

APPENDIX 3
(SOUTH CAROLINA EARTHQUAKE PLAN)
TO THE SOUTH CAROLINA EMERGENCY OPERATIONS PLAN

I. INTRODUCTION

- A. An earthquake is a sudden, rapid shaking of the earth's surface caused by a slip on a fault or other sudden stress changes in the earth. A strong earthquake can cause severe damage and a large number of casualties over a wide area. South Carolina has a significant number of fault lines and seismic activity. Some of these fault lines are located in areas of concentrated population.
- B. Unlike other natural disasters, earthquakes normally occur without warning and could strike anytime. The unpredictable nature of earthquakes, foreshocks and aftershocks may cause great physical and societal impacts over a broad geographic region. The Pee Dee region, Low Country, and Piedmont (Upstate) are all subject to significant seismic activity.
- C. Most earthquakes occur along faults or breaks between massive continental oceanic/tectonic plates that collide, slide, or separate, creating earthquakes. South Carolina, however, is located in the middle of the North American tectonic plate, which is called a passive margin. Though the state observes between 10 and 20 earthquakes per year, most are minor in scale.
- D. Earthquakes are measured by Magnitude and Intensity.
 - 1. Magnitude
 - a. Magnitude (M) is a measure of an earthquake's size.
 - b. Most earthquakes with magnitudes of less than 3.9 would not cause significant damage, and may only be felt by a few people in the area of occurrence.
 - c. A M6.0 earthquake is the normal threshold for serious damage.
 - 2. Intensity
 - a. Intensity is measured by the Modified Mercalli Intensity (MMI) Scale.
 - b. MMI is a subjective measure of damage based on the observed effects of an earthquake.
 - c. The scale categorizes intensity from I (Micro) to XII (Great).
 - 3. Relative Comparison of Magnitude vs. Intensity

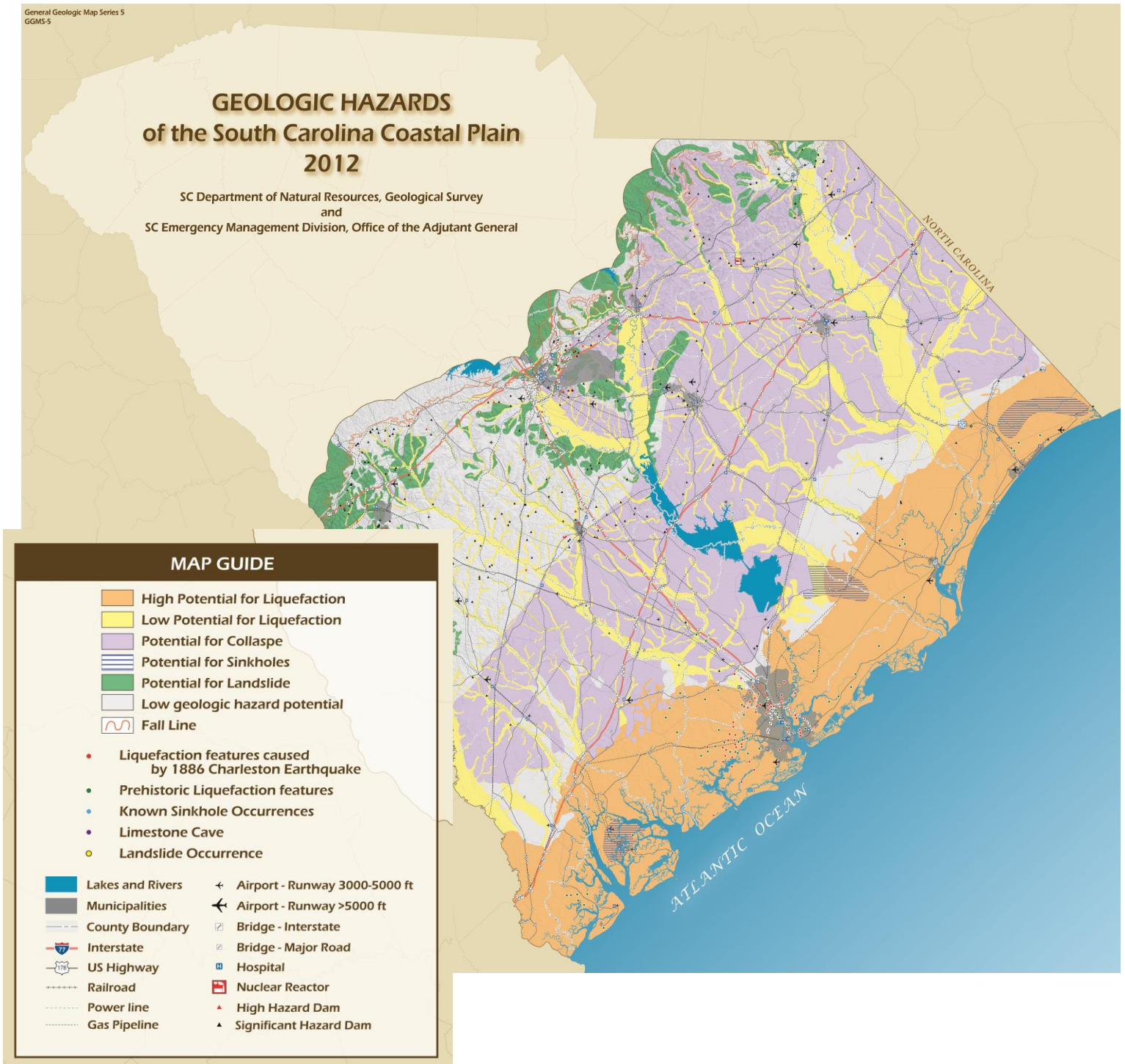
The Modified Mercalli Scale		Effects	The Magnitude Scale
I	Micro	(I) Not felt except by a very few under especially favorable conditions.	< 3.0
II – III	Minor	(II) Felt only by a few persons at rest, especially on upper floors of buildings. (III) Felt quite noticeably by persons indoors, especially on upper floors of buildings. Many people do not recognize it as an earthquake. Standing motorcars may rock slightly. Vibrations similar to the passing of a truck. Duration estimated.	3.0 – 3.9
IV – V	Light	(IV) Felt indoors by many, outdoors by few during the day. At night, some awakened. Dishes, windows, doors disturbed; walls make cracking sound. Sensation like heavy truck striking building. Standing motorcars rocked noticeably. (V) Felt by nearly everyone; many awakened. Some dishes, windows broken. Unstable objects overturned. Pendulum clocks may stop.	4.0 – 4.9
VI – VII	Moderate	(VI) Felt by all, many frightened. Some heavy furniture moved; a few instances of fallen plaster. Damage slight. (VII) Damage negligible in buildings of good design and construction; slight to moderate in well-built ordinary structures; considerable damage in poorly built or badly designed structures; some chimneys broken.	5.0 – 5.9

