

# APPENDIX D: LOCAL HAZARD MITIGATION PLAN UPDATE CHECKLIST

This section of the Plan includes a completed copy of the *Local Hazard Mitigation Plan Update Checklist* as provided by the North Carolina Division of Emergency Management.

**Instructions for Using the Local Hazard Mitigation Plan Update Checklist**

Attached is a Checklist to facilitate the review and revision (as appropriate) of the Local Hazard Mitigation Plan that was adopted by your jurisdiction and approved by the NC Division of Emergency Management (NCEM) and the Federal Emergency Management Agency (FEMA) (referred to here as your "Approved Plan"). This Checklist will assist you in preparing the required 5-year update to your plan (referred to here as your "Plan Update"). This Checklist is based on FEMA's *Local Multi-Hazard Mitigation Planning Guidance*, dated July 1, 2008 (the "Blue Book") and is consistent with *the Disaster Mitigation Act of 2000* (P.L. 106-390) and the accompanying federal regulations found at 44 CFR Part 201 (*Mitigation Planning, Interim Final Rule*). This Checklist also incorporates additional recommendations made by NCEM and refers you to the 2007 NC State Hazard Mitigation Plan to ensure that your local plan update is consistent with the current state plan.

Each element of your Approved Mitigation Plan should be reviewed carefully, and a determination about the need to update each element should be made. Indicate in the second column of the Checklist the exact place in the previously Approved Plan (e.g., Chapter, Section, Annex, and page number) where each required planning element is located. As revisions are inserted into the Plan Update (appropriately marked and dated), use Column 3 to identify where the revision is located. Use the "Comments" column of the Checklist to indicate the reason for the revision, or to explain why no revision is considered necessary. Check "Yes" or "No" in the final column of the Checklist to indicate whether each element of your Approved Plan was revised or otherwise modified. Note: This Checklist does not serve as a substitute for a narrative description of the planning update process. You must describe how your community reviewed and analyzed each section of the previous plan.

*Please use this Checklist to record your changes as you review and revise your plan. A COMPLETED CHECKLIST MUST ACCOMPANY YOUR PLAN UPDATE WHEN IT IS SUBMITTED TO NCEM FOR APPROVAL.*

The example below illustrates how to complete the Local Hazard Mitigation Plan Update Checklist.

**Example**

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.*

Element	Location in the Approved Plan (chapter, section, annex, etc. and page #)	Location in the Plan Update (chapter, section, annex, etc. and page #)	Comments: Use this space to explain revisions made to the Approved Plan, or why revisions were not made.	CHANGES?	
				YES	NO
A. Does the plan update include an <b>overall summary</b> description of the jurisdiction's vulnerability to each hazard?	<b>Section II, p.4-10; Map 12, Appendix B</b>	<b>Section II, p.4A-4C; Map 12A in Appendix B of the Plan Update</b>	<b>This section was revised to reflect new development in the northwest portion of the jurisdiction.</b>	✓	
B. Does the plan update address the <b>impact</b> of each hazard on the jurisdiction?	<b>Section II, p.11-20</b>	<b>Section II, p.11-20</b>	<b>Based on a review of the 2007 NC State Hazard Mitigation Plan, the previously approved plan adequately addresses the impact of each hazard.</b>		✓

**Local Mitigation Plan Update: NFIP Status/CRS Class**

Use this space to indicate whether your community participates in the National Flood Insurance Program (NFIP). For Multi-Jurisdictional Plans, use a separate line for each community participating in the Plan Update. If your community participates in the Community Rating System, indicate the current (updated) classification number. Use the Comments column to explain any changes in NFIP Status or CRS rating.

Jurisdiction:	Comments	NFIP Status*			CRS Class	CHANGES?	
		Y	N	N/A	#	YES	NO
Catawba County	Active NFIP participant since 1980.	✓			N/A		✓
Town of Brookford	Active NFIP participant since 1979.	✓			N/A		✓
Town of Catawba	Active NFIP participant since 1980.	✓			N/A		✓
City of Claremont	Active NFIP participant since 2003.	✓			N/A		✓
City of Conover	Active NFIP participant since 1980.	✓			N/A		✓
City of Hickory	Active NFIP participant since 1981.	✓			N/A		✓
Town of Long View	Active NFIP participant since 1980.	✓			N/A		✓
Town of Maiden	Active NFIP participant since 1980.	✓			N/A		✓
City of Newton	Active NFIP participant since 1980.	✓			N/A		✓

\* Notes:                    Y = Yes, Participating                    N = Not Participating                    N/A = Not Mapped

**LOCAL MITIGATION PLAN UPDATE SUMMARY**

The Hazard Mitigation Plan Update cannot be approved if the Plan has not been formally re-adopted by the local jurisdiction.

Elements in gray-shaded areas are recommended but not required by FEMA; absence of these elements will not preclude the Plan Update from receiving approval from FEMA.

