

APPENDIX C

SEMA Annex O

Catastrophic Event (Earthquake)

I. PURPOSE

The purpose of this annex is to provide operational concepts unique to catastrophic event planning and response, and assign responsibilities to (Enter jurisdiction name here) to meet needs of local jurisdictions following a catastrophic event. It serves as a supplement to the (Enter jurisdiction name here) Emergency Operations Plan (EOP) and is intended to expand the response and recovery organization for a catastrophic event and most likely an earthquake. Many of the operational concepts could be easily adapted to a large scale man-made or natural hazard.

II. SITUATION AND ASSUMPTIONS

A. Situation

1. A catastrophic incident, as defined by the NRP, is any natural or manmade incident, including terrorism that results in extraordinary levels of mass casualties, damage, or disruption severely affecting the population, infrastructure, environment, economy, national morale, and/or government functions. A catastrophic incident could result in sustained national impacts over a prolonged period of time; almost immediately exceeds resources normally available to State, local, tribal, and private-sector authorities in the impacted area; and significantly interrupts governmental operations and emergency services to such an extent that national security could be threatened. All catastrophic incidents are Incidents of National Significance. These factors drive the urgency for coordinated national planning to ensure accelerated Federal/national assistance.
2. A major earthquake centered in the New Madrid seismic zone is one of the most catastrophic natural hazards facing the State of Missouri. Based on current information, earthquake experts have identified 47 Missouri Counties and the City of St. Louis as those jurisdictions most likely to be impacted by a Richter magnitude 7.6 or greater earthquake on the Modified Mercalli Scale. Additional information on Missouri's earthquake threat is provided in the (Enter jurisdiction name here) Hazard Analysis and the State of Missouri Hazard Analysis.
3. The earthquake-planning scenario used to develop this annex is based on the Federal Emergency Management Agency (FEMA) Hazards United States (HAZUS) model-MH Earthquake Event Report, Southeast MO and was used to develop the loss estimation (damage estimates). The primary purpose of HAZUS is to provide a methodology and software application to develop loss estimations. Although no loss estimation will prove completely accurate, it can provide potential damage patterns and conclusions which provide guidelines for emergency response planning.

B. Assumptions

1. (Enter jurisdiction name here) has the primary responsibility to prepare for and respond to incidents and disasters. As such, (Enter jurisdiction name here) must be prepared to manage initial emergency response and recovery activities for at least the first 96 hours through internal capabilities and/or mutual aid agreements, regardless of the size and scope of the incident. State and federal government will make every effort to provide additional life safety support as quickly as possible; however, state and federal resources may not be available in the early stages of an emergency.
2. Damage to transportation (roads, bridges, rail, air, etc.), communication (phone, cell, emergency 911, public warning sirens, etc.), utility distribution systems (electric, gas, and water, etc.), pipelines, chemical and fuel storage and other infrastructure systems will isolate communities creating virtual islands within the disaster areas. Damaged transportation routes may not be functional for many weeks or months. For at least 96 hours after an earthquake, (Enter jurisdiction name here) must be prepared to meet their own emergency needs.
3. A number of people will self evacuate the damaged area, if possible, while many others will stay for a variety of reasons including protecting property or caring for farm/companion animals. Evacuation, if necessary, shall be conducted in accordance with Annex J, Evacuation, of the (Enter jurisdiction name here) EOP.
4. Shelters identified for use during other natural disasters may not be available in the impacted area. Temporary sheltering in campers and tents may be determined to be the safest option until buildings and residences are inspected. Prudent and safe actions must be taken into consideration when determining whether to remain in their residence or utilize temporary shelters. Sheltering may take place outside the impacted area.
5. The Governor may suspend some governmental operations in the affected tier and response tier of the state (as required) to direct maximum utilization of available resources in the initial response.
6. (Enter jurisdiction name here) will use all available local resources and implement established mutual aid agreements as needed.

III. CONCEPT OF OPERATIONS

A. General

1. Response Concept:
 - a) State of Missouri's actions in the event of a catastrophic event is based on the concept of automatic response. At a 6.5 magnitude or greater earthquake all state departments/agencies will activate their plans and take appropriate actions for an earthquake response (i.e. assessment of bridges and roads, communication infrastructure, building damage).
 - b) (Enter jurisdiction here) will activate their plans and take appropriate actions for a catastrophic event (earthquake) response to include assessment of bridges and roads, communication infrastructure, building damage, immediate assessment of injuries and medical system status. Initial injury and damage assessments will be forwarded to the State Emergency Operations Center.

