazard, a general description of the types of structures affected by the hazards. **Examples are buildings, infrastructure, critical facilities, structures that house the elderly and areas where low-income populations reside.**

The overview **shall** also include a general description of the hazard's impact to the vulnerable structures. This information can be presented in terms of dollar value or percentages of damage. The plan should note any data limitations and identify and include in the mitigation strategy actions for obtaining the data necessary to complete and improve future vulnerability assessments.

It is intended that the risk assessment take into account the vulnerability of structures located *within* areas susceptible to a particular hazard. However, keep in mind that certain hazards may affect the entire planning area.

Plan Update:

The vulnerability overview in the updated plan **shall** describe any changes, clarifications, or refinements to the overview summary described in the previously approved plan. It **shall** continue to include, by type of hazard, a general description of the types of structures affected by the hazard.

The community should take into account the following when updating its vulnerability assessment:

- Updates to inventories of existing structures in hazard areas, including structures located in annexed areas.
- Potential impacts of future land development, including areas that may be annexed in the future.
- New buildings that house special high-risk populations (i.e., elderly, low-income, disabled)
- Completed mitigation actions that reduced overall vulnerability.

If the previously approved plan noted data limitations related to the vulnerability summary and identified in the mitigation strategy actions to resolve the data deficiency, then the updated plan **shall** discuss how the

data was collected and incorporated into the updated risk assessment. If data deficiencies still remain unresolved, the plan **shall** discuss in the mitigation strategy what action will be taken to collect the data for the next update.

Special Considerations:

While the Rule does not require a discussion about [facilities that house special populations at risk](#), such as the elderly, disabled, or others with special needs, FEMA recommends their consideration in the risk assessment to enable the development of appropriate actions to [reduce vulnerability to these facilities](#) during or after a disaster.

Resources:

For a discussion on preparing a vulnerability assessment, see:

- ✓ *Understanding Your Risks* (FEMA 386-2), Step 3, Worksheet #3a Inventory Assets.
- ✓ HAZUS-MH at www.fema.gov/plan/prevent/hazus
- ✓ Firewise at www.firewise.org.
- ✓ *Multi-Jurisdictional Mitigation Planning* (FEMA 386-8), p. 25.
- ✓ *Integrating Manmade Hazards into Mitigation Planning (FEMA 386-7), Phase 2, Step 2.*

Examples:

Note: New examples will be developed that take into account the update guidance. Please use this space to suggest themes that you think will be useful to the reader to further illustrate, through example, what is required under this section.

Multi-Hazard Planning Step	A Comparison of the Community Rating System & Hazard Mitigation Planning		CRS Step
<p>Step 3: Risk Assessment</p> <p>[The risk assessment shall include a] description of the jurisdiction's vulnerability to the hazards described in paragraph (c)(2)(i) of this section. This description shall include an overall summary of each hazard and its impact on the community.</p>	<p>Difference?</p> <p>None.</p>	<p>Step 5: Assess the Problem</p> <p>Credit is based on what is included in the assessment of vulnerability to the hazards identified. At a minimum the plan must include an overall summary of each hazard and its impact on the community.</p>	

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ASSESSING VULNERABILITY: IDENTIFYING STRUCTURES

Requirement
§201.6(c)(2)(ii)
(A):

The plan should describe vulnerability in terms of the types and numbers of existing and future buildings, infrastructure, and critical facilities located in the identified hazard areas ...

Explanation:

(Rev. 2007)

This information *should* be based on an inventory of existing and proposed buildings, infrastructure, and critical facilities (structures) located within identified hazard area boundaries. *The inventory may include but is not limited to the following:*

- **Building Stock** broadly includes residential, commercial, industrial, and institutional buildings.
- **Critical Facilities** are essential to the health and welfare of the whole population and are especially important following hazard events. Since vulnerability is also based on service losses as well as building structure integrity and content value, assess the effects on the interruption of critical facility functions based on the service they provide as well as their physical aspects. Critical facilities include emergency service facilities such as hospitals and other medical facilities, jails and juvenile detention centers, police and fire stations, emergency operations centers, public works facilities, evacuation shelters, schools, and other uses that house special needs populations.
- **Transportation Systems** include airways – airports, heliports; highways, bridges, tunnels, roadbeds, overpasses, transfer centers; railways – trackage, tunnels, bridges, rail yards, depots; and waterways – canals, locks, seaports, ferries, harbors, drydocks, piers.
- **Lifeline Utility Systems** such as potable water, wastewater, oil, natural gas, and electric power, substations, power lines, etc.
- **Communications Systems and Networks** such as telephones, emergency service radio systems, repeater sites and base stations, television and radio stations, etc.
- **High Potential Loss Facilities** are facilities that would have a high loss associated with them, such as nuclear power plants, dams, and military installations.
- **Hazardous Material Facilities** include facilities housing industrial/hazardous materials, such as corrosives, explosives, flammable materials, radioactive materials, and toxins.
- **Economic Elements** include major employers, financial centers, and other business or retail districts in the community that could

affect the local or regional economy if significantly interrupted.

- **Special Consideration Areas** include areas of high density residential, commercial, institutional, and industrial development that, if damaged, could result in economic and functional losses and in high death tolls and injury rates.
- **Historic, Cultural, and Natural Resource Areas** may include buildings, structures, objects, sites, and nationally and locally historic or significant districts.

The structure description can also include construction characteristics (e.g., year built, **building type [light wood frame, concrete frame]**). The community *should* determine how best to indicate structures that are vulnerable to more than one hazard.

The plan *should* document the process and sources used to identify existing and future structures. If data are not readily available for buildings and infrastructure, the plan *should* provide information on critical facilities within the identified hazard areas and identify the collection of data for buildings and infrastructure as an action item in the mitigation strategy.

Repetitive flood loss properties are included in the plan. A repetitive loss property is a property that is currently insured through the National Flood Insurance Program (NFIP), for which two or more losses (occurring more than 10 years apart) of at least \$1,000 each have been paid within any 10-year period since 1978.

Note that it is unlawful to publish the specific addresses of the repetitive flood loss properties. A list of potential properties or areas that are being considered for acquisition should be prepared in advance, as part of the mitigation strategy but the specifics regarding property addresses should remain at the project level.

Plan Update:

The updated plan *should* include current inventory of existing and proposed buildings, infrastructure, and critical facilities located within identified hazard area boundaries.