**Prerequisite(s) (Check Applicable Box)**

CHANGES?	
YES	NO
<input type="checkbox"/>	<input type="checkbox"/>

1. Adoption by the Local Governing Body: §201.6(c)(5) **OR**

2. Multi-Jurisdictional Plan Adoption: §201.6(c)(5) **AND**

CHANGES?	
YES	NO
<input type="checkbox"/>	<input type="checkbox"/>

3. Multi-Jurisdictional Planning Participation: §201.6(a)(3)

**Planning Process**

4. Documentation of the Planning Process: §201.6(b) and §201.6(c)(1)

CHANGES?	
YES	NO
<input type="checkbox"/>	<input type="checkbox"/>

**Risk Assessment**

5. Identifying Hazards: §201.6(c)(2)(i)

CHANGES?	
YES	NO
<input type="checkbox"/>	<input type="checkbox"/>

6. Profiling Hazards: §201.6(c)(2)(i)

CHANGES?	
YES	NO
<input type="checkbox"/>	<input type="checkbox"/>

7. Assessing Vulnerability: Overview: §201.6(c)(2)(ii)

CHANGES?	
YES	NO
<input type="checkbox"/>	<input type="checkbox"/>

8. Assessing Vulnerability: Addressing Repetitive Loss Properties. §201.6(c)(2)(ii)

CHANGES?	
YES	NO
<input type="checkbox"/>	<input type="checkbox"/>

9. Assessing Vulnerability: Identifying Structures, Infrastructure and Critical Facilities: §201.6(c)(2)(ii)(A)

CHANGES?	
YES	NO
<input type="checkbox"/>	<input type="checkbox"/>

10. Assessing Vulnerability: Estimating Potential Losses: §201.6(c)(2)(ii)(B)

CHANGES?	
YES	NO
<input type="checkbox"/>	<input type="checkbox"/>

11. Assessing Vulnerability: Analyzing Development Trends: §201.6(c)(2)(ii)(C)

CHANGES?	
YES	NO
<input type="checkbox"/>	<input type="checkbox"/>

12. Multi-Jurisdictional Risk Assessment: §201.6(c)(2)(iii)

CHANGES?	
YES	NO
<input type="checkbox"/>	<input type="checkbox"/>

**Mitigation Strategy**

13. Local Hazard Mitigation Goals: §201.6(c)(3)(i)

CHANGES?	
YES	NO
<input type="checkbox"/>	<input type="checkbox"/>

14. Identification and Analysis of Mitigation Actions: §201.6(c)(3)(ii)

CHANGES?	
YES	NO
<input type="checkbox"/>	<input type="checkbox"/>

15. Identification and Analysis of Mitigation Actions: NFIP Compliance §201.6(c)(3)(ii)

CHANGES?	
YES	NO
<input type="checkbox"/>	<input type="checkbox"/>

16. Implementation of Mitigation Actions: §201.6(c)(3)(iii)

CHANGES?	
YES	NO
<input type="checkbox"/>	<input type="checkbox"/>

17. Multi-Jurisdictional Mitigation Actions: §201.6(c)(3)(iv)

CHANGES?	
YES	NO
<input type="checkbox"/>	<input type="checkbox"/>

**Plan Maintenance Process**

18. Monitoring, Evaluating, and Updating the Plan: §201.6(c)(4)(i)

CHANGES?	
YES	NO
<input type="checkbox"/>	<input type="checkbox"/>

19. Incorporation into Existing Planning Mechanisms: §201.6(c)(4)(ii)

CHANGES?	
YES	NO
<input type="checkbox"/>	<input type="checkbox"/>

20. Continued Public Involvement: §201.6(c)(4)(iii)

CHANGES?	
YES	NO
<input type="checkbox"/>	<input type="checkbox"/>

**Additional NC State Recommendations**

Description of Plan Progress

N/A	N/A
<input type="checkbox"/>	<input type="checkbox"/>

Community Profile

N/A	N/A
<input type="checkbox"/>	<input type="checkbox"/>

Capability Assessment

N/A	N/A
<input type="checkbox"/>	<input type="checkbox"/>

Map of vulnerable structures & critical facilities overlaid with known hazard areas

N/A	N/A
<input type="checkbox"/>	<input type="checkbox"/>

Map of existing & proposed land uses overlaid with known hazard areas

N/A	N/A
<input type="checkbox"/>	<input type="checkbox"/>

**PREREQUISITE(S)**

**1. 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).

*Comment: Note that the plan update must be officially adopted by the local governing body, regardless of the degree of modification to the previously approved plan.*

Element	Location in the Approved Plan (chapter, section, annex, etc. and page #)	Location in the Plan Update (chapter, section, annex, etc. and page #)	Comments	CHANGES?	
				YES	NO
A. Has the local governing body formally adopted the plan update?	Appendix A	Appendix A	Local governing bodies will adopt plan following conditional approval (Approval Pending Adoption) by FEMA.	✓	
B. Is supporting documentation, such as a resolution, included?	Appendix A	Appendix A	Copies of resolutions will be included following local adoption (subsequent to conditional approval by FEMA).	✓	

**2. 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.

*Comment: Note that the plan update must be officially adopted by the local governing body(ies), regardless of the degree of modification to the previously approved plan.*

Element	Location in the Approved Plan (chapter, section, annex, etc. and page #)	Location in the Plan Update (chapter, section, annex, etc. and page #)	Comments	CHANGES?	
				YES	NO
A. Does the plan indicate the specific jurisdictions represented in the plan update?	Section 1, p.3 Section 2, p.17	Section 1, p.3	All jurisdictions within Catawba County participated in the 2009 plan update (and all were active participants in the initial 2004 plan as well).		✓
B. For each jurisdiction, has the local governing body formally adopted the plan update?	Appendix A	Appendix A	Local governing bodies will adopt plan following conditional approval (Approval Pending Adoption) by FEMA.	✓	
C. Is supporting documentation, such as a resolution, included for each participating jurisdiction?	Appendix A	Appendix A	Copies of resolutions will be included following local adoption (subsequent to conditional approval by FEMA).	✓	

3. 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.

**NCEM Recommendation:** NCEM recommends that the Plan Update include a map showing all jurisdictions within the geographic coverage of the multi-jurisdictional plan. The map should indicate which communities are participating/not participating in the plan update. Clearly indicate the jurisdictional boundaries of each participating jurisdiction on the map.