2. Tiered Response: In order to implement a coordinated response, the state may be divided into three tiers: Affected Tier, Initial Response Tier, and Support Tier. These tiers were established to facilitate the planning process based on a New Madrid earthquake event, but can be applied to any catastrophic event. Tier assignment may change depending upon the event. Refer to Appendix 2 for response tier map.
 - a) The Affected Tier consists of jurisdictions that have been identified as the most likely to be impacted by a catastrophic event. For a New Madrid earthquake with a magnitude 6.5 or greater, regions C and E have been identified as the affected tier.
 - b) The Initial Response Tier consists of jurisdictions that have been identified as potential sources of immediate response assets into impacted areas. For a New Madrid earthquake with a magnitude 6.5 or greater, regions B, F, I and G have been identified as the initial response tier.
 - c) The Support Tier consists of jurisdictions that have been identified as potential sources of support and replenishment of assets (i.e. sheltering, medical surge, and staging areas.) For a New Madrid earthquake with a magnitude 6.5 or greater, regions H, A and D have been identified as the support tier.
3. Direction and Control:
 - a) State Unified Command
 - 1) The Missouri State Emergency Operations Center (SEOC) serves as the State's Unified Command.
 - 2) This is the state level command where direction and control will be exercised for the statewide response.
 - b) State Area Coordination Center
 - 1) Area Coordination Centers will be established at state run facilities in regions C and E in order to facilitate the state's response and recovery efforts to region unique situations.
 - 2) Once established these area coordination centers will coordinate response in their respective regions between local emergency operation centers and the state unified command.
 - 3) Incident Support Teams (IST) will be deployed by the state to assist state area coordination operations. An IST is an overhead management team to facilitate the ICS organization.
 - 4) Additional area coordination centers will be established as the situation warrants.
 - c) Local Emergency Operations Centers (Local Unified Command)
 - 1) Local Unified Command is the NIMS terminology used for the Direction and Control function within the local emergency operations center.
 - 2) (Enter jurisdiction name here) must be prepared to manage initial emergency response and recovery activities for at least the first 96 hours through internal capabilities and/or mutual aid agreements.

- 3) (Enter jurisdiction name here) will report initial damage assessments, casualty figures, and condition of critical infrastructure to the State Unified Command at the State Emergency Operations Center.
- 4) (Enter jurisdiction name here) will coordinate with the State Unified Command/SEOC until otherwise directed.

4. Damage Assessment

- a) Damage assessment of (Enter jurisdiction name here) will be conducted as outlined in Annex D, Damage Assessment, of the (Enter jurisdiction name here) emergency operations plan.
- b) (Enter jurisdiction name here) will report damage assessment information to the State Emergency Operations Center as soon as possible. Information should be passed using any available means (web based, faxed, phone, radio, etc.).
- c) One of the first priorities of damage assessment for (Enter jurisdiction name here) will be inspection of local roads and bridges. (Technical assistance may be available from MODOT).

5. Communications

- a) The Missouri State Highway Patrol is the lead state agency for providing initial emergency communications to and from the affected areas.
- b) Due to anticipated communications limitations, all communications should be limited to critical life safety messages.
- c) Communications assets and locations have been identified and are listed in Annex A, Direction and Control, and B, Communications & Warning, of the (Enter jurisdiction name here) emergency operations plan.
- d) A NIMS compliant communications plan is attached as shown in Appendix 7, Communications Plan, to this Annex.

6. Points of Distribution (PODs)

- a) PODs are temporary locations at which commodities are distributed directly to disaster victims. These may be different locations than where the commodities arrive in the jurisdictions Points of Arrival (POA).
- b) It is the responsibility of (Enter jurisdiction name here) to identify locations and to operate the PODs in their jurisdiction. POD locations are listed in Appendix 4, Points of Distribution, to this Annex.

7. Transportation

- a) (Enter jurisdiction name here) must identify available transportation resources for the movement of personnel and/or equipment.
- b) Identify vehicles that can be used for transportation of special needs population.
- c) These resources are listed in Annex G, Resource and Supply, to the (enter jurisdiction name here) local emergency operations plan.
- d) Local transportation routes are identified in Annex J, Evacuation.