The Modified Mercalli Scale		Effects	The Magnitude Scale
VIII – IX	Strong	<p>(VIII) Damage slight in specially designed structures; considerable damage in ordinary substantial buildings with partial collapse. Damage great in poorly built structures. Fall of chimneys, factory stacks, columns, monuments, walls. Heavy furniture overturned.</p> <p>(IX) Damage considerable in specially designed structures; well-designed frame structures thrown out of plumb. Damage great in substantial buildings, with partial collapse. Buildings shifted off foundations.</p>	6.0 – 6.9
X or higher	Major to Great	<p>(X) Some well-built wooden structures destroyed; most masonry and frame structures destroyed with foundations. Rails bent.</p> <p>(XI) Few, if any (masonry) structures remain standing. Bridges destroyed. Rails bent greatly.</p> <p>(XII) Damage total. Lines of sight and level are distorted. Objects thrown into the air.</p>	7.0 and higher

E. Earthquake Series

1. Foreshocks are relatively smaller earthquakes that may precede the largest earthquake in a series.
2. Main shocks are the largest earthquake in a series. Not all main shocks have foreshocks.
3. Aftershocks are earthquakes that follow the largest shock of an earthquake sequence. They are smaller than the main shock. Aftershocks can continue over a period of a weeks, months, or years. The larger the main shock, the larger and more numerous the aftershocks, and the longer they will continue.

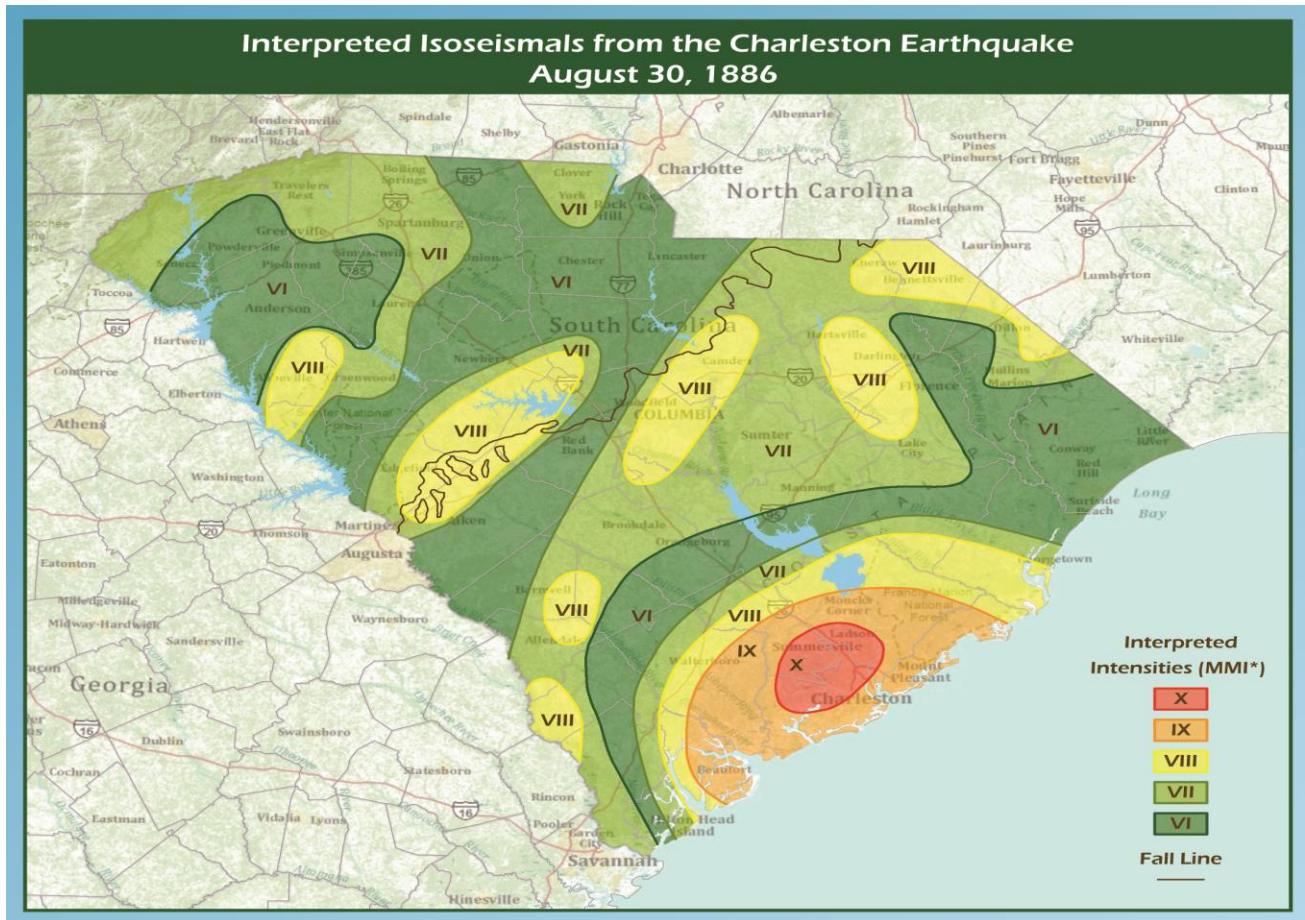
- F. Most South Carolina earthquakes occur in the Coastal Plain. The rocks deep below the surface are fractured from the break-up of Pangea. The plate in this area is weak, creating conditions in which pressure on the rocks causes seismic activity. Consequently, earthquakes occur less frequently, but more violently over a much greater area due to sub-surface geological conditions.