It should indicate where approved or planned development is likely to occur, including expected annexation areas. The community *should* determine how far into the future they wish to go in considering proposed buildings, infrastructure, and critical facilities, including planned and approved development. The information on future structures may be based on and timed with the data gathering phase of their comprehensive plan or land use plan update. This information can be used to assess the overall vulnerability and identify which future structures may be at risk.

If a local comprehensive plan is not available, State agencies or Regional Planning Commissions may be able to provide regional data about

anticipated growth that may affect the community's vulnerability to hazards.

Special Considerations:

In addition to reviewing and incorporating data from comprehensive and long-range plans, some communities may opt to conduct a build-out analysis. The analysis involves a projection based on full development of all land in accordance with existing land use regulations such as the zoning ordinance or subdivision regulations. Within this context, the impact of growth on vulnerability could be assessed and included in the risk assessment as a means to develop future actions to mitigate the risk.¹⁰

Special Considerations:

When identifying structures that are flood-prone, communities may prefer to speak more generally in the plan and not give the specific addresses that may have information available from FEMA's National Flood Insurance Program's Repetitive Loss List. Though this information may provide you with loss and claim data for individual properties, FEMA recommends that providing owner or property address data be withheld from the plan, due to potential conflicts with the Federal Privacy Act. Though numbers of properties can be identified, only general locations (e.g. along North Pecan Creek, or within Riverside Acres Subdivision) should be provided. The plan developer should provide sufficient detail to the reader that specific property information for mitigation is maintained and will be addressed at the project level, rather than within the plan.

Resources:

For a discussion on identifying vulnerable structures and preparing a detailed inventory, see:

- ✓ *Understanding Your Risks* (FEMA 386-2), Step 3, Worksheets #3a and #3b Inventory Assets.
- ✓ HAZUS-MH at www.fema.gov/plan/prevent/hazus.
- ✓ Firewise at www.firewise.org.
- ✓ *Integrating Manmade Hazards into Mitigation Planning*, (FEMA 386-7), Phase 2, Step 3.

Using HAZUS-MH to Inventory Assets

To consider the assets that can be impacted by the prioritized hazards, HAZUS outputs tables and maps of inventory data and allows the incorporation of local data. It provides a means by which the user can document the populations, buildings, transportation infrastructure, utilities, and other elements of the built environment that can be impacted by different hazard events.

¹⁰ United States Environmental Protection Agency, http://www.epa.gov/greenkit/build_out.htm

Multi-Hazard Planning Step	A Comparison of the Community Rating System & Hazard Mitigation Planning		CRS Step
<p>Step 3: Risk Assessment</p> <p>The plan <i>should</i> describe vulnerability in terms of the types and numbers of existing and future buildings, infrastructure, and critical facilities located in the identified hazard areas ...</p>	<p>Difference?</p> <p>Multi-Hazard Mitigation Plan</p> <p>Identifying structures with regard to vulnerability is optional, but recommended.</p>	<p>Step 5: Assess the Problem</p> <p>CRS credits the identification of the number and types of buildings subject to the hazards as well as the identification of critical facilities and infrastructure located in the hazard areas.</p>	

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ASSESSING VULNERABILITY: ESTIMATING POTENTIAL LOSSES

Requirement
§201.6(c)(2)(ii)
(B):

[The plan should describe vulnerability in terms of an] estimate of the potential dollar losses to vulnerable structures identified in paragraph (c)(2)(i)(A) of this section and a description of the methodology used to prepare the estimate ...

Explanation:

(Rev. 2007)

Describing vulnerability in terms of dollar losses provides the community and the State with a common framework in which to measure the effects of hazards on vulnerable structures. The Plan *should* include an estimate of losses for the identified vulnerable structures. A **monetary** estimate *should* be provided for each hazard, and *should* include, when resources permit, structure, contents, and function losses¹¹ to present a full picture of the total loss for each asset. Where data are limited, the planning team can select the most likely event for each hazard and estimate the losses for that event. In this way, the planning team can identify parts of the jurisdiction that could suffer the greatest losses.

In addition to providing a clear measure of the estimated dollar losses and the impact of the displacement of residents and businesses as a result of hazard events, losses can be used to assess the benefits and costs of proposed mitigation actions.

The methodology used to determine losses *should* also be provided. The plan *should* note any data limitations and identify and include in the implementation strategy actions for obtaining the data to complete and improve future risk assessment analysis efforts.

Plan Update:

If there are changes to the hazard profile and/or to the inventory of structures, the loss estimate *should* be updated to reflect the changes. If the approach for determining the losses has changed since the first approval, the plan *should* describe the new methodology. The updated plan *should* include, when resources permit, estimates of structure, contents, and function losses to present a full picture of the total loss for each asset.

If the previously approved plan noted data deficiencies in estimating potential losses and identified actions in the mitigation strategy to address them at a later time, then the new information *should* be incorporated into the updated plan. However, if the data deficiencies have not been resolved, they *should* be addressed in the updated plan, accompanied by an explanation of why they remain and an updated schedule to resolve the issue.

Special

Creating a composite loss map depicting high potential loss areas (and

¹¹ **Structure Loss %** = Replacement Value x Percentage of Damage

Content Loss % = Replacement Value x Percentage of Damage

Functional Losses: Indirect effects that usually involve interruptions in asset operations.

Functional Downtime: The average time (in days) during which functions (business or service) is unable to provide its service due to a hazard event.

Considerations: identifying the location of critical facilities within the high potential loss areas) from multiple hazards will help the community develop its mitigation priorities based on loss potential.

Resources: For a step-by-step method for estimating losses, see:

- ✓ *Understanding Your Risks* (FEMA 386-2), Step 4.
- ✓ HAZUS-MH at www.fema.gov/plan/prevent/hazus .

For information regarding U.S. Forest Service guidelines see:

- ✓ www.fs.fed.us .

For further information regarding wildland/urban interface see:

- ✓ Firewise at www.firewise.org.
- ✓ *Multi-Jurisdictional Mitigation Planning* (FEMA 386-8), p. 27.
- ✓ *Integrating Manmade Hazards into Mitigation Planning* (FEMA 386-7), Phase 2, Step 4.

Using HAZUS-MH to Estimate Potential Losses

The most important purpose of HAZUS is the ability to estimate losses from natural hazards. Descriptions of losses include both social and economic considerations and they describe both the location and extent of losses.

Examples:

Note: New examples will be developed that take into account the update guidance. Please use this space to suggest themes that you think will be useful to the reader to further illustrate, through example, what is required under this section.