8. Evacuation

- a) An Evacuation Management Team (EMT) will be established as part of the State Unified Command. The EMT is responsible for coordinating all evacuations throughout the state.
- b) (Enter jurisdiction name here) will coordinate all of their evacuation operations through the Evacuation Management Team located at the SEOC.

9. Mass Care and Special Needs Population

- a) Refer to Annex L, Reception and Care, of (enter jurisdiction name here) emergency operations plan.
- b) Note: This section of the local plan should address the specific needs of the local jurisdictions associated with mass care, shelters, special needs population, and pets.

B. Phases of Emergency Management

Refer to the general responsibilities in Appendix 2, Attachment B of the (Enter jurisdiction name here) Basic Plan for agency-specific actions.

1. Mitigation (Prevention)

It is recognized that you cannot prevent a catastrophic event from happening; however, there are measures that can be taken to lessen their effect. Such measures could include:

- a. Adopt seismic resistant design standards, some of which are currently being followed (i.e. bridges built since 1990).
- b. Comply with floodplain management guidelines.
- c. Adopt seismic non-structural design standards such as FEMA guides: “Avoiding Earthquake Damage: A Checklist for Homeowners”; “FEMA 74-Reducing the Risks of Non-Structural Earthquake Damage: A Practical Guide”; “FEMA 232-Homebuilders’ Guide to Earthquake-Resistant Design and Construction”, etc.

2. Preparedness

The preparedness phase occurs prior to and in anticipation of a catastrophic event (earthquake). This phase focuses on promotion of increased public awareness of the potential emergency, preparation of necessary materials and equipment or response to the emergency, and training for emergency response personnel. Typical functions of the preparedness phase include conducting public information programs, maintaining emergency resources inventory lists and conducting exercise and training programs.

- a. Provide training and information to mitigate the effects of a catastrophic event (earthquake).
- b. Train and equip response personnel.
- c. Identify local staging areas and fuel sources.
- d. Identify transportation resources and facilities, to include injured and special needs populations.
- e. Identify large, adequately equipped shelter facilities and transportation resources.
- f. Identify adequate locations that could serve as Points of Distribution (PODS).
- g. Promote personal preparedness i.e. Community Emergency Response Team (CERT).

3. Response

The response phase occurs from the onset of a catastrophic event (earthquake) and lasts until lifeline systems are at least partially restored. During this phase, functions that are critical to saving lives, to protecting people, and meeting basic human needs are performed.

In the event of an earthquake with a 6.5 magnitude or greater all departments/agencies identified in this plan will activate their plans. For other catastrophic events this plan will be activated as determined by the senior elected official.

See Appendix 3 to this Annex for the actions for each Tier Level.

4. Recovery

The recovery phase usually overlaps the response phase. It begins a few days after the catastrophic event (earthquake) and can last for years. During the recovery phase, the federal government provides disaster relief upon Presidential Declaration. Functions during this phase include federal relief under P.L. 93.288, as amended, for public and individual assistance, establishment of Disaster Recovery Centers, establishment of temporary housing facilities, and federal disaster loans and grants. Long-term recovery includes restoration of affected areas to their normal or to a substantially improved state.

- a. Establish liaisons and hold at a minimum, annual meetings of state and local agencies, non-governmental organizations, and volunteer groups that would play significant roles in returning communities to livable conditions.
- b. Focus should key on returning social services, schools, environmental issues and public utilities to normal as quickly as possible.

IV. ORGANIZATION AND ASSIGNMENT OF RESPONSIBILITIES

A. Organization

The organization for a catastrophic event (earthquake) will be based on the (Enter jurisdiction name here) LEOP Basic Plan. All operations will be conducted under the National Incident Management System (NIMS). See Appendix 1 to this Annex.

B. Assignment of Responsibilities

The LEOP Basic Plan includes the Primary and Support Responsibilities Chart that shows agency assignments. Agencies and organizations with primary and/or support assignments are responsible to develop and maintain SOGs, checklists, and other supporting documents that detail how to perform their assigned tasks.