G. The State of South Carolina has a history of earthquakes which have caused significant damage and long-term effects. The two most significant to occur in South Carolina were the 1886 Summerville/Charleston earthquake and the 1913 Union County earthquake.

1. 1886 Summerville/Charleston Earthquake

- a. The 1886 Summerville/Charleston earthquake was the most damaging earthquake to occur in the eastern United States, and was the most destructive United States earthquake in the 19th century.
- b. The estimated M6.9 to M7.3 (X Intensity on Modified Mercalli Scale) earthquake occurred August 31, 1886 at 9:51 pm. The main shock was followed two minutes later by an aftershock, and more aftershocks over the next three years.
- c. This earthquake was felt over 2.5 million square miles and in distant places such as Boston, Massachusetts; Milwaukee, Wisconsin, Chicago, Illinois, Cuba and Bermuda.
- d. Approximately 110 persons lost their lives and more than 90 percent of brick structures in Charleston were damaged.
- e. Damaging secondary effects included fires, ruptured water and sewage lines, damaged wells, and flooding from a cracked dam in Langley, South Carolina.
- f. Damage estimates were estimated at \$8 million (over \$196 million in today's dollars).
- g. The graphic depicted below describes the interpreted isosiesmals from the 1886 Charleston earthquake. The map illustrates lines of equal felt seismic intensity, measured on the MMI scale, showing the state-wide impact in historical context. Of note, the isoseismal analysis showed:
 - (1) VIII-level intensity observed in Abbeville, Bennettsville, Columbia, and Edgefield.
 - (2) VII-level intensity observed as far as Spartanburg and Sumter Counties.
 - (3) VI-level intensity observed as far as Anderson and Cherokee Counties, and a majority of the Pee Dee Region from the coastal counties of Horry and Georgetown to the region of Darlington and Florence.



2. 1913 Union County Earthquake
 - a. The 1913 Union County earthquake occurred on January 1 near the town of Union.
 - b. The earthquake was felt from western South Carolina into Georgia, North Carolina, and Virginia.
 - c. Damage was minimal; no deaths resulted.
 - d. Based on a 2012 (Talwani & Howard, 2012) re-evaluation of the earthquake, the magnitude is now estimated to have been 4.3.

II. PURPOSE

- A. Identify preparedness and response procedures to an earthquake affecting South Carolina.
- B. Identify roles and responsibilities of local, state and federal agencies when preparing for and responding to an earthquake.

- C. Identify resources to assist those affected by an earthquake.
- D. Identify operational concepts unique to earthquake preparedness and response.

III. SCOPE

- A. The South Carolina Earthquake Plan addresses operations to be conducted in coordination and mutual support with the South Carolina Emergency Operations Plan (SCEOP).
- B. This plan complements the SCEOP and addresses responsibilities, processes, and actions specific to earthquake events.
- C. This plan defines the threat, terminology, and the utilization of planning scenarios as a basis for earthquake preparedness and planning.