Element	Location in the Approved Plan (chapter, section, annex, etc. and page #)	Location in the Plan Update (chapter, section, annex, etc. and page #)	Comments	CHANGES?	
				YES	NO
A. Does the plan describe <b>how</b> each jurisdiction participated in the plan update process?	Section 2, p.4-13, 17-18	Section 2, p.16-30	A complete description of the 2009 plan update process is included in Section 2, and expands upon the narrative description of the process to prepare the initial plan in 2004.	✓	
B. Does the updated plan identify all participating jurisdictions, including new, continuing, and the jurisdictions that no longer participate in the plan?	N/A	Section 1, p.3	All jurisdictions within Catawba County that participated in the initial 2004 plan participated in the 2009 plan update. Also, as recommended by NCEM, a map showing the boundaries of all participating jurisdictions is provided in Section 3: <i>Community Profile</i> .	N/A	N/A

PLANNING PROCESS: §201.6(b): *An open public involvement process is essential to the development of an effective plan.*

4. Documentation of the Planning Process

**Requirement §201.6(b):** *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.*

**Requirement §201.6(c)(1):** *[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.*

Comment: The plan update must describe the process used to review, analyze and update each section of the previously approved plan. If the planning team or committee finds that some sections of the previously approved plan warrant an update, and others do not, the process the team took to make that determination must be documented in the Plan Update.

NCEM Recommendation: *NCEM recommends that the mitigation plan include a **Community Profile**, a narrative description of the jurisdiction.*

Comment: The Community Profile may be included in the Planning Process section of the Plan Update, or in an introduction. Alternatively, the Community Profile may be included as an Appendix.

Element	Location in the Approved Plan (chapter, section, annex, etc. and page #)	Location in the Plan Update (chapter, section, annex, etc. and page #)	Comments	CHANGES?	
				YES	NO
A. Does the plan provide a narrative description of the process followed to prepare the update?	Section 2, p.1-18	Section 2, p.16-30	A complete description of the 2009 plan update process is included in Section 2, and expands upon the description of the process to prepare the initial plan in 2004.	✓	
B. Does the plan update indicate who was involved in the current planning update process? (For example, who led the development at the staff level and were there any external contributors such as contractors? Who participated on the plan committee, provided information, reviewed drafts, etc.?)	Section 2, p.4-13, 17-18	Section 2, p.16-17	Planning process section updated with all current information for the 2009 plan update process.	✓	

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<p>C. Does the plan update indicate how the public was involved? (Was the public provided an opportunity to comment on the plan during the drafting stage of the update and prior to the plan update approval?)</p>	<p>Section 2, p.13-17. Appendix B (Public Participation Survey)</p>	<p>Section 2, p.25-29. Appendix B (Public Participation Survey)</p>	<p>Updated with all current information for the 2009 plan update process. The public was provided numerous opportunities to participate as advertised through the County's extensive public outreach and advertisement efforts.</p>	<p>✓</p>	
<p>D. Does the plan update discuss the opportunity for neighboring communities, agencies, businesses, academia, nonprofits, and other interested parties to be involved in the planning update process?</p>	<p>Section 2, p.13-17.</p>	<p>Section 2, p.28-30</p>	<p>Updated with all current information for the 2009 plan update process. The County was successful in gaining participation and feedback from a wide variety of stakeholders during the plan update process.</p>	<p>✓</p>	
<p>E. Does the planning update process describe the review and incorporation, if appropriate, of existing plans, studies, reports, and technical information?</p>	<p>Section 7, p.1-20.</p>	<p>Section 2, p.17-25. Section 7, p.1-21</p>	<p>Updated with all current information for the 2009 plan update process. The County integrated a lot of new data and information into the 2009 plan update process as described throughout the plan.</p>	<p>✓</p>	
<p>F. Does the plan update document how the planning team reviewed and analyzed each section of the plan and whether each section was revised as part of the update process?</p>	<p>N/A</p>	<p>Section 2, p.16-31</p>	<p>Updated with all current information for the 2009 plan update process. The current plan was thoroughly evaluated and discussed during the "plan update kickoff" meeting as described on pages 19-22 of the plan update.</p>	<p>N/A</p>	<p>N/A</p>
<p>H. NCEM Recommendation: Does the plan update include a current community profile of the jurisdiction?</p>	<p>Section 3, p.1-9</p>	<p>Section 3, p.1-12</p>	<p>Updated Community Profile section to include updated narrative information, maps, figures and tables from a variety of sources.</p>	<p>✓</p>	

**Description of Plan Progress**

*Requirement §201.6(d)(3): A local jurisdiction must review and revise its plan to reflect changes in development, progress in local mitigation efforts, and changes in priorities, and resubmit it for approval within five (5) years in order to continue to be eligible for mitigation project grant funding.*

**Comment:**

*Plan Updates must demonstrate that progress has been made in the past five years to fulfill commitments outlined in the previously approved plan. This will involve a comprehensive review and update of each section of the local mitigation plan and a discussion of the results of evaluation and monitoring activities detailed in the Plan Maintenance section of the previously approved plan. Plan updates may validate the information in the previously approved plan, or may involve a major plan rewrite. A plan update is NOT an annex to the previously approved plan; it stands on its own as a complete and current plan.*

The plan update must also describe how the community was kept involved during the plan maintenance process over the previous five years.

*The plan update should provide a progress report on any deficiencies in data or information that were noted in the previous plan (e.g., have gaps in data that were identified before been filled?).*

**NCEM Recommendation:** NCEM recommends that the plan update include a "Progress Report": a separate section that describes progress that has been made over the past five years, placing emphasis on the status of mitigation actions proposed in the previous plan, detailing how the public has been involved, and describing the results of evaluation and monitoring activities.

