



FEMA

March 19, 2019

Lieutenant James Byers  
El Dorado County Sheriff's OES  
300 Fair Lane  
Placerville, CA 95668

Dear Lt. Byers:

We have completed our review of the *El Dorado County Local Hazard Mitigation Plan*, and have determined that this plan is eligible for final approval pending its adoption by El Dorado County.

Formal adoption documentation must be submitted to the FEMA Region IX office by the jurisdiction within one calendar year of the date of this letter, or the entire plan must be updated and resubmitted for review. We will approve the plan upon receipt of the documentation of formal adoption.

If you have any questions regarding the planning or review processes, please contact the FEMA Region IX Hazard Mitigation Planning Team at [fema-r9-mitigation-planning@fema.dhs.gov](mailto:fema-r9-mitigation-planning@fema.dhs.gov).

Sincerely,

A handwritten signature in blue ink that reads "Juliette Hayes".

Juliette Hayes  
Director  
Mitigation Division  
FEMA, Region IX

Enclosure

cc: Julie Norris, Mitigation and Dam Safety Branch Chief, California Governor's Office of  
Emergency Services  
Jennifer Hogan, State Hazard Mitigation Officer, California Governor's Office of  
Emergency Services

# REGION IX LOCAL HAZARD MITIGATION PLAN REVIEW TOOL

Updated 9/6/2018

The *Local Hazard Mitigation Plan Review Tool* demonstrates how the Local Hazard Mitigation Plan meets the regulation in 44 CFR §201.6 and offers State and FEMA Mitigation Planners an opportunity to provide feedback to the community.

- The **Regulation Checklist** provides a summary of FEMA’s evaluation of whether the plan has addressed all requirements.
- The **Plan Assessment** identifies the plan’s strengths as well as documents areas for future improvement. This section also includes a list of resources for implementation of the plan.
- The **Multi-Jurisdiction Summary Sheet** is a mandatory worksheet for multi-jurisdictional plans that is used to document which jurisdictions are eligible to adopt the plan.
- The **Hazard Identification and Risk Assessment Matrix** is a tool for plan reviewers to identify if all components of Element B are met.

<b>Jurisdiction:</b> El Dorado County	<b>Title of Plan:</b> El Dorado County Multi-Jurisdictional Local Hazard Mitigation Plan	<b>Date of Plan:</b> October 2018
<b>Local Point of Contact:</b> James Byers	<b>Address:</b> 300 Fair Lane Placerville, CA 95668	
<b>Title:</b> Lieutenant		
<b>Agency:</b> El Dorado County Sheriff’s OES		
<b>Phone Number:</b> 530-642-4707	<b>E-Mail:</b> byersj@edso.org	

<b>State Reviewer:</b> Victoria La Mar-Hass	<b>Title:</b> HM Planner	<b>Date:</b> October 2018 (Joint review started)
<b>Date Received at State Agency</b>	October 2018	
<b>Date Sent to FEMA</b>	March 15, 2019	

<b>FEMA Reviewer:</b> Asia King	<b>Title:</b> HM Planner	<b>Date:</b> 2-11-19
<b>Date Received in FEMA Region IX</b>		
<b>Date Not Approved</b>		
<b>Date Approvable Pending Adoption</b>	3-18-19	
<b>Date Approved</b>		

**SECTION 1:  
REGULATION CHECKLIST**

**INSTRUCTIONS:** The Regulation Checklist must be completed by FEMA. The purpose of the Checklist is to identify the location of relevant or applicable content in the plan by element/sub-element and to determine if each requirement has been ‘Met’ or ‘Not Met.’ The ‘Required Revisions’ summary at the bottom of each element must be completed by FEMA to provide a clear explanation of the revisions that are required for plan approval. Required revisions must be explained for each plan sub-element that is ‘Not Met.’ Sub-elements should be referenced in each summary by using the appropriate numbers (A1, B3, etc.), where applicable. Requirements for each Element and sub-element are described in detail in the *Local Plan Review Guide* in Section 4, Regulation Checklist.