1. In accordance with RSMo, Chapter 44, the chief elected official of the (Enter jurisdiction name here) is ultimately responsible for the coordination of response to a catastrophic event (earthquake).
2. Responsibilities include but are not limited to:
 - a. Activate the EOC. (Once activated, the EOC is the coordinating point for all local response and recovery activities.)

- b. Serve as the collection point for damage assessment information.
- c. Coordinate the provision of services, equipment, and supplies to support expedient operations associated with an earthquake disaster; for the approval and acquisition of equipment and supplies not available through normal purchasing channels and ordering time frames following an earthquake.
- d. Identify sites for Points of Distribution (PODS).
- e. Identify sites for Emergency Rest Area Stops.

V. DIRECTION AND CONTROL

Direction and control will be consistent with guidance found in Annex A, Direction and Control and Section III-3 of this Annex.

VI. CONTINUITY OF GOVERNMENT

Continuity of government will be consistent with guidance found in (Enter jurisdiction name here) Local Emergency Operations Plan (LEOP).

VII. ADMINISTRATION AND LOGISTICS

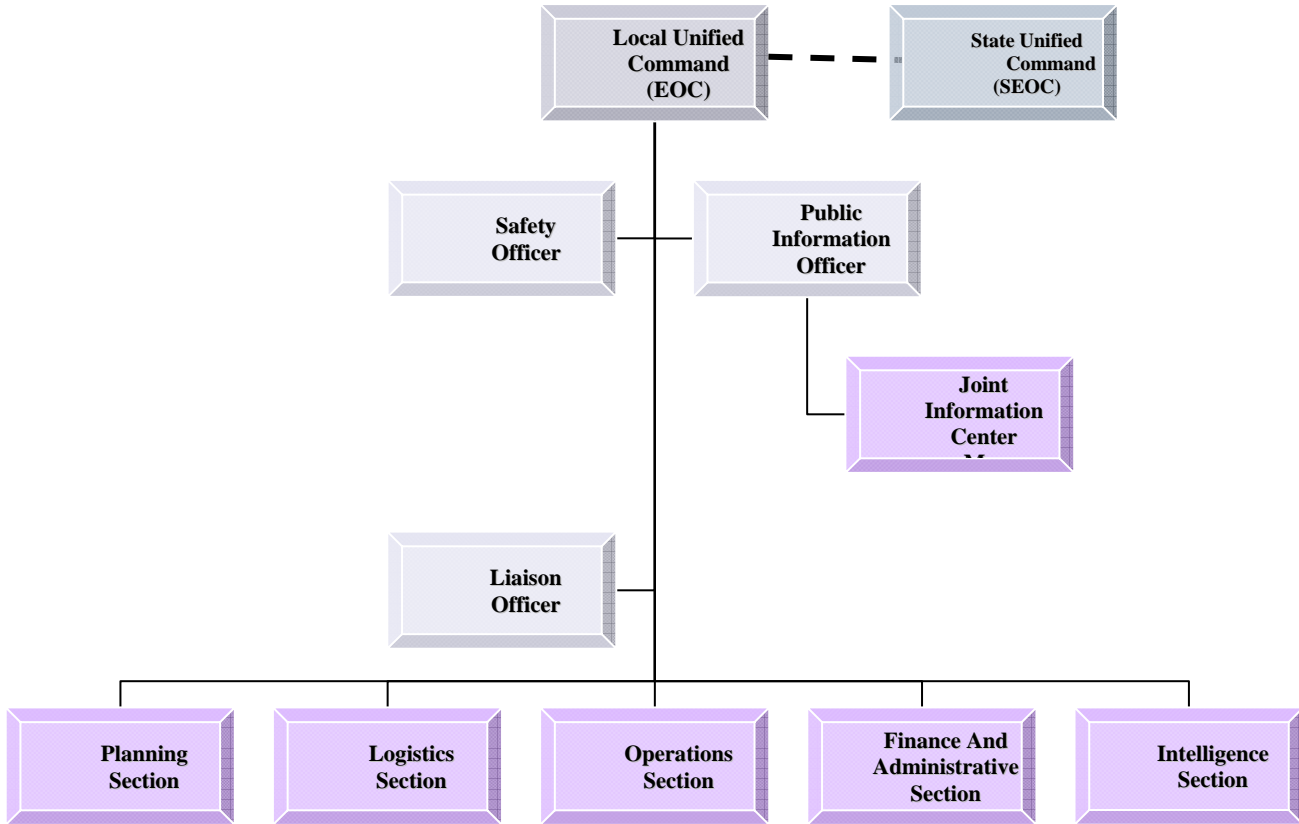
Administration and Logistics will be consistent with guidance found in (Enter jurisdiction name here) Local Emergency Operations Plan (LEOP).