Element	Location in the Approved Plan (chapter, section, annex, etc. and page #)	Location in the Plan Update (chapter, section, annex, etc. and page #)	Comments	CHANGES?	
				YES	NO
A. Does the plan update indicate that progress has been made in the past five years to fulfill commitments outlined in the previously approved plan?	N/A	Section 9, p. 1-77	Completed status updates have been provided for every mitigation action proposed in 2004 for each jurisdiction under their own individual Mitigation Action Plan in Section 9 (see "Status Update on 2004 Mitigation Actions").	N/A	N/A

<p>B. Does the plan update include a discussion of the results of evaluation and monitoring activities over the last five years?</p>	<p>N/A</p>	<p>Section 10, p.2</p>	<p>Catawba County routinely coordinated with participating jurisdictions on the evaluation and monitoring activities following completion of the 2004 plan. This included email correspondence and occasional meetings between Mitigation Advisory Committee members. This also included the submission, review and discussion of status updates on each jurisdiction's Mitigation Action Plans, as well as the inclusion of status updates in annual reports submitted to local governing bodies.</p>	<p>N/A</p>	<p>N/A</p>
<p>C. Does the plan update include a narrative description of changes in the mitigation strategy, particularly where actions have been completed? Does the plan update describe any resultant changes to the approved plan?</p>	<p>N/A</p>	<p>Section 2, p. 16-30 Section 8, p.1-4 Section 9, p. 1-77</p>	<p>The reasoning behind necessary changes to the mitigation strategy are documented in Section 2 (Planning Process), and the actual changes may be found in Sections 8 (Mitigation Strategy) and 9 (Mitigation Action Plans).</p>	<p>N/A</p>	<p>N/A</p>
<p>D. Does the plan update describe how the public was involved in the plan's maintenance over the past five years?</p>	<p>N/A</p>	<p>Section 10, p. 2-4</p>	<p>Aside from being notified through the posting of Board and Council meeting minutes and Annual Report documents, the public was not heavily involved in the plan maintenance process until the 2009 plan update process began in May 2009.</p>	<p>N/A</p>	<p>N/A</p>

**RISK ASSESSMENT:** §201.6(c)(2): *The plan shall include a risk assessment that provides the factual basis for activities proposed in the strategy to reduce losses from identified hazards. Local risk assessments must provide sufficient information to enable the jurisdiction to identify and prioritize appropriate mitigation actions to reduce losses from identified hazards.*

**Comments:**

*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. Communities are encouraged to incorporate updated estimated 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 for vulnerable areas.*

*New data or data deficiencies previously identified that are now available (e.g., risk assessment or mapped data) are a trigger for plan revision. 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 Plan update, accompanied by an explanation of why they remain and an updated schedule to resolve the issue. Sources of all data should be included.*

*The local risk assessment update must 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. Improved descriptions of hazards should be incorporated into this section if available.*

*Maps must be consistent with updated information.*

**5. 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.*

Element	Location in the Approved Plan (chapter, section, annex, etc. and page #)	Location in the Plan Update (chapter, section, annex, etc. and page #)	Comments	CHANGES?	
				YES	NO
A. Does the plan update include a <b>description</b> of the types of <b>all natural hazards</b> that affect the jurisdiction?  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.	Section 4, p.1-28	Section 4, p.1-28	Updated some narrative descriptions, tables, figures and images - but much information in this section remains unchanged. Eliminated some extraneous information along with descriptions of hazards not recognized as hazard threats for Catawba County (tsunami and volcano).	✓	

6. 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.

**NCEM Recommendation:** NCEM recommends that local mitigation plans include maps of known hazard areas. Any maps included in the updated plan must be consistent with the updated information.

Comments: Refer to Appendix A of the 2007 NC State Hazard Mitigation Plan to profile applicable hazards that may occur in your jurisdiction. If the previous plan noted any data limitations or deficiencies, then newly acquired data must be incorporated into the updated risk assessment. If data deficiencies have not been resolved, they must be addressed in the update, along with an explanation of why they remain, and a schedule to resolve the issue.

The Plan Update should describe conditions unique to the jurisdiction – such as topography, soil characteristics, climate – that might exacerbate or lessen the potential effects of identified hazards.

Element	Location in the Approved Plan (chapter, section, annex, etc. and page #)	Location in the Plan Update (chapter, section, annex, etc. and page #)	Comments	CHANGES?	
				YES	NO
A. Does the updated risk assessment identify the <b>location</b> (i.e., geographic area affected) of each natural hazard addressed in the plan?	Section 5, p.1-32	Section 5, p.1-39	All narrative descriptions and maps showing hazard area locations were improved and updated with best available data, including new GIS data for flood and wildfire hazards.	✓	
B. Does the updated risk assessment identify the <b>extent</b> (i.e., magnitude or severity) of each hazard addressed in the plan?	Section 6, p.48	Section 6, p.52	Based on the updated risk assessment (2009) and subsequent consensus building exercises with the Mitigation Advisory Committee it was determined that extent classifications for each hazard have not changed since 2004.		✓
C. Does the plan update provide information on <b>previous occurrences</b> of each hazard addressed in the plan?	Section 5, p.1-32	Section 5, p.1-39	All information on previous hazard occurrences has been updated with best available data, including information on any new hazard events recorded since 2004.	✓	
D. Does the plan update include the <b>probability of future events</b> (i.e., chance of occurrence) for each hazard addressed in the plan?	Section 6, p.48	Section 6, p.52 and Section 5, p.37-38	Based on the updated risk assessment (2009) and subsequent consensus building exercises with the Mitigation Advisory Committee it was determined that probability classifications for each hazard have not changed since 2004. However, a new narrative section focused on the	✓	

			long-term effects of <b>climate change</b> on the frequency and severity of identified hazards was also added to Section 5 (p. 37-40).		
E. NCEM Recommendation: Does the plan update include <b>map(s) of known hazard areas?</b>	Section 5, p.1-32	Section 5, p.1-39. Section 6, p.1-53	All maps illustrating hazard area locations have been improved and updated with best available data. Detailed flood hazard maps are also provided in Section 6, along with a variety of other hazard overlay maps.	✓	

7. 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.