IV. FACTS AND ASSUMPTIONS

- A. Facts
 - 1. South Carolina has a Federal Emergency Management Agency (FEMA) approved Hazard Mitigation Plan, dated October 19, 2013. The updated plan is pending approval with a no later than anticipated republication of October 18, 2018.
 - 2. Efforts to restore roadway, railway, waterway, and airport transportation systems will begin immediately.
 - 3. In 2017, 4,672 facilities reported chemical inventories as required by Federal EPCRA (Emergency Planning Community Right-to-Know Act) regulations. Of those, 1,473 reported storing extremely hazardous substances exceeding the Threshold Planning Quantity as classified by Section 302/304 of the Federal Superfund Amendments and Reauthorization Act (SARA, Title III). Approximately 4,175 of these facilities also reported various chemical inventories of more than 10,000 pounds as classified by Section 311/312 of the SARA, Title III. Of these, 15.45% are located within Berkeley, Charleston, Dorchester, Beaufort and Colleton counties.
 - 4. Tourist populations will be present and in high volume.
 - 5. A major seismic event will affect many jurisdictions simultaneously.
 - 6. Fires will occur due to ruptured gas lines and damage to electrical systems.
 - 7. Bridges in impacted areas from large seismic events will incur structural damage, rendering many unusable. Access to affected areas via roadway will be significantly inhibited.

8. A large scale earthquake will cause deaths of large numbers of animals, necessitating high volumes of animal carcass movement and disposal.
9. Broken water supply pipelines, communication services, and lack of mobility resulting from damaged transportation infrastructure will hinder response operations.
10. In a large seismic event, damage will be significant to transportation, communication, and other infrastructure systems, and will isolate communities and populations within impacted areas.

B. Assumptions

1. Federal aid will not be available for the first 72 hours.
2. Area ports/terminals will close pending damage assessments and channel inspections. Airports will close pending damage assessment of runways and facilities.
3. Damage assessments will be required before displaced persons can occupy emergency shelters in impacted areas.
4. Many shelters identified for use will not be available based upon compromised structural integrity; non-traditional methods of sheltering will be required in and out of impacted areas.
5. An earthquake the magnitude of the 1886 event will create sheltering requirements in excess of 60,000 citizens.
6. Evacuation will be impeded due to damaged transportation networks.
7. Mutual aid for firefighting within impacted areas will be curtailed.

V. SITUATION

A. Vulnerability and Hazard Analysis

1. South Carolina completed the Comprehensive Seismic Risk and Vulnerability Study for the State of South Carolina, 2001 (hereafter referred to as the Vulnerability Study). HAZUS-model results were included in this study. The Vulnerability Study provided information about the likely effects of earthquakes on the population, and on contemporary structures and systems including roadways, bridges, homes, commercial and government buildings, schools, hospitals, and water and sewer facilities.
2. The Vulnerability Study determined that an earthquake similar to the Summerville/Charleston earthquake of 1886 is the worst-case scenario and would significantly impact the State.

3. Based on estimates, an earthquake of similar intensity and location to the 1886 event would result in economic losses exceeding \$20 billion from damage to buildings, direct business interruption losses, and damage to transportation and utility systems.
 - a. Direct economic losses due to building damage (excluding business interruption losses) are estimated to exceed \$14 billion. Transportation and utility systems' direct economic losses would exceed \$1 billion. Building damage alone would exceed \$4.2 billion in losses due to direct business interruption. Loss estimates include rental income, business income, wages, and relocation expenses.
 - b. A Charleston area earthquake similar to the 1886 event will potentially affect the structural integrity of nearly 500 bridges in the State. Approximately 85% of these are in Berkeley, Charleston, and Dorchester Counties.
4. HAZUS estimates total economic losses in excess of \$60 billion (See Attachment A, Earthquake Planning Scenarios).
 - a. Total building-related losses would exceed \$57 billion; 15% of the estimated losses would be related to the business interruption of the region.
 - b. Residential buildings would make up over 60% of the loss.
5. The effects of an earthquake in South Carolina would be further worsened by the additional effects of liquefaction, collapses, sinkholes, and landslides.

VI. CONCEPT OF OPERATIONS

- A. State agencies with coordinating, primary, and supporting responsibilities to the Emergency Support Functions (ESF) will participate in earthquake planning and training, including participation and attendance at scheduled exercises and meetings. Counties are encouraged to do the same.
- B. Plan Activation
 1. \leq M3.9 Earthquakes
 - a. No plan activation.
 - b. SCEMD will document the incident and communicate with staff and local emergency managers.
 2. M4.0 to M4.9 Earthquakes

- a. The State Emergency Operations Center (SEOC) will activate to Operating Condition (OPCON) 4 to assess potential impacts.
 - b. SCEMD Operations will contact affected county(s) to assess the situation.
 - c. Upon assessment, SCEMD Director will determine if there is a need for further SEOC activation or return to normal operating conditions (OPCON 5).
- 3. M5.0 to 5.9 Earthquakes
 - a. The SEOC will activate to OPCON 3.
 - b. The State Emergency Response Team will recommend the Governor declare a State of Emergency to activate the SCEOP and selected ESFs.
 - c. The state-wide common operating picture will be developed and damage assessments will be conducted to assess impacts.
- 4. M6.0 or greater earthquake
 - a. The SEOC will activate at OPCON 1.
 - b. The SEOC will recommend the Governor declare a State of Emergency to activate the SCEOP and SERT, and request a Presidential Declaration.
 - c. The SEOC will implement the Statewide Mutual Aid Agreement, Emergency Management Assistance Compacts (EMAC), and other mutual aid agreements as needed.
 - d. The SEOC and county emergency management offices in impacted areas will establish Alternate Emergency Operations Centers (AEOCs) as necessary.
- C. Emergency Notification. Earthquake notification information, procedures and processes can be found in Annex J (Earthquakes) to the State Warning Point Standard Operating Procedures (SOP).
- D. Initial priorities are not rank ordered, but simultaneous efforts to establish a common operating picture and provide immediate multi-discipline response and recovery efforts to impacted communities. These simultaneous priorities are:
 - 1. Situational awareness
 - 2. Life safety and life-sustaining operations