APPENDICES

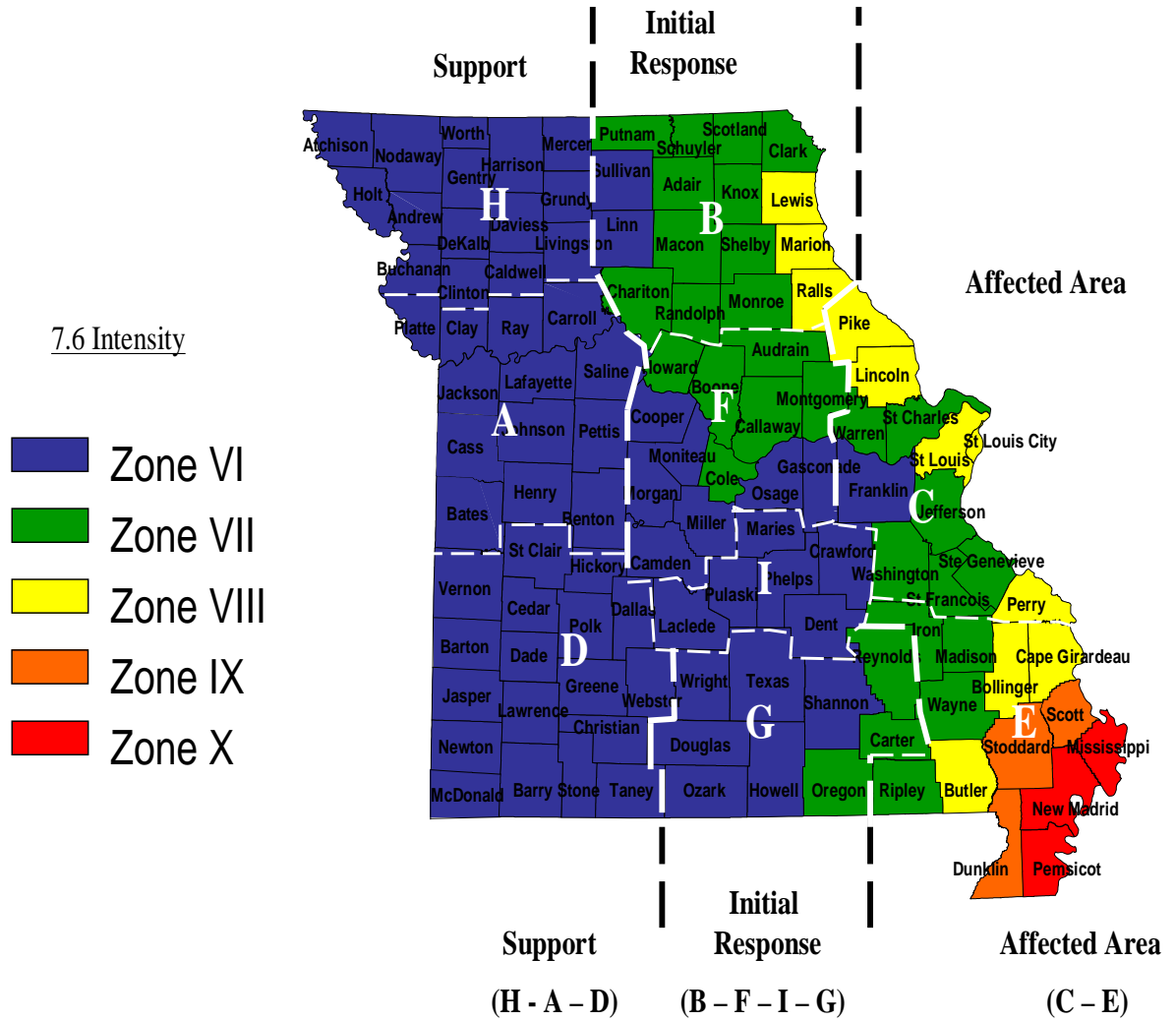
1. ICS Organization
2. Tier Response Map
3. Tier Response Actions
4. Points of Distribution (PODs)
5. Staging Areas
6. Command Structure – Organization Assignment List (Optional use)
7. Communications Plan (Optional use)
8. Resource Assessment
9. Local Resource Request Form
10. Emergency Rest Area Sites