Multi-Hazard Planning Step	A Comparison of the Community Rating System & Hazard Mitigation Planning		CRS Step
<p>Step 3: Risk Assessment</p> <p>[The plan should describe vulnerability in terms of an] estimate of the potential dollar losses to vulnerable structures identified in paragraph (c)(2)(i)(A) of this section and a description of the methodology used to prepare the estimate.</p>	<p>Difference?</p> <p>Multi-Hazard Mitigation Plan</p> <p>Estimating potential losses with regard to vulnerability is optional, but recommended.</p>		<p>Step 5: Assess the Problem</p> <p>CRS credits is given for an assessment that includes a review of all properties that received flood insurance claims (in addition to repetitive loss properties) or an estimate of the potential dollar losses to vulnerable structures.</p>

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ASSESSING VULNERABILITY: ANALYZING DEVELOPMENT TRENDS

Requirement
§201.6(c)(2)(ii)
(C):

[The plan should describe vulnerability in terms of] providing a general description of land uses and development trends within the community so that mitigation options can be considered in future land use decisions.

Explanation:

(Rev. 2007)

The plan *should* provide a general overview of land uses and types of development occurring within **each** community **participating in the plan**. This can include existing and **proposed/future** land uses as well as development densities in the identified hazard areas and any anticipated future **land use, including anticipated annexation areas**.

An analysis of development trends, provides a basis for making decisions on the type of mitigation approaches to consider, and the locations in which these approaches should be applied. This information can also be used to influence decisions regarding future development in hazard areas. A land use map would be useful to depict the descriptive information.

The plan *should* note any data limitations and identify and include in the mitigation strategy actions for obtaining the data necessary to complete **and improve the risk assessment in the future**.

The local mitigation plan should consider any or all of the following when analyzing development trends:

- Describe trends in terms of amount of change over time (for example, projecting trends based on increases of numbers of permits [including demolition] issued per year) and identify where the development is occurring;
- Differentiate land uses of similar types that have distinctly different densities (for example, single-family homes, attached housing, and multifamily housing);
- Show where the future land uses are likely to occur based on comprehensive plans, zoning, proposed annexation areas, or simply an extension of historic patterns; or
- Show the expected growth or redevelopment for some reasonable future timeframe (for example, 10 years). The timeframe could be coordinated with that of a local comprehensive or long-range plan review and update.

Update:

The updated plan *should* include a general overview of land uses and types of development occurring within the community. It can include existing and future land uses, including densities, in identified hazard areas.

If the previously approved plan noted data deficiencies in analyzing development trends and identified actions in the mitigation strategy to address them at a later time, then the new information *should* be incorporated. However, if the data deficiencies have not been resolved, they *should* be addressed in the updated plan, accompanied by an

explanation of why they remain and an updated schedule to resolve the issue.

Special Considerations:

To ascertain which jurisdictions statewide are the most vulnerable and to establish priorities for mitigation funding and technical assistance, the State is required to review local risk assessments and information provided in local mitigation plans regarding current and future land uses and anticipated or proposed development. Following the review of local plans, the State may adjust their own risk assessment to more accurately reflect vulnerability using more detailed data provided in local plans. States may use this information to prioritize mitigation programming and funding. The integration includes the analysis of:

- Areas of the State that have experienced significant population increases or decreases and/or shifts in population;
- Changes in land use or land use activities in vulnerable areas;
- Implementation of mitigation actions that have ultimately reduced vulnerability.

For more information on development trends, consult with your local, State, or regional planning officials.

- ✓ *Multi-Jurisdictional Mitigation Planning* (FEMA 386-8), p. 29.
- ✓ *APA Build-Out Analysis??*

Using HAZUS-MH to Analyze Development Trends

The HAZUS provided inventory reflects current conditions within a community based on best available national data sources. It is possible for the HAZUS user to replace the out-of-the-box inventory with data that reflects projected community change. While this process can be potentially time consuming and costly depending on the scale of the area under study, it could provide a valuable means by which to assess the risk from anticipated development. This information can then be applied toward making better informed decisions which can guide development within the community.

Examples:

Note: New examples will be developed that take into account the update guidance. Please use this space to suggest themes that you think will be useful to the reader to further illustrate, through example, what is required under this section.

Multi-Hazard Planning Step	A Comparison of the Community Rating System & Hazard Mitigation Planning	CRS Step
<p>Step 3: Risk Assessment</p> <p>[The plan should describe vulnerability in terms of] providing a general description of land uses and development trends within the community so that mitigation options can be considered in future land use decisions.</p>	<p>Difference?</p> <p>Multi-Hazard Mitigation Plan</p> <p>Describing vulnerability by describing current, proposed, and future land use and development trends with regard to vulnerability is optional, but recommended.</p>	<p>Step 5: Assess the Problem</p> <p>CRS gives credit for a description of the development, redevelopment, and population trends and a discussion of what the future brings for development in the community.</p>

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MULTI-JURISDICTIONAL RISK ASSESSMENT

Requirement §201.6(c)(2)(iii): For multi-jurisdictional plans, the risk assessment must assess each jurisdiction's risks where they vary from the risks facing the entire planning area.

Explanation: The multi-jurisdictional plan **must** present information for the general planning area as a whole as described in the previous paragraphs. However, where hazards and associated losses occur in only part of the planning area, this information **must** be attributed to the particular jurisdiction in which they occur. *The larger the planning area and the more communities participating in a plan, the more likely that unique and varied risks will occur. This requirement reflects the entirety of the risk assessment, including both the identification of hazards, and the varied vulnerabilities faced by each participating jurisdiction.* Further, where unique construction characteristics occur, they *should* be indicated on the plan so that appropriate mitigation actions are considered. *Consulting the State hazard mitigation plan can help identify the hazards that affect each jurisdiction in the planning area.*

Plan Update: If new hazards have been identified in the multi-jurisdictional risk assessment, the information **must** be attributed to the appropriate jurisdiction (s) or to the whole planning area, whichever applies.

Where vulnerability to previously identified hazards has changed, the plan **must** incorporate this information into the updated multi-jurisdictional risk assessment and it **must** be attributed to the appropriate jurisdiction (s) or to the whole planning area, whichever applies.

Resources: For more information on creating a detailed risk assessment, see:

- ✓ *Understanding Your Risks* (FEMA 386-2), Steps 1 – 4.
- ✓ HAZUS-MH at www.fema.gov/plan/prevent/hazus.
- ✓ Firewise at www.firewise.org.
- ✓ *Multi-Jurisdictional Mitigation Planning* (FEMA 386-8), p. 21-29.