<b>1. REGULATION CHECKLIST</b>		<b>Location in Plan</b>	<b>Met</b>	<b>Not Met</b>
Regulation (44 CFR 201.6 Local Mitigation Plans)		(section and/or page number)		
<b>ELEMENT A. PLANNING PROCESS</b>				
A1. Does the plan document the planning process, including how it was prepared and who was involved in the process for each jurisdiction? (Requirement §201.6(c)(1))	a. Does the plan provide documentation of how the plan was prepared? This documentation must include the schedule or timeframe and activities that made up the plan’s development as well as who was involved.	Ch 2 Table 2-1	x	
	b. Does the plan list the jurisdiction(s) participating in the plan that are seeking approval?	Pg 1-2	x	
	c. Does the plan identify who represented each jurisdiction? (At a minimum, it must identify the jurisdiction represented and the person’s position or title and agency within the jurisdiction.)	Table 2-1	x	
A2. Does the plan document an opportunity for neighboring communities, local and regional agencies involved in hazard mitigation activities, agencies that have the authority to regulate development as well as other interests to be involved in the planning process? (Requirement §201.6(b)(2))	a. Does the plan document an opportunity for neighboring communities, local, and regional agencies involved in hazard mitigation activities, agencies that have the authority to regulate development, as well as other interested parties to be involved in the planning process?	App A Table 2-1	x	
	b. Does the plan identify how the stakeholders were invited to participate in the process?	App A.1.1	x	

1. REGULATION CHECKLIST		Location in Plan (section and/or page number)	Met	Not Met
Regulation (44 CFR 201.6 Local Mitigation Plans)				
A3. Does the plan document how the public was involved in the planning process during the drafting stage? (Requirement §201.6(b)(1))	a. Does the plan document how the public was given the opportunity to be involved in the planning process?	App A Copy of notice Ch 2	x	
	b. Does the plan document how the public's feedback was incorporated into the plan?	Ch 2 pg 2-8	x	
A4. Does the plan describe the review and incorporation of existing plans, studies, reports, and technical information? (Requirement §201.6(b)(3))		Ch 2, pg 2-10. App B	x	
A5. Is there discussion of how the community(ies) will continue public participation in the plan maintenance process? (Requirement §201.6(c)(4)(iii))		Pg 6-4	x	
A6. Is there a description of the method and schedule for keeping the plan current (monitoring, evaluating and updating the mitigation plan within a 5-year cycle)? (Requirement §201.6(c)(4)(i))	a. Does the plan identify how, when, and by whom the plan will be <b>monitored</b> (how will implementation be tracked) over time?	Pg 6-4	x	
	b. Does the plan identify how, when, and by whom the plan will be <b>evaluated</b> (assessing the effectiveness of the plan at achieving stated purpose and goals) over time?	Pg 6-3	x	
	c. Does the plan identify how, when, and by whom the plan will be <b>updated</b> during the 5-year cycle?	Pg 6-3	x	
<b>ELEMENT A: REQUIRED REVISIONS</b>				
<b>ELEMENT B. HAZARD IDENTIFICATION AND RISK ASSESSMENT</b> (Reviewer: See Section 4 for assistance with Element B)				
B1. Does the plan include a description of the type, location, and extent of all natural hazards that can affect each jurisdiction(s)? (Requirement §201.6(c)(2)(i))	a. Does the plan include a general description of all natural hazards that can affect each jurisdiction?	3-52 – 3-54	X	
	b. Does the plan provide rationale for the omission of any natural hazards that are commonly recognized to affect the jurisdiction(s) in the planning area?		X	
	c. Does the plan include a description of the <b>type</b> of all natural hazards that can affect each jurisdiction?	See Hazard Risk Assessment Matrix table	X	
	d. Does the plan include a description of the <b>location</b> for all natural hazards that can affect each jurisdiction?	See Hazard Risk Assessment Matrix table	X	
	e. Does the plan include a description of the <b>extent</b> for all natural hazards that can affect each jurisdiction?	See Hazard Risk Assessment Matrix table	x	