Comments:

The community should take into account new information when updating its vulnerability assessment, such as: 1) Updates to inventories of existing structures in hazard areas, including new development, redeveloped areas or structures located in annexed areas; 2) Potential impacts of future land development, including areas that may be annexed in the future; 3) New buildings that house special high-risk populations; 4) Completed mitigation actions that have reduced overall vulnerability.

If the previous plan noted any data limitations or deficiencies, then newly acquired data must be incorporated into the updated risk assessment. If data deficiencies have not been resolved, they must be addressed in the update, along with an explanation of why they remain, and a schedule to resolve the issue.

Element	Location in the Approved Plan (chapter, section, annex, etc. and page #)	Location in the Plan Update (chapter, section, annex, etc. and page #)	Comments	CHANGES?	
				YES	NO
A. Does the plan update include an <b>overall summary</b> description of the jurisdiction’s <b>vulnerability</b> to each hazard?	Section 6, p.49.	Section 6, p.50-53	While the specific data and results from the qualitative and quantitative assessments did change since 2004, the estimated risk levels and overall summary of hazard vulnerability for Catawba County remained the same for each hazard (high, moderate and low).	✓	
B. Does the plan update address the <b>impact</b> of each hazard on the jurisdiction?	Section 6, p.1-49	Section 5, p. 1-	Section 5 addresses the impact of each hazard by describing the impact of past hazard events, and Section 6 addresses the impact of each hazard by	✓	

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		39. Section 6, p.1-53	quantifying vulnerability in terms of exposure, potential losses, etc.		
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8. Assessing Vulnerability: Addressing Repetitive Loss Properties

**Requirement §201.6(c)(2)(ii):** [The risk assessment] **must** also address National Food Insurance Program (NFIP) insured structures that have been repetitively damaged by floods.

Comments: This requirement is effective for any jurisdiction with NFIP Repetitive Loss Properties. Repetitive Loss Properties (RLP) are those for which two or more losses of at least \$1,000 each have been paid under the NFIP within any 10-year rolling period since 1978. Severe Repetitive Loss Properties (SRL) are a subset of RLP, and should also be addressed in the Plan Update

Note that the Privacy Act of 1974 prohibits public release of the names of policy holders or recipients of financial assistance. However, maps showing areas where claims have been paid can be made public. The data should be used for planning purposes only.

Refer to the NC State Hazard Mitigation Plan, Appendix C “Severe Repetitive Loss Strategy” (2008 Addendum)

Element	Location in the Approved Plan (chapter, section, annex, etc. and page #)	Location in the Plan Update (chapter, section, annex, etc. and page #)	Comments	CHANGES?	
				YES	NO
A. Does the plan update describe vulnerability in terms of the types and numbers of repetitive loss properties located in the identified hazard areas?	Section 6, p.26-27	Section 6, p.25-28	Description of vulnerability to repetitive loss properties has been updated with new data as provided by NCEM.	✓	
B. Does the plan update estimate the potential dollar losses to repetitive loss properties and the methodology used to prepare the estimate?*	N/A	N/A	It is believed that repetitive loss properties are adequately addressed with the information provided in Section 6, p.25-28. Attempting to estimate a defensible, quantifiable loss estimate for such few properties was not deemed necessary or appropriate at this time.	N/A	N/A

\* Note: Elements in gray-shaded areas are recommended but not required by FEMA; absence of these elements will not preclude the Plan Update from receiving approval from FEMA or NCEM

C. Does the plan update include a map of the known flood hazards where repetitive loss properties are located?*	N/A	Section 6, p.28	Please see Figure 6.16	N/A	N/A
D. Does the plan update describe the number, type and area(s) where Severe Repetitive Loss Properties are located?*	N/A	N/A	None of Catawba County's identified repetitive loss properties are classified by FEMA as "Severe Repetitive Loss" properties.	N/A	N/A
E. NCEM Requirement: Does the plan update describe undeveloped lots, land uses and development trends within repetitive loss areas?	N/A	Section 6, p.25-26		N/A	N/A
F. NCEM Recommendation: Does the plan update determine the causes of the flooding situation in repetitive loss areas and/or severe repetitive loss areas?*	N/A	Section 6, p.27	Cause of flooding situations described under comments in Table 6.6	N/A	N/A

**\* Note: Elements in gray-shaded areas are recommended but not required by FEMA; absence of these elements will not preclude the Plan Update from receiving approval from FEMA or NCEM**

9. 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 area ... .