Examples: Note: New examples will be developed that take into account the update guidance. Please use this space to suggest themes that you think will be useful to the reader to further illustrate, through example, what is required under this section.

MITIGATION STRATEGY

Section 201.6(c)(3) of the Rule requires jurisdictions to develop a mitigation strategy. The mitigation strategy serves as the blue print for reducing the potential losses identified in the risk assessment. The mitigation strategy includes the development of goals, objectives, and prioritized mitigation actions.

The development of goals from which specific actions and projects will be derived are based on the community's existing authorities, policies, programs, and resources and its capability to use local tools to reduce losses and vulnerability from profiled hazards. Goals are broad policy statements and global visions that support the mitigation strategy. An example of a goal for a wildfire hazard is, "Minimize wildfire losses in the urban interface¹² area. Many communities take an extra step and identify objectives that more narrowly define implementation steps to attain the goals. Unlike goals, objectives are specific and measurable, such as, "Educate citizens about wildfire defensible space actions."

Following the identification of goals and objectives, the Rule requires that communities identify, analyze, and prioritize alternative actions *by profiled hazard*. The actions are even more narrowly categorized than objectives. An example of an action for a wildfire hazard is, "Sponsor a community fair to promote wildfire defensible space." Jurisdictions should review and evaluate the State's mitigation policies, regulations, and practices to ensure locally identified actions support the State's mitigation strategy. Communities are encouraged to develop actions that can be implemented by using local tools, such as capital improvement budgets, special funds, or implementing changes in policies or procedures that reduce vulnerability.

All mitigation actions are prioritized to ensure that the projects considered the most important get implemented according to a cost-benefit review, with a focus on how effective the actions are expected to be with respect to their cost. For multi-jurisdictional plans, each participating jurisdiction shows the specific actions they will undertake for each hazard profiled. Many multi-jurisdictional plans fall short in identifying actions for each of the jurisdictions represented in the plan. Some actions may overlap but the Rule still requires the identification of specific mitigation actions for each jurisdiction.

While not required, communities are encouraged to incorporate a post-disaster recovery component into the overall implementation strategy of this plan by considering mitigation actions that may not be currently feasible but may become a realistic possibility following a disaster event. Access to State and Federal mitigation funds can enable communities to accomplish actions that otherwise may not be possible. Prior to a hazard event, it may be useful to have a list of mitigation actions on hand that support the jurisdiction's mitigation strategy.

After five years of implementing the mitigation strategy, communities are required to update their goals and actions. In the plan update, goals and objectives may be reaffirmed or updated based on current conditions, including the completion of mitigation initiatives, an updated or new risk assessment, or changes in State priorities. It is useful to review the changes in the community since the previous plan was approved to determine whether goals have been met or if they remain consistent with current conditions.

¹² Urban Interface: where residential, commercial or other land uses in an urban area meet non-urban land uses, such as a forest

Updating the plan provides an opportunity to reconsider the goals and objectives that guides the selection of the actions identified in the previously approved plan, particularly in light of experiences gained from actions that have been implemented.

This section includes the following four subsections:

- Local Hazard Mitigation Goals
- Identification and Analysis of Mitigation Actions
- Implementation of Mitigation Actions
- Multi-jurisdictional Mitigation Actions

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LOCAL HAZARD MITIGATION GOALS

Requirement
§201.6(c)(3)(i):

[The hazard mitigation strategy shall include a] description of mitigation goals to reduce or avoid long-term vulnerabilities to the identified hazards.

Explanation:

(Rev. 2007)

The community's hazard reduction goals, as described in the plan, along with any corresponding objectives, guide the development and implementation of mitigation actions. This section **shall** list the goals intended to reduce or avoid the effects of the **profiled** hazards addressed in the risk assessment.

The description *should* include how goals were developed. The goals could be developed early in the planning process and refined based on the risk assessment findings, or developed entirely after the risk assessment is completed. They *should* also be compatible with the goals of the community as expressed in other community plan documents, **such as a comprehensive plan.**

Although the Rule does not require a description of objectives, communities are encouraged to include objectives developed to achieve the goals so that reviewers understand the connection between goals, objectives, and **actions.**

The goals and objectives *should*:

- Be based on the findings of the local and State risk assessments; and
- Represent a long-term vision for hazard reduction or enhancement of mitigation capabilities.

Plan Update:

The plan update provides an opportunity for local jurisdictions to **reconsider the goals and objectives identified in the previously approved plan to determine if they should be reaffirmed or updated based on current conditions, including the completion of mitigation initiatives, an updated or new risk assessment, or changes in State priorities. The planning team should ask the following questions when updating the mitigation strategy:**

- **Do the goals and objectives identified in the previously approved plan reflect the updated risk assessment?**
- **Did the goals and objectives identified in the previously approved plan lead to mitigation projects and/or changes in policy that helped the jurisdiction(s) to reduce vulnerability?**
- **If there are changes in mitigation priorities, do the goals and objectives identified in the previously approved plan support those priorities?**

- Are goals identified in the updated local plan reflective of current State goals?

Goals are general guidelines and broad-policy statements that explain what is to be achieved. They may be reaffirmed or updated based on more current information. It is not necessary to change goals from the previous plan if they remain valid; however, the plan **must** document that goals were re-evaluated and that they were determined to remain valid and effective.

If the previously approved plan included objectives, the updated plan *should* document which objectives have been met, and identify new objectives.

Resources:

For more information on developing local mitigation goals and objectives, see:

- *Developing the Mitigation Plan* (FEMA 386-3), Step 1.
- *Multi-Jurisdictional Mitigation Planning* (FEMA 386-8), p. 30.
- *Integrating Manmade Hazards into Mitigation Planning*, Phase 3, Step 1.

Special Considerations:

Goals are general guidelines that explain what you want to achieve. They **are broad policy-type statements** and are usually long-term and represent global visions, such as “Protect Existing Property.”

Objectives define strategies or implementation steps to attain the identified goals. Unlike goals, objectives are specific, measurable, and may have a defined completion date. Objectives are more specific, such as “Use the most effective approaches to protect buildings from flooding, including acquisition where warranted.”

The development of effective goals and objectives enables the planning team to evaluate the merits of alternative mitigation actions and the local conditions in which these activities would be pursued.¹³

(From *Developing the Mitigation Plan* [FEMA 386-3], Step 1.)