3. Preserving public health and safety
 4. Incident stabilization
 - a. Resource allocation
 - b. Restoration of essential government services
 - c. Reestablishing communication
 5. Environmental protection
 6. Property conservation
- E. If the SEOC is unsafe or non-functional, the State Warning Point will notify ESF/SERT members to report to the AEOC. The AEOC location and operating procedures are located in SEOC SOP, Annex Q (Alternate Emergency Operations Center), which is located in the File Library of Palmetto.
- F. Checklists
1. ESF agencies will use the SEOC SOP (Annex I, Earthquake Response) to guide response operations. The SOP is used to ensure critical actions are monitored and completed
 2. Activities in the SEOC SOP Earthquake Checklist do not replace required activities normally assigned to ESF agencies in the SCEOP and supporting ESF SOPs.
 3. Activities in Annex I do not replace required activities normally assigned to ESFs in the SCEOP and supporting ESF SOPs.
 4. Lead agencies of each ESF will review and update their SEOC SOP Earthquake Checklists as a part of their biannual review.
- G. Operational Areas
1. A major earthquake has the potential to isolate impacted communities due to damaged infrastructure. The damage may make movement of human and material resources difficult, resulting in the need to target specific areas with a significant response effort and/or localized ICS command structure.
 2. County-identified operational areas will form the basis of State response to a major earthquake. SCEMD will assist counties who choose to develop operational areas and operational area response protocols within their jurisdictions. Efforts may include area analysis to determine resource requirements or shortfalls, and assistance in mitigating the effects of a disaster.

3. See Attachment A (Operational Area Concept, Paragraph III, Concept of Operations) to Appendix 9 (South Carolina Catastrophic Plan) for the phases of implementation.

H. Inspection of Damaged Buildings

1. Initial engineer support request for post-disaster inspection and/or evaluation will be made to the State Emergency Operations Center (SEOC) from the County Emergency Operations Centers (EOC) and, if necessary, State agencies with facilities in affected areas. Requests for engineer support will be coordinated by response priority.
2. Responsibility for Inspections of Facilities
 - a. Local building officials are responsible for inspecting facilities within their jurisdiction.
 - b. State facilities are the jurisdiction of the Office of the State Engineer and the South Carolina National Guard.
 - c. The Federal authorities having jurisdiction over damaged facilities are responsible for inspecting Federal facilities.

- I. Debris Assessment. See the South Carolina Recovery Base Plan and Attachment J, South Carolina Department of Transportation Debris Management Plan.

VII. DISASTER INTELLIGENCE

- A. See Section VIII (Disaster Intelligence and Communications) of the SCEOP.

B. Damage Reporting

1. Counties and ESFs will forward damage reports to the SEOC as soon as possible.
2. These reports should minimally include the following information:
 - a. Locations of collapsed structures with trapped persons
 - b. Status of communications systems to include broadcast media and any portions of the county where there are no communications
 - c. Status of transportation infrastructure (e.g., bridges, roads, etc.)
 - d. Locations of major firefighting efforts and out-of-control fires
 - e. Locations providing critical medical assistance
 - f. Known hazardous material releases and impact on the public

- g. Operational capability of critical facilities (e.g., hospitals, sewage and waste stations, electrical substations, etc.)
- h. Public safety needs (e.g., security, traffic control, and law enforcement)
- i. Immediate known public mass care needs or projections
- j. Public information needs

C. Public Information Dissemination

- 1. See Section VIII (Disaster Intelligence and Communications) and Annex 15 (Public Information) of the SCEOP.
- 2. See Attachment B (Sample Public Information Statements) for sample press releases and Emergency Alert System (EAS) messages.

VIII. ORGANIZATION AND ASSIGNMENT OF RESPONSIBILITIES

A. Counties

- 1. Incorporate the planning concepts of this Appendix into emergency planning processes.
- 2. Ensure backup/alternate communications systems are tested and operational.
- 3. Ensure the alternate County EOC has the ability to function in the event the primary EOC is inoperable.
- 4. Promote earthquake mitigation through grants, plans, and implementing education and awareness programs.

B. Emergency Support Functions. Coordinating agencies will conduct a biannual review of their ESF-specific earthquake checklists with primary and supporting agencies.

- 1. ESF-1 (Transportation).
 - a. South Carolina Department of Transportation (Coordinating Agency).
 - (1) Develop concepts and processes to address the movement of emergency supplies and personnel to and from isolated areas.
 - (2) Establish and maintain situational awareness of ground, water, and air transportation routes within impacted areas.

- (3) Deploy Seismic Response Teams to inspect transportation infrastructure and assist in identification of transportation lifelines into impact areas.
 - (4) Coordinate and compile damage assessments and estimated clearance time of roads and bridges for use by emergency and supply vehicles, to include load limitations. Priorities for ground transportation lifeline routes are:
 - (a) Critical facilities
 - (b) Interstate highways
 - (c) Primary roads
 - (d) Secondary roads
 - (5) Compile assessments and status of ports, terminals and waterways.
 - (6) Compile assessments and status of airport runways and facilities.
 - (7) Coordinate with the South Carolina Office of Regulatory Staff (ORS) on the status of railways and railway infrastructure.
 - (8) Coordinate interstate mutual aid and contractor assistance to support transportation infrastructure assessment and repairs.
 - (9) Coordinate route priorities, restrictions, identification of critical roads to remain open, and evacuation routes as required with ESF-16 (Emergency Traffic Management) and local emergency managers.
 - (10) Coordinate with ESF-13 (Law Enforcement) for law enforcement support to the Seismic Response Teams.
 - (11) Establish Air Operations Branch for coordination and management of aerial operations; coordinate as required with ESF-4, ESF-13, and ESF-19 for aviation assets.
- b. Civil Air Patrol.
- (1) Provide aerial platforms for communication, assessment, and reconnaissance as requested.