Appendix 1 to Annex O

ICS Organization



Response Tiers



Appendix 3 to Annex O

Tier Response Actions

Actions following a catastrophic event (earthquake) are as follows:

I. Affected Tier

- a. Immediate assessment should be conducted to ascertain injuries and medical system status (i.e. functioning hospitals, clinics, ambulances)
- b. Initial injury and damage assessments will be forwarded to the State Emergency Operations Center.
- c. A coordinated response will be achieved by mobilizing resources through the local emergency operations center.
- d. Points of Distribution Sites (PODS) will be identified by local jurisdictions for the distribution of commodities to the affected population.
- e. See Appendix 5 to this annex for local staging area designations.
- f. A Local Unified Command EOC will be established. See *Appendix 6* to this Annex for organizational structure.
- g. State Area Coordination Centers will be established for Regions C and E. When the Area Coordination Centers become functional the local emergency operations organizations will coordinate response with their respective region's state area command.
- h. Any locally coordinated evacuation will be conducted in coordination with the state's Evacuation Management Team.
- i. The priority of movement is for responders into the affected area and movement of victims with life threatening conditions out of the affected area.
- j. The Local Unified Command will designate a Local Net Control Station (LNCS) to coordinate radio traffic and frequency allocation. This will be coordinated with the Regional Net Control Station (RNCS), located at a State Area Coordination Center. See *Appendix 7* to this Annex for a sample communications plan form.

II. Initial Response Tier

- a. Immediate assessment should be conducted to ascertain available resources that could be deployed to affected regions. This information should be forwarded to the SEOC using the form shown in *Appendix 8* to this Annex.
- b. Assessments should be done to determine medical surge capacity to support critical patient evacuation from the affected tier.
- c. A coordinated response will be achieved by mobilizing resources through the state emergency operations center.
- d. All activated response elements must report to assigned staging areas upon mobilization. All response to affected areas will be deployed from designated staging areas.
- e. Discipline specific staging areas will be established for initial response tier resources. See *Appendix 5* to this Annex.
- f. Responders should report equipped for operation and be self-sufficient for up to 96 hours. Initial responders should be prepared for a deployment period of 14 to 28 days.
- g. The concept of operations for a voluntary evacuation of the affected tier is to move the affected population through the initial response tier to the support tier of the state.

- h. To facilitate evacuation, local jurisdictions will identify, establish, and support emergency rest area sites in coordination with the state's Evacuation Management Team. Emergency rest area sites will be designed to distribute information, emergency medical treatment, fuel, food and water to the evacuating population as they pass through to the support tier of the state. See Appendix 10 to this Annex.
- i. Response from the Initial Response Tier will be coordinated through the State Unified Command.
- j. State Area Coordination Centers will be established for Regions C and E. Responding resources from the Initial Response Tier will be assigned to a State Area Coordination Center.
- k. The State Area Coordination Centers will assign missions to their respective responding resources.
- l. The priority of movement is for responders into the affected tier and movement of victims with life threatening conditions out of the affected tier.

III. Support Tier

- a. Immediate assessment should be conducted to ascertain resources that could be used to support mass care of the evacuated population from the affected tier. This information should be forwarded to the State Emergency Operations Center using the form shown in Appendix 8 of this Annex.
- b. Assessments should be done to determine medical surge capacity to support critical patient evacuation from the affected tier.
- c. Assessments should be conducted to prepare for mass care of the evacuated population and special needs population.
- d. Mass care and support of deployed resources are the primary function for the support tier.
- e. Response enhancement and replenishment will be drawn from the support tier.
- f. Support Tier jurisdictions will activate sites to support mass care of the evacuated population.
- g. Any Response from the Support Tier to the Affected Tier will be coordinated through the State Unified Command.
- h. State Area Coordination Centers will be established for Regions C and E. Responding resources from the Support Tier will be assigned to a State Area Coordination Center.
- i. The State Area Coordination Centers will assign missions to their respective responding resources.
- j. Any evacuation will be conducted in coordination with the state's Evacuation Management Team.