Examples:

Note: New examples will be developed that take into account the update guidance. Please use this space to suggest themes that you think will be useful to the reader to further illustrate, through example, what is required under this section.

¹³ A potential mitigation action that would support the goal and objective goal example under *Special Considerations* is “Acquire seven of the 10 repetitive flood loss homes in the Acadia Woods Subdivision.”

Multi-Hazard Planning Step	A Comparison of the Community Rating System & Multi-Hazard Mitigation Planning			CRS Step
Step 4: Mitigation Strategy	Difference?			Step 6: Set Goals
	[The hazard mitigation strategy shall include a) description of mitigation goals to reduce or avoid long-term vulnerabilities to the identified hazards.	None.	Credit is based on a statement of goals of the community's floodplain management or hazard mitigation program.	

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IDENTIFICATION AND ANALYSIS OF MITIGATION ACTIONS

Requirement
§201.6(c)(3)(ii):

[The mitigation strategy shall include a] section that identifies and analyzes a comprehensive range of specific mitigation actions and projects being considered to reduce the effects of each hazard, with particular emphasis on new and existing buildings and infrastructure.

Explanation:

(Rev. 2007)

The local jurisdiction **shall** list potential loss reduction actions it has identified in its planning process and evaluate various actions that achieve the community's goals and objectives to reduce or avoid the effects of the identified hazards. *A comprehensive range of specific mitigation actions consists of multiple mitigation actions for each profiled hazard. "No Action"¹⁴ does not qualify as a mitigation action.* Mitigation actions **shall** address **existing** and **new** buildings and infrastructure.

Prior to analyzing and prioritizing mitigation actions, it may be useful for communities to sort identified mitigation actions into the following groups:

- **Prevention:** Government administrative or regulatory actions or processes that influence the way land and buildings are developed and built. These actions also include public activities to reduce hazard losses. Examples include planning and zoning, building codes, capital improvement programs, open space preservation, and storm water management regulations.
- **Property Protection:** Actions that involve the modification of existing buildings or structures to protect them from a hazard, or removal from the hazard area. Examples include acquisition, elevation, relocation, structural retrofits, storm shutters, and shatter-resistant glass.
- **Public Education & Awareness:** Actions to inform and educate citizens, elected officials, and property owners about the hazards and potential ways to mitigate them. Such actions include outreach projects, real estate disclosure, hazard information centers, and school-age and adult education programs.
- **Natural Resource Protection:** Actions that, in addition to minimizing hazard losses also preserve or restore the functions of natural systems. These actions include sediment and erosion control, stream corridor restoration, watershed management, forest and vegetation management, and wetland restoration and preservation.
- **Emergency Services:** Actions that protect people and property during and immediately after a disaster or hazard event.
- **Structural Projects:** Actions that involve the construction of structures to reduce the impact of a hazard. Such structures include dams, levees, floodwalls, seawalls, retaining walls, and safe rooms.

Some of the mitigation actions *initially* identified may ultimately be *eliminated* in the community's *action* plan due to limited capabilities, prohibitive costs, low benefit/cost ratio, or other concerns. The process by which the community decides on particular mitigation actions **shall** be

described. This description can include who participated in the [analysis](#) and selection of actions. The information will also be valuable as part of the alternative analysis for the National Environmental Policy Act (NEPA) review required if projects are Federally funded.

With regard to analyzing and prioritizing mitigation actions, FEMA's How-To Guide, 386-3, *Developing the Mitigation Plan*, highlights the STAPLEE¹⁵ method—an excellent technique for identifying, evaluating, and prioritizing mitigation actions based on existing local conditions.

- S** Social The public must support the overall implementation strategy and specific mitigation actions. Therefore, the projects will have to be evaluated in terms of community acceptance.

- T** Technical It is important to determine if the proposed action is technically feasible, will help to reduce losses in the long term, and has minimal secondary impacts. Here, you will determine whether the alternative action is a whole or partial solution, or not a solution at all.

- A** Administrative Under this part of the evaluation criteria, you will examine the anticipated staffing, funding, and maintenance requirements for the mitigation action to determine if the jurisdiction has the personnel and administrative capabilities necessary to implement the action or whether outside help will be needed.

- P** Political Understanding how your current community and state political leadership feels about issues related to the environment, economic development, safety, and emergency management will provide valuable insight into the level of political support you will have for mitigation activities and programs. Proposed mitigation objectives sometimes fail because of a lack of political acceptability.

- L** Legal Without the appropriate legal authority, the action cannot lawfully be undertaken. When considering this criterion, you will determine whether your jurisdiction has the legal authority at the State, or local level to implement the action, or whether the jurisdiction must pass new laws or regulations. Each level of government operates under a specific source of delegated authority. As a general rule, most local governments operate under enabling legislation that gives them the power to engage in different activities. You should identify the unit of government undertaking the mitigation action, and

include an analysis of the interrelationships between local, regional, State, and Federal governments. Legal authority is likely to have a significant role later in the process when your State, or community will have to determine how mitigation activities can best be carried out, and to what extent mitigation policies and programs can be enforced.

E Economic

Every local and State government experiences budget constraints at one time or another. Cost-effective mitigation actions that can be funded in current or upcoming budget cycles are much more likely to be implemented than mitigation actions requiring general obligation bonds or other instruments that would incur long-term debt to a community. States and local communities with tight budgets or budget shortfalls may be more willing to undertake a mitigation initiative if it can be funded, at least in part, by outside sources. “Big ticket” mitigation actions, such as large-scale acquisition and relocation, are often considered for implementation in a post-disaster scenario when additional federal and state funding for mitigation is available.

E Environmental

Impact on the environment is an important consideration because of public desire for sustainable and environmentally healthy communities and the many statutory considerations, such as the National Environmental Policy Act (NEPA), to keep in mind when using Federal funds. You will need to evaluate whether, when implementing mitigation actions, there would be negative consequences to environmental assets such as threatened and endangered species, wetlands, and other protected natural resources.

Using STAPLEE criteria, local communities can weigh the pros and cons of implementing a particular mitigation action. STAPLEE can help jurisdictions to evaluate actions based on local conditions that may impact whether or not the *actions* identified in the mitigation action plan could be accomplished.

When identifying and evaluating mitigation actions, the following considerations may also be useful:

- Compatibility with goals and objectives identified in the current State hazard mitigation plan;
- Compatibility with goals and objectives identified in the local

mitigation strategy;

- An assessment of the impact of identified actions on other jurisdictions within the entire planning area or region. (e.g. No Adverse Impact, watersheds)
- Ability to implement (e.g. local capability);
- Available financial and other resources;
- Funding priorities identified in the current State hazard mitigation plan; and,
- Compatibility with other local or regional plans and programs.