- (2) Coordinate with the ESF-1 Air Operations Branch (AOB) to provide aviation assets as requested.
2. ESF-2 (Communications).
 - a. South Carolina Department of Administration, Division of Technology Operations (Coordinating Agency).
 - (1) Provide assessment of damage to communication facilities.
 - (2) Coordinate with communication providers for restoration of communication facilities and public safety communications.
 - (3) Evaluate the need to deploy communication resources.
 - (4) Coordinate transportation for deployment of communication teams and equipment.
 - b. South Carolina National Guard. Provide communication support as requested by the Division of Technology Operations.
3. ESF-3 (Public Works and Engineering).
 - a. State Fiscal Accountability Authority, Office of the State Engineer (Coordinating Agency).
 - (1) Coordinate the deployment and use of engineers to conduct structural damage inspection and evaluation of state facilities.
 - (2) Coordinate with the National Society of Professional Engineers, South Carolina Department of Labor, Licensing and Regulation, Structural Engineering Association of South Carolina, American Counsel of Engineering Companies and local authorities for inspection of critical facilities (e.g., medical facilities, shelters, fire and police stations, and other government facilities).
 - b. South Carolina National Guard
 - (1) Coordinate with SCDHEC for inspection of water, sewer, facilities and dams.
 - (2) Coordinate with U.S. Army Corps of Engineers (USACE) to provide augmented engineering support.
4. ESF-4 (Firefighting).

- a. South Carolina Department of Labor, Licensing, and Regulation (Coordinating Agency).
 - (1) Coordinate activation of Firefighter Mobilization with South Carolina Department of Labor, Licensing, and Regulation (SCLLR), Division of Fire and Life Safety. This will include:
 - (a) Strategy to provide fire services assets.
 - (b) Personnel to support missions to assess damage to critical facilities.
 - (c) Identification of equipment and personnel shortfalls including resources and delivery timeline.
 - (2) Coordinate for assignment of Regional Coordinator(s) to serve as fire service liaisons.
 - (3) Coordinate with South Carolina Forestry Commission (SCFC) to determine usability of communications, heavy equipment, aerial assets and personnel.
 - (4) Coordinate for identification of alternative water sources in affected areas (dry-hydrants, ponds, lakes, rivers).
 - (5) Coordinate for activation of the South Carolina Emergency Response Task Force (SCERTF) Incident Support Team (IST) for deployment to affected areas for an all-hazard assessment and initial incident support as required.
 - (6) Coordinate with SCFC for activation of the SCFC Incident Management Team (IMT) and regional IMTs for deployment to affected areas.
 - (7) Coordinate with Federal ESF-4 (Firefighting) and the Southern Area Coordination Center (SACC) to request additional IMTs as needed.
- b. South Carolina Forestry Commission.
 - (1) Provide communications, heavy equipment and personnel to support firefighting and search and rescue efforts as requested;
 - (2) Coordinate with the ESF-1 Air Operations Branch (AOB) to provide aviation assets as requested.

- (3) Activate the SCFC IMT and Regional IMTs for deployment to affected areas.
 - (4) Coordinate activation of the Southeastern Forest Fire Compact and coordinate with the United States Department of Agriculture (USDA) Forest Service Southern Area Coordination Center (SACC) for mobilization of resources.
- 5. ESF-6 (Mass Care).
 - a. South Carolina Department of Social Services (Coordinating Agency).
 - (1) Provide a State Mass Care Coordinator to the SEOC upon activation.
 - (2) Communicate with all mass care agencies and organizations to compile and exchange information concerning extent of disaster and status of response operations. Provide same information to SEOC Operations Section.
 - (3) Provide SCDSS staff to support shelter operations, as required.
 - (4) Identify shelter locations outside of impact areas.
 - (5) Assist in identifying Life Support Areas (LSAs) and Points of Distribution (PODs) for issuance of critical commodities.
 - b. American Red Cross.
 - (1) Establish, manage, and support shelter operations as requested.
 - (2) Provide services to help family members reconnect (reunification/welfare inquiry services).
 - (3) Provide meals at fixed sites and through mobile feeding units as requested and in coordination ESF-6 partners.
 - (4) Distribute emergency supplies.
- 6. ESF-8 (Health and Medical Services). South Carolina Department of Health and Environmental Control (Coordinating Agency).
 - a. Determine availability of air medical transport and determine and maintain status of available medical facility landing/reception capabilities.