**NCEM Recommendation:** NCEM recommends that local mitigation plans include a map of vulnerable structures including critical facilities. This map should be overlaid with the map of known hazard areas

Element	Location in the Approved Plan (chapter, section, annex, etc. and page #)	Location in the Plan Update (chapter, section, annex, etc. and page #)	Comments	CHANGES?	
				YES	NO
A. Does the plan update describe vulnerability in terms of the <b>types and numbers</b> of <b>existing</b> buildings, infrastructure and critical facilities located in the identified hazard areas?*	Section 6 Flood, p.25-32. Wildfire, p.35	Section 6, p.6. Flood, p.23-25. Wildfire, p.35	As described on page 6 in Section 6, it is assumed that the entire countywide building stock of approximately 55,000 buildings is equally susceptible to those hazards not located within geographically-defined hazard areas as described in this section (such as flood and wildfire, in which more detailed estimates of at-risk structures are provided).	✓	
C. Does the plan update describe vulnerability in terms of the <b>types and numbers</b> of <b>future</b> buildings, infrastructure, and critical facilities located in the identified hazard areas?*	Section 6, p.9-13	Section 6, p.10-13 Section 3, p.5-8	Data is not available to quantify the specific types and numbers of future development located in identified hazard areas, however detailed descriptions of the general development trends in specific areas of the County is provided in Section 6, as well as Section 3 ( <i>Community Profile</i> ).	✓	
C. NCEM Recommendation: Does the plan update include <b>map(s) of vulnerable structures</b> , including critical facilities?*	Section 6, p.27-32, 42-44	Section 6, p.7-9, 14-22, 28-31, 33-34, 45-46	A variety of maps is provided throughout Section 6 to help illustrate the degree of community-wide vulnerability to hazards with known geographic boundaries.	✓	

\* Note: Elements in gray-shaded areas are recommended but not required by FEMA; absence of these elements will not preclude the Plan Update from receiving approval from FEMA or NCEM

10. 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 ... .*

Comments:

*If there are changes to the hazard profile and/or to the inventory of structures during the plan update process, the loss estimate should be updated to reflect the changes.*

Element	Location in the Approved Plan (chapter, section, annex, etc. and page #)	Location in the Plan Update (chapter, section, annex, etc. and page #)	Comments	CHANGES?	
				YES	NO
A. Does the plan update estimate <b>potential dollar losses</b> to vulnerable structures?*	Section 6, p.48	Section 6, p. 51	Summary of potential loss estimates provided on page 49, but more details can be found throughout Section 6 for each identified hazard.	✓	
B. Does the plan update describe the <b>methodology</b> used to prepare the estimate?*	Section 6, p.1-4	Section 6, p. 1-4	Summary of methodologies used is found on pages 1-4, but more details may be found throughout Section 6 for each identified hazard.	✓	

**\* Note: Elements in gray-shaded areas are recommended but not required by FEMA; absence of these elements will not preclude the Plan Update from receiving approval from FEMA or NCEM**

11. 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.

**NCEM Recommendation:** NCEM recommends that the plan include a map of land uses (existing and proposed), overlaid with the map of known hazard areas.

Element	Location in the Approved Plan (chapter, section, annex, etc. and page #)	Location in the Plan Update (chapter, section, annex, etc. and page #)	Comments	CHANGES?	
				YES	NO
A. Does the plan update describe land uses and development trends?*	Section 3, p.2-9. Section 6, p.9-13	Section 3, p. 5-10. Section 6, p.10-13	Data and narrative descriptions have been updated where determined necessary by representatives from each of the respective participating jurisdictions.	✓	
B. Does the plan update reflect changes in development in hazard prone areas?*	N/A	Section 6, p.23-24 (flood), p.36 (wildfire), p.45-46 (critical facilities)	For those hazards with geographically-defined hazard areas, new data and analysis was completed to reflect changes in the number of structures and critical facilities potentially at-risk.	N/A	N/A
C. NCEM Recommendation: Does the plan update include map(s) of land uses (existing and proposed)?*	Section 6, p.45-47	Section 6, p.48-50	Figures 6.26 through 6.28 illustrate current land uses across the county and in comparison to identified flood and wildfire hazard areas.	✓	

**\* Note: Elements in gray-shaded areas are recommended but not required by FEMA; absence of these elements will not preclude the Plan Update from receiving approval from FEMA or NCEM**

12. 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.

Comment: The multi-jurisdictional plan must present information for the general planning area as a whole. However, where hazards and associated losses occur in any part of the planning area, this information must be attributed to the participating jurisdiction where they occur.

Element	Location in the Approved Plan (chapter, section, annex, etc. and page #)	Location in the Plan Update (chapter, section, annex, etc. and page #)	Comments	CHANGES?	
				YES	NO
A. Does the plan update include an updated risk assessment for each participating jurisdiction as needed to reflect unique or varied risks?	Section 6, p.1-49	Section 6, p.1-53	For hazards in which new data was made available, all narrative, maps and tables were updated accordingly.	✓	

**MITIGATION STRATEGY:** §201.6(c)(3): *The plan shall include a mitigation strategy that provides the jurisdiction’s blueprint for reducing the potential losses identified in the risk assessment, based on existing authorities, policies, programs and resources, and its ability to expand on and improve these existing tools.*

Comments:

**CAPABILITY ASSESSMENT**

**NCEM Recommendation:** *The mitigation plan should include an assessment of the jurisdiction’s capability to carry out mitigation actions, including existing authorities, policies, programs and resources.*

Comment: *The Capability Assessment may be appropriate as an Appendix to the Plan Update.*

Element	Location in the Approved Plan (chapter, section, annex, etc. and page #)	Location in the Plan Update (chapter, section, annex, etc. and page #)	Comments	CHANGES?	
				YES	NO
A. Does the plan update include an analysis of the jurisdiction’s current capability: existing authorities, policies, programs and resources?	Section 7, p.1-20	Section 7, p. 1-22	While not a lot has changed since the initial plan was completed, Section 7 was updated following the completion of a new assessment of each jurisdiction’s current (2009) capabilities according to the same methodology applied in 2004.	✓	
B. Does the plan update include an analysis of the jurisdiction’s ability to expand on and improve these existing tools?	Section 7, p.1-20	Section 7, p. 1-22	In completing the Capability Assessment Survey’s “County and Municipal Self Assessment,” Mitigation Advisory Committee members were encouraged to consider their jurisdiction’s ability to expand and improve their existing local tools and capabilities for natural hazard reduction. Also see Table 7.7 (Political Capability) and “Conclusions on Local Capability.”	✓	