Plan Update: If the mitigation actions or activities remain unchanged from the previously approved plan the updated plan **must** indicate why changes are not necessary. The plan update provides an opportunity for local jurisdictions to reconsider analysis of the range of specific actions.

Special Considerations: Even though actions are listed in the plan, they may not all meet eligibility requirements for FEMA’s mitigation grant programs. Many plans exclude mitigation action items in favor of preparedness, response, and recovery actions. The Rule on mitigation planning only requires the development of mitigation actions. In the course of developing the local hazard mitigation plan, your community may discover and build consensus on preparedness, response, and recovery actions. These actions are not a substitute for the mitigation action requirements, and thus, are not required to be documented. FEMA encourages communities to formally agree upon all actions that will make the community safer from natural and man-made hazards.

It is important to remember that for FEMA’s purposes, hazard mitigation is defined as sustained action take to reduce or eliminate long-term risk to people and property from hazards and their effects. The idea is that a mitigation action, such as elevating a home in a floodplain, protects the property and the people in it and therefore safeguards the homeowner and the community’s assets in the long-term. A response action that would not qualify as a mitigation action would be, “Update Emergency Operations Plan.”

Special Considerations: FEMA recommends that jurisdictions, as part of this section, assess their own existing capabilities to implement mitigation actions. This assessment *should* include a discussion of existing mitigation activities in the community, existing regulatory standards, projects that have already been planned, integration with comprehensive planning and capital improvement programs, etc., as well as the jurisdiction’s ability to expand on and improve these existing tools. The community may want to review the sections titled, “State and Local Capability Assessment” in the State’s hazard mitigation plan. The local capability assessment would generally describe how local pre-and post-disaster mitigation policies, programs, and capabilities such as building codes, zoning, or land use policies are

effective in reducing vulnerability.

Resources:

For more information on identifying and evaluating mitigation actions and preparing a capability assessment, see:

- ✓ *Developing the Mitigation Plan* (FEMA 386-3), Step 2, Worksheet #1 Identify Alternative Mitigation Actions, Job Aid #1: Alternative Mitigation Actions by Hazard, Worksheet #2 State Mitigation Capability Assessment, Worksheet #3 Local Mitigation Capability Assessment, Job Aid #2: Local Hazard Mitigation Capabilities, and Worksheet #4 Evaluate Alternative Mitigation Actions.
- ✓ *Integrating Manmade Hazards into Mitigation Planning* (FEMA 386-7), Phase 3.
- ✓ *Multi-Jurisdictional Mitigation Planning* (FEMA 386-8), p. 31.
- ✓ *Integrating Manmade Hazards into Mitigation Planning* (FEMA 386-7), Phase 3, Step 2.
- ✓ Mitigation [Best Practices](http://www.fema.gov/plan/preventbestpractices/index.shtm) and Case Studies at <http://www.fema.gov/plan/preventbestpractices/index.shtm>
- ✓ *Rebuilding for a More Sustainable Future: An Operational Framework* (FEMA 365).
- ✓ The Natural Hazards Center at www.colorado.edu/hazards.
- ✓ Flood mitigation success stories from the Association of State Floodplain Managers at <http://www.fema.gov/plan/prevent/bestpractices/index.shtm>

Examples:

Note: New examples will be developed that take into account the update guidance. Please use this space to suggest themes that you think will be useful to the reader to further illustrate, through example, what is required under this section.

Multi-Hazard Planning Step	A Comparison of the Community Rating System & Multi-Hazard Mitigation Planning			CRS Step
Step 4: Mitigation Strategy	Difference?			Step 7: Review Possible Activities
	<p>[The mitigation strategy shall include a) section that identifies and analyzes a comprehensive range of specific mitigation actions and projects being considered to reduce the effects of each hazard, with particular emphasis on new and existing buildings and infrastructure.</p>	<p>The CRS plan must discuss why some activities are appropriate for implementation and also discuss why certain activities are not appropriate for implementation.</p>	<p>Credit is based on a comprehensive review of floodplain management or hazard mitigation activities are reviewed in the plan. The review must include a description of why certain activities were recommended and why others were not.</p>	

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IMPLEMENTATION OF MITIGATION ACTIONS

Requirement:
§201.6(c)(3)(iii): [The mitigation strategy section shall include] an action plan describing how the actions identified in section (c)(3)(ii) will be prioritized, implemented, and administered by the local jurisdiction. Prioritization shall include a special emphasis on the extent to which benefits are maximized according to a cost benefit review of the proposed projects and their associated costs.

Explanation:
(Rev. 2007) After [describing](#) the mitigation actions to be included in the mitigation strategy, the local jurisdiction **shall** describe the method for prioritizing the order in which actions will be implemented. Considerations that may be used to prioritize actions include: social impact, technical feasibility, administrative capabilities, and political and legal effects, as well as environmental issues. [It is also useful to use the STAPLEE method highlighted on p. 3-40 of this document to prioritize mitigation actions.](#)

When prioritizing mitigation actions, local jurisdictions **shall** consider the benefits that would result from the mitigation actions versus the cost of those actions. Note that the Rule **does not require** plans to include a cost benefit analysis for [projects](#). However, an economic evaluation is essential for selecting one or more actions from among many competing ones. The requirement is met as long as the economic considerations are summarized in the plan as part of the community's analysis. Among ways to address this requirement are:

- Assessing the economic impact of one action compared to another.
- Showing how one type of action costs more than another to achieve the same benefit.
- Showing that funding is available for one type of action but not another.
- Demonstrating that the economic goals of your community are better served by one action instead of another.

This section **shall** also include how actions will be implemented and administered. The plan **shall** include the [department and title of the personnel](#) responsible for carrying out the actions, the funding sources, and the implementation timeline. This section can also include a cost estimate or budget for each action, when available.

Plan Update: The updated plan **must** identify the completed, deleted, or deferred actions or activities from the previously approved plan as a benchmark for progress. Further, the updated plan **shall** include in its evaluation and prioritization any new mitigation actions identified since the previous plan was approved or through the plan update process.

[If the mitigation actions or activities remain unchanged from the](#)

previously approved plan, the updated plan **must** indicate why changes are not necessary.