- b. Facilitate coordination of air and ground medical transportation services.
 - c. Synchronize state and local plans with the Federal National Disaster Medical System (NDMS).
 - d. Coordinate with coroners to determine need for mass fatality support and support locating and establishing Family Assistance Centers/Victim Information Centers and temporary morgue sites.
7. ESF-9 (Search and Rescue). South Carolina Department of Labor, Licensing, and Regulation (Coordinating Agency).
- a. Coordinate search and rescue support.
 - b. Integrate the South Carolina Firefighter Mobilization Plan to support search and rescue efforts in affected areas.
 - c. Coordinate activation of the South Carolina Emergency Response Task Force (SCERTF) Incident Support Team (IST) for deployment to affected areas for all-hazard assessment and incident support as required.
 - d. Place the Regional Building Collapse Urban Search and Rescue (US&R) Teams on alert status, and deploy them as needed.
 - e. Request and stage the State US&R Task Force at the State Fire Academy until assessment and resource requirements are determined. Coordinate deployment of assets as required.
 - f. Request additional US&R capabilities through EMAC and FEMA's National US&R Task Forces as required.
 - g. Coordinate and integrate FEMA US&R teams into the State's search and rescue response to include identifying sites for US&R teams to stage.
 - h. Coordinate with SCEMD and the Defense Coordinating Officer (DCO) to identify military bases for potential staging areas and utilization of military equipment (helicopters, landing crafts, etc.) to transport rescue personnel and equipment.
8. ESF-10 (Hazardous Materials, [HAZMAT]).
- a. South Carolina Department of Health and Environmental Control (Coordinating Agency).

- (1) Coordinate the initial State-level assessment of pre-identified HAZMAT locations and Fixed Nuclear Facilities.
 - (2) Coordinate HAZMAT technical assistance to affected counties and facilities as required.
 - (3) Coordinate with SERT and local officials to establish priorities for HAZMAT response support.
 - (4) Review and update procedures for deploying the Technical Assistance Teams (TAT), and exercise TATs to validate plans and operational procedures.
 - (5) Coordinate for deployment of Technical Assistance Teams (TAT) and Regional On-Scene Coordinators (ROSC) to assess the HAZMAT situation in affected areas. Priority of deployment will be to field reports, known Tier II sites, and regulated petroleum facilities.
 - (6) Coordinate with responding agencies to assist in determining personnel and equipment needed to support hazardous material incidents.
 - (7) Coordinate aerial assessments in support of industrial fire and waterway petroleum spill response.
 - (8) Coordinate assessment and response for potential or actual radiological releases in accordance with procedures outlined in the SCEOP, the South Carolina Operational Radiological Emergency Response Plan (SCOREP), and South Carolina Technical and Emergency Response Plan (SCTREPR). In the case of licensed radiological sources, coordinate with the SCDHEC Bureau of Radiological Health.
 - (9) Determine and report condition of Emergency Planning and Community Right-to-Know Act (EPCRA), Tier II, and known petroleum facilities; maintain and provide to SCEMD GIS Section the layer of all Tier II and regulated petroleum facilities.
 - (10) Coordinate activation of SCDHEC Contingency Plan for Spills & Releases of Oil & Hazardous Substances as required.
- b. South Carolina National Guard. Coordinate HAZMAT response support to SCDHEC as requested.

9. ESF-11 (Food Services).

- a. South Carolina Department of Social Services (Coordinating Agency).
 - (1) Analyze reports of damage and shelter populations to estimate feeding requirements.
 - (2) Coordinate with the South Carolina Department of Education (SCDOE) and local school district food supervisors to identify food stocks already available that may be used for feeding operations.
 - (3) In coordination with ESF-6 (Mass Care), develop plans to transport and distribute bulk food supplies to support feeding operations in impacted areas.
 - (4) In conjunction with County Emergency Managers, identify facilities capable of storing food.
 - (5) Coordinate with the Operations Support Supply Unit/Logistics for procurement of food supplies in instances when standard ESF-11 bulk food procurement measures are exhausted or unavailable.
 - b. South Carolina Department of Education.
 - (1) Coordinate with local school district food supervisors to determine inventory of food stocks available for feeding operations in impacted areas.
 - (2) Assist in identifying and anticipating likely food shortages and develop corresponding plans to acquire and deliver resources.
 - c. Feeding The Carolinas/Harvest Hope Food Bank. Provide food supplies for POD operations as requested.
10. ESF-12 (Energy). South Carolina Office of Regulatory Staff (Coordinating Agency).
- a. Provide assessment of damage to electric generating facilities.
 - b. Coordinate with utilities for restoration of generation facilities and transmission of electricity to damaged and affected areas.
 - c. Provide assistance to ESF-1 in receiving the reports of utility company damage assessments and restoration of service to railroads.

- d. Coordinate with ESF-3 as reports of utility company damage assessments of natural gas pipelines and facilities are received.
 - e. Coordinate with fuel suppliers in their distribution to consumer fuel stops in accordance with ESF-12 SOP.
11. ESF-13 (Law Enforcement).
- a. South Carolina Law Enforcement Division (Coordinating Agency).
 - (1) Assign Law Enforcement Liaisons to Incident Command Posts (ICP) as they are established.
 - (2) Mobilize and deploy law enforcement assets to designated staging areas as requested.
 - (3) Provide disaster intelligence and reports of observed critical facilities, roads, or bridges that have sustained damage.
 - (4) Coordinate with South Carolina Department of Corrections (SCDC) to provide status on the condition of correctional facilities in impacted areas. Reports will include:
 - (a) Locations of damage
 - (b) Inmate accountability
 - (c) Observations on building stability
 - (d) If law enforcement assistance is needed
 - (5) Coordinate law enforcement support to SCDOT Seismic Response Teams to maintain law and order during evaluation and inspection of transportation infrastructure.
 - (6) Coordinate with ESF-16 for law enforcement support along potential evacuation routes and reentry control points in impacted areas.
 - (7) Coordinate with the ESF-1 Air Operations Branch (AOB) to provide aviation assets as requested.
 - b. South Carolina Department of Corrections. Provide the South Carolina Law Enforcement Division with information on status of conditions of correction facilities in the impacted areas. Information should include locations of damage, inmate accountability, observations of building stability, and an assessment of whether law enforcement augmentation is required.