13. 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.*

*Comments: 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.*

*Although the regulations do 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.*

Element	Location in the Approved Plan (chapter, section, annex, etc. and page #)	Location in the Plan Update (chapter, section, annex, etc. and page #)	Comments	CHANGES?	
				YES	NO
A Does the plan update include a description of mitigation <b>goals</b> to reduce or avoid long-term vulnerabilities to the identified hazards? ( <b>GOALS</b> are long-term; represent what the community wants to achieve, and are based on the risk assessment findings.)	Section 8, p.2-3	Section 8, p.2-3	Goal statements have been slightly modified from 2004 versions based on consensus of the Mitigation Advisory Committee.	✓	

14. 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.*

*Comments: Some of the mitigation actions identified in the previously approved plan may ultimately be eliminated from the community’s action plan due to limited capabilities, prohibitive costs, low benefit/cost ratio, or other concerns. Other actions may be continued from the previously approved plan and incorporated into the plan update. Still other actions may be new to the plan update. The process by which the community decides on particular mitigation actions must be described in the plan update.*

Element	Location in the Approved Plan (chapter, section, annex, etc. and page #)	Location in the Plan Update (chapter, section, annex, etc. and page #)	Comments	CHANGES?	
				YES	NO
A. Does the plan update identify and analyze a <b>comprehensive range</b> of specific mitigation actions and projects for each hazard?	Section 2, p.6, 11-12. Section 8, p. 3-6. Section 9, p. 1-33	Section 2, p.16-25. Section 8, p. 3-6. Section 9, p.1-77	A large, comprehensive range of mitigation actions were discussed and deliberated at Mitigation Advisory Committee meetings and the open public meetings (described in Section 2). Actions are also discussed and categorized in Section 8.	✓	
B Do the identified actions and projects address reducing the effects of hazards on <b>new</b> buildings and infrastructure?	Section 2, p.6, 11-12. Section 8, p.3-6. Section 9, p.1-33	Section 2, p.16-25. Section 8, p. 3-6. Section 9, p.1-77		✓	
C. Do the identified actions and projects address reducing the effects of hazards on <b>existing</b> buildings and infrastructure?	Section 2, p.6, 11-12. Section 8, p.3-6. Section 9, p.1-33	Section 2, p.16-25. Section 8, p. 3-6. Section 9, p.1-77,		✓	
D. NCEM Addition: Do the identified actions address the future use of land that is currently undeveloped in hazard areas?	N/A	Section 2, p.16-25. Section 8, p. 3-6. Section 9, p.1-77,		N/A	N/A
E. If data deficiencies have been identified and remain unresolved, does the plan update describe what	N/A	N/A		N/A	N/A

Jurisdiction: **Catawba County, NC (Multi-jurisdictional)**

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action will be taken to collect the data for the next update?					
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15. Identification and Analysis of Mitigation Actions: National Flood Insurance Program (NFIP) Compliance

**Requirement §201.6(c)(3)(ii):** [The mitigation strategy] must also address the jurisdiction’s participation in the National Flood Insurance Program (NFIP), and continued compliance with NFIP requirements, as appropriate.

NCEM Requirement: Local mitigation plan updates are required to be consistent with NC’s “Severe Repetitive Loss Strategy” contained in Appendix C to the NC State Hazard Mitigation Plan. Appendix C requires local plans to address repetitive loss properties and severe repetitive loss properties and to develop and give priority to appropriate mitigation actions. Appendix C is available on the Supplemental CD accompanying the NCEM Plan Update Guidance notebook.

Element	Location in the Approved Plan (chapter, section, annex, etc. and page #)	Location in the Plan Update (chapter, section, annex, etc. and page #)	Comments	CHANGES?	
				YES	NO
A. Does the plan update describe each jurisdiction’s participation in the NFIP?	Section 7, p.9-10	Section 7, p.9-13	The description of each jurisdiction’s participation in the NFIP has been updated and expanded upon with new information.	✓	
B Does the mitigation strategy identify, analyze, and prioritize actions related to continued compliance with the NFIP?	N/A	Section 9 (throughout)	Each jurisdiction included mitigation action related to continued compliance in with the NFIP in their individual mitigation action plans (most of these were listed as Mitigation Action #1).	N/A	N/A
C. NCEM Requirement: Does the plan update identify and prioritize appropriate mitigation actions for repetitive flood loss properties and/or severe repetitive loss properties?	N/A	Section 9, p.5 (Catawba County) and p.43 (City of Hickory)	See Mitigation Action #8 for Catawba County and Mitigation Action #2 for the City of Hickory’s repetitive loss properties. No repetitive loss properties identified for other jurisdictions.	N/A	N/A
D. NCEM Requirement: Does the plan update identify appropriate mitigation actions for undeveloped areas within repetitive flood loss areas to avoid repetitive losses in the future?	N/A	N/A	As discussed in Section 6, there are no vacant undeveloped areas within repetitive flood loss areas	N/A	N/A
E. NCEM Recommendation: does the plan update include a Redevelopment Plan that covers Severe Repetitive Loss areas to be activated in the event of a major disaster?	N/A	N/A	There are no Severe Repetitive Loss areas in Catawba County.	N/A	N/A

16. 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.