Resources: For a detailed description of the development of the action plan, see:

- ✓ *Developing the Mitigation Plan* (FEMA 386-3), Step 3.
- ✓ *Using Benefit-Cost Review in Mitigation Planning* (FEMA 386-5).
- ✓ *Mitigation Benefit Cost Analysis (BCA) Toolkit Compact Disc (CD)* – this CD includes all of the FEMA BCA software, technical manuals, BCA training course documentation, and other supporting material and BCA guidance. Copies can be obtained by calling FEMA’s toll-free BC Hotline at 866.222.3580.
- ✓ *Integrating Manmade Hazards into Mitigation Planning*, (FEMA 386-7), Phase 2, Step 3.

Examples: Note: New examples will be developed that take into account the update guidance. Please use this space to suggest themes that you think will be useful to the reader to further illustrate, through example, what is required under this section.

Multi-Hazard Planning Step	A Comparison of the Community Rating System & Multi-Hazard Mitigation Planning			CRS Step
Step 4: Mitigation Strategy	Difference?			Step 8: Draft an Action Plan
	[The mitigation strategy section shall include] an action plan describing how the actions identified in section (c)(3)(ii) will be prioritized, implemented, and administered by the local jurisdiction. Prioritization shall include a special emphasis on the extent to which benefits are maximized according to a cost benefit review of the proposed projects and their associated costs.	For CRS credit, the plan must identify who, (what, department or person is responsible for implementing the action item), does what, when will the action item be implemented and how will the action item be financed for each action (mitigation measure) item.	Credit is based on an action plan that identifies who does what, when it will be done, and how it will be financed. The actions must be prioritized and include a review of the benefits of the proposed projects and their associated costs.	

MULTI-JURISDICTIONAL MITIGATION ACTIONS

Requirement §201.6(c)(3)(iv): For multi-jurisdictional plans, there must be identifiable action items specific to the jurisdiction requesting FEMA approval or credit of the plan.

Explanation: (Rev. 2007) The multi-jurisdictional plan **must** contain a section that links the proposed mitigation actions to the applicable jurisdictions. Any jurisdiction within the planning area requesting approval or credit for the Mitigation Plan **must** be able to point to specific actions that will be pursued. Actions by individual jurisdictions may be part of or contribute to an area-wide mitigation action. The scope of any action may be entirely within the jurisdiction or may be part of a larger action involving some or all of the other jurisdictions covered in the plan.

All participating jurisdictions must have participated in identifying and analyzing a comprehensive range of mitigation actions (see p. 3-39 of this document) for each profiled hazard, which can result in an achievable mitigation action plan. Look to the risk assessment section to identify actions that best address each participating jurisdiction's vulnerability to the profiled hazards.

This section **shall** also include how actions will be implemented and administered. The plan **shall** include the jurisdiction, department and title of the personnel responsible for carrying out the actions, the funding sources, and the implementation timeline. This section can also include a cost estimate or budget for each action, when available.

Update: The updated multi-jurisdictional plan **must** identify the completed, deleted or deferred actions from the previously approved plan as a benchmark for progress. Further, the updated plan **shall** include any new mitigation actions identified in its evaluation and prioritization since the previous plan was approved or through the plan update process.

If the mitigation actions remain unchanged from the previously approved plan, the updated plan **must** indicate why changes are not necessary.

Resources: For more information on the development of the action plan, see:

- ✓ *Developing the Mitigation Plan* (386-3), Step 3.
- ✓ *Multi-Jurisdictional Mitigation Planning* (FEMA 386-8), p. 32.
- ✓ *Using Benefit-Cost Review in Mitigation Planning*, (FEMA 386-5)

Examples: Note: New examples will be developed that take into account the update guidance. Please use this space to suggest themes that you think will be useful to the reader to further illustrate, through example, what is required under this section.

Multi-Hazard Planning Step	A Comparison of the Community Rating System & Multi-Hazard Mitigation Planning			CRS Step
Step 4: Mitigation Strategy	Difference?			Step 8: Draft an Action Plan
	For multi-jurisdictional plans, there must be identifiable action items specific to the jurisdiction requesting FEMA approval or credit of the plan.	None.	For CRS credit, when a multi-jurisdictional plan is prepared, it must have action items from at least two of the six categories that directly benefit each community seeking CRS credit.	

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PLAN MAINTENANCE PROCESS

Section 201.6(c)(4) requires a formal plan maintenance process to ensure that the mitigation plan remains an active and relevant document. The plan maintenance process must include a method and schedule for monitoring, evaluating, and updating the plan at least every five (5) years. This section must also include an explanation of how local governments intend to incorporate their mitigation strategies into any existing planning mechanisms they have, such as comprehensive or capital improvement plans, or zoning and building codes. Lastly, this section requires that there be continued public participation throughout the plan maintenance process.

The updated plan assesses how the local plan maintenance process worked and identifies whether any changes to the process are needed. Taking into consideration future updates, adjustments to the method and schedule for maintaining the plan may be necessary to ensure its value for comprehensive risk reduction.

Since the plan is an evolving document, the plan maintenance process identified in the plan serves as the basis for the next update. The process of updating the plan provides local government with opportunity to document its progress in achieving its mitigation goals.

When the community prepares a plan update, the Rule requires that the plan discuss how the community was kept involved during the plan maintenance process¹⁶ over the previous five (5) years. It is suggested that this discussion take place within the planning process section of the plan update rather than the plan maintenance section. The plan maintenance section is intended to be forward-thinking and emphasize future community involvement.

This section includes the following three subsections:

- Monitoring, Evaluating, and Updating the Plan
- Incorporation into Existing Planning Mechanisms
- Continued Public Involvement

MONITORING, EVALUATING, AND UPDATING THE PLAN

Requirement
§201.6(c)(4)(i):

[The plan maintenance process shall include a] section describing the method and schedule of monitoring, evaluating, and updating the mitigation plan within a five-year cycle.

Explanation:

(Rev. 2007)

The local jurisdiction **shall** describe how, when, and by whom¹⁷ the plan will be **monitored**. Monitoring may include periodic reports by agencies involved in implementing projects or activities; site visits, phone calls, and meetings conducted by the person responsible for overseeing the plan; and the preparation of an annual report that captures the highlights of the previously mentioned activities.

The plan **shall** also include a description of how, when, and by whom the plan will be **evaluated**, and *should* include the criteria used to evaluate the plan. The evaluation *should* assess, among other things, whether:

- The goals and objectives address current and expected conditions.
- The nature, magnitude, and/or type of risks have changed.
- The current resources are appropriate for implementing the plan.
- There are implementation problems, such as technical, political, legal, or coordination issues with other agencies.
- The outcomes have occurred as expected.
- The agencies and other partners participated as originally proposed.