<b>1. REGULATION CHECKLIST</b>		<b>Location in Plan</b> (section and/or page number)	<b>Met</b>	<b>Not Met</b>
Regulation (44 CFR 201.6 Local Mitigation Plans)				
B2. Does the plan include information on previous occurrences of hazard events and on the probability of future hazard events for each jurisdiction? (Requirement §201.6(c)(2)(i))	a. Does the plan include information on <b>previous occurrences</b> of hazard events for each jurisdiction?	See Hazard Risk Assessment Matrix table	x	
	b. Does the plan include information on the <b>probability</b> of future hazard events for each jurisdiction?	See table	x	
B3. Is there a description of each identified hazard's impact on the community as well as an overall summary of the community's vulnerability for each jurisdiction? (Requirement §201.6(c)(2)(ii))	a. Is there a description of each hazard's <b>impacts</b> on each jurisdiction (what happens to structures, infrastructure, people, environment, etc.)?	See Hazard Risk Assessment Matrix table	X	
	b. Is there a description of each identified hazard's overall <b>vulnerability</b> (structures, systems, populations, or other community assets defined by the community that are identified as being susceptible to damage and loss from hazard events) for each jurisdiction?	See Hazard Risk Assessment Matrix table	X	
B4. Does the plan address NFIP insured structures within the jurisdiction that have been repetitively damaged by floods? (Requirement §201.6(c)(2)(ii))		3-56, 3-116, 3-145	x	
<b>ELEMENT B: REQUIRED REVISIONS</b>				
<b>ELEMENT C. MITIGATION STRATEGY</b>				
C1. Does the plan document each jurisdiction's existing authorities, policies, programs and resources and its ability to expand on and improve these existing policies and programs? (Requirement §201.6(c)(3))	a. Does the plan document each jurisdiction's existing authorities, policies, programs and resources?	3-128 – 3-149	x	
	b. Does the plan document each jurisdiction's ability to expand on and improve these existing policies and programs?	Exec summary, Goal 4; Pg 4-10	X	
C2. Does the plan address each jurisdiction's participation in the NFIP and continued compliance with NFIP requirements, as appropriate? (Requirement §201.6(c)(3)(ii))		Table 4-1	x	
C3. Does the plan include goals to reduce/avoid long-term vulnerabilities to the identified hazards? (Requirement §201.6(c)(3)(i))		4-8 – 4-10	x	
C4. Does the plan identify and analyze a comprehensive range of specific mitigation actions and projects for each jurisdiction being considered to reduce	a. Does the plan identify and analyze a comprehensive range of specific mitigation actions and projects to reduce the impacts from hazards?	4-16 – 4-37	x	

<b>1. REGULATION CHECKLIST</b>		Location in Plan (section and/or page number)	Met	Not Met
Regulation (44 CFR 201.6 Local Mitigation Plans)				
the effects of hazards, with emphasis on new and existing buildings and infrastructure? (Requirement §201.6(c)(3)(ii))	b. Does the plan identify mitigation actions for every hazard posing a threat to each participating jurisdiction?	4-16 – 4-37	x	
	c. Do the identified mitigation actions and projects have an emphasis on new and existing buildings and infrastructure?	Table 4-1	X	
C5. Does the plan contain an action plan that describes how the actions identified will be prioritized (including cost benefit review), implemented, and administered by each jurisdiction? (Requirement §201.6(c)(3)(iv)); (Requirement §201.6(c)(3)(iii))	a. Does the plan explain how the mitigation actions will be prioritized (including cost benefit review)?	Pg 4-12, Ch 4	x	
	b. Does the plan identify the position, office, department, or agency responsible for implementing and administering the action, potential funding sources and expected timeframes for completion?	Action 1-16	x	
C6. Does the plan describe a process by which local governments will integrate the requirements of the mitigation plan into other planning mechanisms, such as comprehensive or capital improvement plans, when appropriate? (Requirement §201.6(c)(4)(ii))	a. Does the plan identify the local planning mechanisms where hazard mitigation information and/or actions may be incorporated?	County: Mit Action 1,2, 4, Pg 6-6	x	
	b. Does the plan describe each community's process to integrate the data, information, and hazard mitigation goals and actions into other planning mechanisms?	County: Mit Act 1, 1,2, 4, Pg 6-6	x	
	c. The updated plan must explain how the jurisdiction(s) incorporated the mitigation plan, when appropriate, into other planning mechanisms as a demonstration of progress in local hazard mitigation efforts.	Ch 2, Pg 2-13; Table 2-2	x	
<b>ELEMENT C: REQUIRED REVISIONS</b>				
<b>ELEMENT D. PLAN REVIEW, EVALUATION, AND IMPLEMENTATION</b> (Applicable to plan updates only)				
D1. Was the plan revised to reflect changes in development? (Requirement §201.6(d)(3))		Vulnerability section	x	
D2. Was the plan revised to reflect progress in local mitigation efforts? (Requirement §201.6(d)(3))		Table 4-1	x	
D3. Was the plan revised to reflect changes in priorities? (Requirement §201.6(d)(3))		Pg 4-2	x	
<b>ELEMENT D: REQUIRED REVISIONS</b>				
<b>ELEMENT E. PLAN ADOPTION</b>				