Comments: The updated plan must identify the completed, deleted or deferred actions or activities from the previously approved plan. Further, the updated plan shall include in its evaluation and prioritization any new mitigation actions identified since the previous plan was approved.

Element	Location in the Approved Plan (chapter, section, annex, etc. and page #)	Location in the Plan Update (chapter, section, annex, etc. and page #)	Comments	CHANGES?	
				YES	NO
A. Does the updated mitigation strategy include how the actions are <b>prioritized</b> ? (For example, is there a discussion of the process and criteria used?)	Section 2, p.12-13. Section 9, p.1-33	Section 8, p.2 Section 9 (throughout)			✓
B. Does the updated mitigation strategy address how the actions will be <b>implemented and administered</b> including the responsible department, existing and potential resources, and timeframe to complete each action?	Section 9, p.1-33	Section 9 (throughout)		✓	
C. Does the updated prioritization process include an emphasis on the use of a <b>cost-benefit review</b> to maximize benefits?	Section 2, p.13. Section 8, p.2	Section 8, p.2	As in 2004 during the initial development of the plan, only a general economic cost-benefit review was considered through the process of selecting and prioritizing mitigation actions for each jurisdiction. Mitigation actions with "high" priority were determined to be the most cost effective and most compatible with each jurisdiction's unique needs. A more detailed cost-benefit analysis will be applied to particular projects prior to the application for or obligation of funding, as appropriate.		✓
D. Does the plan update identify the completed, deleted or deferred actions as a benchmark for progress, and if activities are unchanged (i.e., deferred), does the updated plan describe why no changes occurred?	N/A	Section 9 (throughout)	All proposed mitigation actions from the 2004 plan have been included with information on their current status, in addition to newly proposed mitigation actions for each jurisdiction.	N/A	N/A

17. 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.

Element	Location in the Approved Plan (chapter, section, annex, etc. and page #)	Location in the Plan Update (chapter, section, annex, etc. and page #)	Comments	CHANGES?	
				YES	NO
A Does the plan update include at least one identifiable <b>action item</b> for each jurisdiction requesting FEMA approval of the plan update?	Section 9, p.1-33	Section 9 (throughout)		✓	
B. Does the updated plan identify the completed, deleted or deferred mitigation actions as a benchmark for progress, and if activities are unchanged (i.e., deferred), does the updated plan describe why no changes occurred?	N/A	Section 9 (throughout)	All proposed mitigation actions from the 2004 plan have been included with information on their current status, in addition to newly proposed mitigation actions for each jurisdiction.	N/A	N/A

PLAN MAINTENANCE PROCESS

18. 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.

Comments:

The plan update must describe any changes in how the plan will be maintained over the next five-year period.

Element	Location in the Approved Plan (chapter, section, annex, etc. and page #)	Location in the Plan Update (chapter, section, annex, etc. and page #)	Comments	CHANGES?	
				YES	NO
A. Does the plan update describe the method and schedule for <b>monitoring</b> the updated plan, including the responsible department?	Section 10, p.1-3	Section 10, p.2		✓	
B. Does the plan update describe the method and schedule for <b>evaluating</b> the plan, including how, when and by whom (i.e., the responsible department)?	Section 10, p.2-3	Section 10, p.2-3		✓	
C. Does the plan update describe the method and schedule for <b>updating</b> the plan within the five-year cycle?	Section 10, p.4	Section 10, p.3			✓

**19. 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 such as comprehensive or capital improvement plans, when appropriate.*

Element	Location in the Approved Plan (chapter, section, annex, etc. and page #)	Location in the Plan Update (chapter, section, annex, etc. and page #)	Comments	CHANGES?	
				YES	NO
A. Does the plan update identify other local planning mechanisms available for incorporating the mitigation requirements of the mitigation plan?	Section 10, p.1-2	Section 10, p.1-2		✓	
B. Does the plan update include a process by which the local government will incorporate the mitigation strategy and other information contained in the plan (e.g., risk assessment) into other planning mechanisms, when appropriate?	Section 10, p.1-2	Section 10, p.2-3		✓	
C. Does the updated plan explain how the local government incorporated the mitigation strategy and other information contained in the plan (e.g., risk assessment) into other planning mechanisms, when appropriate?	N/A	Section 10, p.1		N/A	N/A

20. 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.*

Comment: *Make sure the public from each jurisdiction in a multi-jurisdictional plan has the opportunity for continued public involvement.*

Element	Location in the Approved Plan (chapter, section, annex, etc. and page #)	Location in the Plan Update (chapter, section, annex, etc. and page #)	Comments	CHANGES?	
				YES	NO
A. Does the plan update explain how <b>continued public participation</b> will be obtained? (For example, will there be public notices, an on-going mitigation plan committee, or annual review meetings with stakeholders?)	Section 10, p.5	Section 10, p.5-6			

**HAZARD MITIGATION PLAN UPDATE SUMMARY**

NCEM Recommendation: NCEM recommends that the plan update include a section that summarizes the findings of the plan update process.

Element	Location in the Approved Plan (chapter, section, annex, etc. and page #)	Location in the Plan Update (chapter, section, annex, etc. and page #)	Comments	CHANGES?	
				YES	NO
A. Does the plan update summary indicate the results of the updated risk assessment, including a ranking of the overall importance of each hazard identified for the local jurisdiction?	N/A	N/A		N/A	N/A
B. Does the plan update summary indicate the existing and proposed capabilities used to address each hazard?	N/A	N/A		N/A	N/A
C. Does the plan update summary indicate the type of mitigation actions proposed to address each hazard?	N/A	N/A		N/A	N/A