The plan **shall** describe how, when, and by whom the plan will be **updated**. The Rule requires that the plan be updated within five (5) years from the date of FEMA approval. FEMA recommends that the plan be reviewed and updated on an annual basis *or after a hazard occurrence* to determine the effectiveness of programs, and to reflect changes in land development or programs that may affect mitigation priorities.

Plan Update:

The previously approved plan identified procedures to **monitor, evaluate, and update** its mitigation plan and track mitigation activities. The results of this evaluation and monitoring will assist local government in updating each section of the plan as part of the established update schedule. In particular, the plan maintenance section of the previously approved plan should assist in establishing a process for updating the plan.

The updated plan **must** include:

- An analysis of whether the previously approved plan's method and schedule for monitoring, evaluating, and updating the plan worked, and what elements or processes, if any, were changed; and

- The method and schedule to be used over the next five (5) years to monitor, evaluate, and update the plan.

Special Considerations: If the plan also satisfies the CRS requirements, the flood section may need to be updated more frequently than every five years. States may also have additional requirements. Consult with your FEMA Regional Office or State Hazard Mitigation Officer.

- Resources:** For guidance on monitoring, evaluating, and updating the plan, see:
- ✓ *Bringing the Plan to Life* (FEMA 386-4), Steps 2 – 4.
 - ✓ *Multi-Jurisdictional Mitigation Planning* (FEMA 386-8), p. 35.
 - ✓ *Integrating Manmade Hazards into Mitigation Planning* (FEMA 386-7), Phase 4, Step 3.

Multi-Hazard Planning Step	A Comparison of the Community Rating System & Multi-Hazard Mitigation Planning			CRS Step
Step 5: Plan Maintenance	Difference?			Step 10: Draft an Action Plan
	[The plan maintenance process shall include a] section describing the method and schedule of monitoring, evaluating, and updating the mitigation plan within a five-year cycle.	The CRS requires annual progress reports as well as an update of the plan every five (5) years.	Credit is based on how a community monitors and evaluates its plan on an annual basis and updates it on a five-year cycle.	

INCORPORATION INTO EXISTING PLANNING MECHANISMS

Requirement §201.6(c)(4)(ii): [The plan shall include a] process by which local governments incorporate the requirements of the mitigation plan into other planning mechanisms.

Explanation: Jurisdictions **shall** indicate how the mitigation strategy, including the goals and objectives, and mitigation actions will be incorporated into other planning mechanisms.
(Rev. 2007)

Communities that do not have comprehensive plans and/or capital improvement plans, *should* explain how the mitigation actions would be implemented into zoning and building codes, subdivision regulations, site reviews, permitting, job descriptions, staff training, and other planning tools where such tools are the appropriate vehicle for implementation. Further, for certain mitigation actions that may use other means of implementation, these other tools *should* be described.

Jurisdictions shall also indicate how information contained in the plan, including hazard identification and the risk assessment, will be integrated into other planning mechanisms.

Local government functions provide a myriad of methods in which to implement actions identified in the mitigation strategy. Among them is the comprehensive plan. Others include but are not limited to the following:

<i>Plans</i>	<i>Codes, Regulations, & Procedures</i>	<i>Programs</i>	<i>Land Use</i>
Local Comprehensive /Land Use Plan	Zoning Ordinances	Beach Conservation & Restoration Programs	
General Plans	Subdivision Regulations	Historic Preservation District Programs	
Sustainability Plan	Building Codes	Construction/Retrofit Programs	
Capital Improvements Plan	Soil Erosion Ordinance	Downtown Redevelopment	
Redevelopment Plan	Landscape Code	Long-Range Recreation Facilities	
Post-Disaster Redevelopment Plan	Tree Protection Ordinance	Improvement/Retrofit Program	

Regional Development Plans	Local/County/Parish Solid Waste & Hazardous Materials Waste Regulations	Land Buyout Programs	
Watershed Protection/Enhancement Plans	Property Deed Restrictions	Transportation Improvement/Retrofit Programs	
Open Space Plan	Site Plan Review	School Siting Plan	
Flood Mitigation Plan	Architectural/Design Review	Land Buyout Programs	
Military Base Development/Redevelopment/Reuse Plan		Environmentally Sensitive Purchase Programs	
College Campus Development Plans		Local Storm Water Program	
Special Functional Plans (economic, development, airport, facilities plan)			
Comprehensive Emergency Management Plan		Local and/or Regional Evacuation Programs	<i>Emergency Operations</i>
Mutual Aid Agreement		"Firewise" and other Fire Mitigation	
Flood Response Plan		Fire Rescue Long-Range Programs	
		Temporary Animal Relocation Program	

Resources: For more information on incorporating hazard mitigation activities in other initiatives, see:

- ✓ *Getting Started* (FEMA 386-1), Step 2
 - ✓ *Multi-Jurisdictional Mitigation Planning* (FEMA 386-8), p. 29.
 - ✓ *Planning for a Sustainable Future: The Link Between Hazard Mitigation and Livability* (FEMA 364)
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CONTINUED PUBLIC INVOLVEMENT

Requirement §201.6(c)(4)(iii): [The plan maintenance process shall include a] discussion on how the community will continue public participation in the plan maintenance process.

Explanation: The plan **shall** describe what opportunities the broader public (i.e., stakeholders who are not part of the planning team) would have during the plan's periodic review to comment on the progress made to date and the proposed plan revisions. Plans *should* describe the mechanisms for keeping the public involved (e.g., holding strategic meetings, posting the proposed changes to the plan on the Web, etc.)

(Rev. 2007)

Update:¹⁸ When the community prepares a plan update, the Rule requires that the plan discuss how the community was kept involved during the plan maintenance process¹⁹ over the previous five (5) years. It is suggested that this discussion take place within the planning process section of the plan update rather than the plan maintenance section. The plan maintenance section is intended to be forward-thinking and emphasize future community involvement.

The updated plan **shall** describe how the community will involve the public during the plan maintenance process over the next five (5) years.

Resources: For more information on keeping the public involved, see:

- ✓ *Getting Started* (FEMA 386-1), Step 3.
- ✓ *Bringing the Plan to Life* (FEMA 386-4), Steps 2 and 3.
- ✓ *Multi-Jurisdictional Mitigation Planning* (FEMA 386-8), p. 38.