<b>1. REGULATION CHECKLIST</b> Regulation (44 CFR 201.6 Local Mitigation Plans)	Location in Plan (section and/or page number)	Met	Not Met
E1. Does the plan include documentation that the plan has been formally adopted by the governing body of the jurisdiction requesting approval? (Requirement §201.6(c)(5))	Not yet		X
E2. For multi-jurisdictional plans, has each jurisdiction requesting approval of the plan documented formal plan adoption? (Requirement §201.6(c)(5))	N/A		
<b><u>ELEMENT E: REQUIRED REVISIONS</u></b>			
<b>ELEMENT F. ADDITIONAL STATE REQUIREMENTS</b> (Optional for State Reviewers only; not to be completed by FEMA)			
F1.			
F2.			
<b><u>ELEMENT F: REQUIRED REVISIONS</u></b>			

**SECTION 2:**

**PLAN ASSESSMENT**

**A. Plan Strengths and Opportunities for Improvement**

This section provides a discussion of the strengths of the plan document and identifies areas where these could be improved beyond minimum requirements.

#### Element A: Planning Process

##### **Strengths:**

- 1) The planning process is thorough and detailed, making it easy for future planners to replicate the methodology. Specifically, you discuss “investigative research, community outreach... GIS data... tabular and narrative descriptions” (2-6): this gives future stakeholders and the wider public an idea of the plan’s legitimacy and replicability.
- 2) The planning process obviously invited a large group of participants. This is important for the plan development, but it is also important for raising public awareness about hazard mitigation.
- 3) Great inclusion of other city and state planning documents into the plan’s development! As the plan states, this is essential to hazard mitigation implementation.

##### **Opportunities for Improvement:**

- 1) There was no mention of how the planning process specifically targeted marginalized groups, non-English speakers, visitors to the county, or other-abled residents. These groups have important contributions to hazard mitigation, as their experience lies outside of what most people experience. In the next update, consider addressing how these groups can be included in the planning process.
- 2) The public comments on the plan were minimal. This is common, as it can be difficult to gather feedback from the general community. What type of creative outreach methods can be used the next time around to engage the public more fully? Can the planning committee participate in local fairs or festivals? Can local businesses get involved? How can local schools or citizen groups be a creative part of the process?

#### Element B: Hazard Identification and Risk Assessment

##### **Strengths:**

- 1) The plan uses great outside, scientific resources and data to inform the risk assessment. Accurate and valid data helps the community identify and assess how the probability, location and severity of each hazard might affect them. This, in turn, helps them make decisions about which mitigation action is required.

##### **Opportunities for Improvement:**



- 1) Many of the maps are very difficult to read due to their size or extent. Next time, consider making the geographic extent of the maps smaller or zoomed in closer to local geographies.
- 2) Although a seiche has not occurred in the County in the past, it might be helpful to provide other examples of where they have occurred. This will give the public a relevant example of how this hazard might play out in real life.
- 3) Many of the hazard risk assessment profiles give narrative descriptions of maps and measurements from organizations like CalFIRE but does not provide the map itself. These maps are useful visuals that can be inserted into the plan as long as the author of a map or data set is referenced.
- 4) Most of the vulnerability assessment is generalized information, not specific to El Dorado County. This is the place in the plan where specific areas in need of mitigation should be identified. This plan has no mention of vulnerably located buildings, industries or marginalized populations in need of additional care. If the County cannot identify what is specifically at risk, and what causes that risk (location, building materials, mobility, language barriers, proximity to a slope, etc) they will not be able to mitigate that risk. In addition, the maps used in the vulnerability piece are for the entire state or larger. Use localized maps that allow the public to spatially identify their specific vulnerability to a hazard.

### Element C: Mitigation Strategy

#### **Strengths:**

- 1) Great fire mitigation strategies: fuel reduction and defensible space are important steps to take to protecting the community.
- 2) The mitigation actions are closely linked to adjusting zoning code and local general planning policy. This is an effective way to insert mitigation into every part of the County's governing structure.

#### **Opportunities for Improvement:**

- 1) Many of the hazard mitigation actions are pre-existing codes and regulations. This is one of the best ways to mitigate hazards in the built environment. However, these actions are not new or specific, describing actions that can be done as a result of upgrading your hazard mitigation program. Next time, develop new or additional mitigation actions in order to do more than what is already being done.
- 2) Great use of FEMA's suggestions for mitigation actions! Next time, it may be helpful to be specific about where and how these actions can be completed. Which buildings/neighborhoods/districts will these actions take place at? Be careful to avoid detailing objectives rather than actual actions. The point of listing projects is so that future funding opportunities can be identified for these specific actions.
- 3) Many of the plan's mitigation actions are carried over from the 2012 plan. What lessons can be learned from the previous planning cycle that kept the County from accomplishing these actions? Including past evaluations and monitoring in the updated plan will help County officials navigate current project planning.

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

#### **Strengths:**

- 1) It is great to see an overview of the plan update process in chapter 2. Marking the County's successes through reviewing where the plan was incorporated into other planning mechanisms in Table 2-2 gives the reader and the public assurance that the plan was put to good use.
- 2) The implementation strategy to incorporate the plan into the day-to-day functions and priorities of government and development is a strength of this plan and a strategy worth highlighting.
- 3) Finally, the strategy to monitor funding opportunities is very beneficial. Please let all of us at FEMA know how we can help connect you with other organizations, funding partners and grant opportunities for specific projects.
- 4) This plan contains one of the most robust and thorough update/evaluation and implementation sections I have seen. It is detailed, goal oriented and inclusive of the planning requirements.

#### **Opportunities for Improvement:**

- 1) It might be helpful to include specific timing for the bi-annual plan review meetings. Some communities designate triggering events to ensure the review meetings take place. For example, the first Tuesday after Presidents Day, the second week of September and March, etc.
- 2) Because this plan update's public feedback received few comments through the traditional solicitation methods (web postings, public meetings), consider developing a creative and innovative strategy for including the public in the update/bi-annual reviews. For example, could the public education mitigation actions include an update/review element?

## B. Resources for Implementing and Updating Your Approved Plan

This resource section is organized into three categories:

- 1) Guidance and Resources
- 2) Training Topics and Courses
- 3) Funding Sources

### **Guidance and Resources**

#### Local Mitigation Planning Handbook

<https://www.fema.gov/media-library/assets/documents/31598>

#### Beyond the Basics

<http://mitigationguide.org/>

#### Mitigation Ideas

<https://www.fema.gov/media-library/assets/documents/30627>

#### Plan Integration: Linking Local Planning Efforts

<https://www.fema.gov/media-library/assets/documents/108893>

#### Integrating Disaster Data into Hazard Mitigation Planning

<https://www.fema.gov/media-library/assets/documents/103486>

#### Integrating Historic Property and Cultural Resource Considerations into Hazard Mitigation Planning

<https://www.fema.gov/ar/media-library/assets/documents/4317>

#### Community Rating System User Manual

<https://www.fema.gov/media-library/assets/documents/8768>

#### U.S. Climate Resilient Toolkit

<https://toolkit.climate.gov/>

#### 2014 National Climate Assessment

<http://nca2014.globalchange.gov/>

#### Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation

[http://ipcc-wg2.gov/SREX/images/uploads/SREX-All\\_FINAL.pdf](http://ipcc-wg2.gov/SREX/images/uploads/SREX-All_FINAL.pdf)

#### FY15 Hazard Mitigation Assistance Unified Guidance

<https://www.fema.gov/media-library/assets/documents/103279>

#### Climate Resilient Mitigation Activities for Hazard Mitigation Assistance

<https://www.fema.gov/media-library/assets/documents/110202>

### **Training**

More information at <https://training.fema.gov/emi.aspx> or through your State Training Officer

#### **Mitigation Planning**

##### IS-318 Mitigation Planning for Local and Tribal Communities

<https://training.fema.gov/is/courseoverview.aspx?code=is-318>

##### IS-393 Introduction to Hazard Mitigation

<https://training.fema.gov/is/courseoverview.aspx?code=is-393.a>

##### G-318 Preparing and Reviewing Local Plans

G-393 Mitigation for Emergency Managers

Hazard Mitigation Assistance (HMA) Grant Programs

IS-212.b Introduction to Unified HMA

<http://www.training.fema.gov/is/courseoverview.aspx?code=IS-212.b>

IS-277 Benefit Cost Analysis Entry Level

<http://www.training.fema.gov/is/courseoverview.aspx?code=IS-277>

E-212 HMA: Developing Quality Application Elements

E-213 HMA: Application Review and Evaluation

E-214 HMA: Project Implementation and Programmatic Closeout

E-276 Benefit-Cost Analysis Entry Level

GIS and Hazus-MH

IS-922 Application of GIS for Emergency Management

<http://www.training.fema.gov/is/courseoverview.aspx?code=IS-922>

E-190 ArcGIS for Emergency Managers

E-296 Application of Hazus-MH for Risk Assessment

E-313 Basic Hazus-MH

Floodplain Management

E-273 Managing Floodplain Development through the NFIP

E-278 National Flood Insurance Program/ Community Rating System

**Potential Funding Sources**

Hazard Mitigation Grant Program

POC: FEMA Region IX and State Hazard Mitigation Officer

Website: <https://www.fema.gov/hazard-mitigation-grant-program>

Pre-Disaster Mitigation Grant Program

POC: FEMA Region IX and State Hazard Mitigation Officer

Website: <https://www.fema.gov/pre-disaster-mitigation-grant-program>

Flood Mitigation Assistance Grant Program

POC: FEMA Region IX and State Hazard Mitigation Officer

Website: <https://www.fema.gov/flood-mitigation-assistance-grant-program>

Emergency Management Performance Grant Program

POC: FEMA Region IX

Website: <https://www.fema.gov/emergency-management-performance-grant-program>

**SECTION 3:  
MULTI-JURISDICTIONAL SUMMARY SHEET**

**INSTRUCTIONS:** For multi-jurisdictional plans, this summary sheet must be completed by listing each participating jurisdiction that is eligible to adopt the plan.

MULTI-JURISDICTION SUMMARY SHEET					
#	Jurisdiction Name	Jurisdiction Type	Eligible to Adopt the Plan?	Plan POC	Email
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					

**SECTION 4:**

**HAZARD IDENTIFICATION AND RISK ASSESSMENT MATRIX (OPTIONAL)**

**INSTRUCTIONS:** This matrix can be used by the plan reviewer to help identify if all of the components of Element B have been met. List out natural hazard names that are identified in the plan in the column labeled “Hazards” and put a “Y” or “N” for each component of Element B.

HAZARD IDENTIFICATION AND RISK ASSESSMENT MATRIX								
Hazard	Requirement Met? (Y/N)							
	Type	Location	Extent	Previous Occurrences	Probability	Impacts	Vulnerability	Mitigation Action
Avalanche	3.2.3	Fig 3-7; Pg 3-25,26; 3-92-93	Pg 3-91	T 3-4, T 3-12;	T 3-2, pg 3-26	3.2.3	3-92	Action 4
Drought	3.2.8	Fig 3-10	T 3-14	T 3-4, pg 3-36-3-37	T 3-2	Pg 3-35	3-37	Action 5
Debris flow	3.2.11	Pg 3-64; Fig 3-20; F 3-22	Fig 3-33	T 3-4; 3-17	T 3-2; F 3-22	T 3-4; T 3-17	Pg 3-103	Action 3
Floods	3.2.10	Pg 3-106	3-109 See Link under map	T 3-4; 3-60, T	T 3-2; Pg 3-62	T 3-4, 3.2.10; Pg 3-107-8	Pg 3-105	Action 1, 9
Seiche wave	3.2.12	F 3-25; Pg 3-73; Fig 3-26	Pg 3-73; Fig 3-26	Pg 3-75	T 3-2	3-73	3-188	Action 10
Severe weather	3.2.1	3-13	3-13	T 3-3	T 3-2	T 3-4	3-120	Action 2, 11
Severe Thunderstorms and Tornado	3.2.2	3.2.2	3.2.2, T 3-7	T 3-4, Pg 3-20, pg 3-21	T 3-2, 3-22	Pg 3-20, T 3-8	3-22	Action 2, 12
Wildfire	3.2.14	3-85 – 3-86	3-85 – 3-86	T 3-3; T 3-4; T 3-18	T 3-2; pg 3-86	T 3-4; 3.2.14; T 3-18	3-85 – 3-86	Action 1, 14, 15, 16
EQ	3.2.9	3-43, 3-13	T 3-15, F 3-13	T 3-16	T3-15, F 3-14, F 3-15	Fig 3-13	3-99	Action 1, 7
Subsidence	3.2.13	3-80	3-80	Pg 3-80	Pg 3-80	Pg 3-77	3-80 – 3-81	Action 17