12. ESF-15 (Public Information). South Carolina Emergency Management Division (Coordinating Agency).
 - a. See Annex 15 (Public Information) to the State Emergency Operations Plan.
 - b. See Attachment B - Sample Public Information Statements.
13. ESF-16 (Emergency Traffic Management). South Carolina Department of Public Safety (Coordinating Agency).
 - a. In coordination with county officials, ESF-1, ESF-13, and ESF-19, identify suitable ingress, egress, and potential evacuation routes in impacted areas.
 - b. Staff and/or secure transportation routes in affected areas as required or requested.
 - c. As requested, coordinate support to ESF-13 (Law Enforcement) and SCDOT Seismic Response Teams in order to maintain law and order during evaluation and inspection of transportation infrastructure.
 - d. Provide disaster intelligence and reports of observed critical facilities, roads, or bridges that have sustained damage.
14. ESF-17 (Animal/Agriculture Emergency Response). Clemson University Livestock Poultry Health (Coordinating Agency).
 - a. Develop situational awareness and damage assessments of animal/agriculture entities.
 - b. Coordinate resources, as needed, to fulfill requests related to animal/agriculture issues to include:
 - (1) Livestock and poultry businesses in affected areas
 - (2) Food safety concerns for foods of animal origin
 - (3) Veterinary medical care for injured animals
 - (4) Capture and safe transport of animals at large
 - (5) Emergency animal sheltering
15. ESF-19 (Military Support). South Carolina National Guard (Coordinating Agency).
 - a. Coordinate with ESF-1 to support route clearance and debris push operations.

- b. Coordinate with the ESF-1 Air Operations Branch (AOB) to provide aviation assets as requested.
 - c. Coordinate with ESF-2 to provide communications support as requested.
 - d. Coordinate with ESF-6 for provision of logistics support to the mass care plan.
 - e. Coordinate with ESF-10 to assist in the identification and assessment of hazardous materials and hazardous material threats.
 - f. Coordinate with ESF-13 to assist in security operations as requested.
 - g. Coordinate with ESF-16 to support evacuation, reentry and access control operations in affected areas.
 - h. Coordinate with ESF-17 to provide South Carolina State Guard (SCSG) large animal evacuation assistance as requested.
16. ESF-24 (Business and Industry). South Carolina Department of Commerce (Coordinating Agency).
- a. Utilize existing resources and expand relationships with business associations and other organizations that can assist in response and recovery; develop concepts to provide government resources to businesses and industries where possible.
 - b. Coordinate with the insurance industry to ensure availability of adjusters and familiarity with the State's policy for post-disaster reentry.
 - c. Coordinate with business and industry in impacted areas through available communications to determine extent of damage and support needs.
 - d. Coordinate with the Recovery Task Force to identify post-earthquake recovery issues of concern to businesses and industries. These type of issues include, but are not limited to:
 - (1) Loss of power
 - (2) Loss of transportation
 - (3) Loss of revenue
 - (4) Ability to communicate with customers
 - (5) Physical loss and damage

- (6) Loss of inventory
- (7) Potential for permanent loss
- (8) Sources of financial assistances to aid businesses recovery
- e. In conjunction with ESF-15, provide information regarding business/industry and disaster assistance programs.
- f. In coordination with the Recovery Task Force, determine private-sector priorities for inspection, repair, and restoration of services.
- g. Coordinate with the South Carolina Department of Employment and Workforce to begin activation of the Disaster Unemployment Assistance (DUA) program, and in cooperation with the Recovery Task Force, begin providing strategic assessment of workforce needs and impacts.

IX. ADMINISTRATION, LOGISTICS, AND FINANCE

- A. Administration and Finance. See Annex 7 (Finance and Administration) to the SCEOP.
- B. Logistics
 - 1. See Attachment A (South Carolina Logistics Plan) to the SCEOP.
 - 2. The State will stage and distribute resources regionally in accordance with the SC Logistics Plan.
 - 3. Regional Staging Areas
 - a. Multiple Regional Staging Areas (RSAs) may be established outside the disaster area.
 - b. RSAs may not be operational for the first 72 hours, post-incident.
 - 4. Initial shortages of critical resources are anticipated. Daily coordination with counties will be required to address prioritizing distribution of resources. Anticipated resource requirements immediately after an earthquake event includes medical support, fire support, search and rescue support, generators, communications support, shelters/camps, food, bottled water, cots, blankets, fuel, and heavy equipment.

X. CONTINUITY OF GOVERNMENT (COG). See Section VII (Concept of Operations), Paragraph K (Continuity of Government) of the SCEOP.

XI. CONTINUITY OF OPERATIONS (COOP). See Section VII (Concept of Operations), paragraph L (Continuity of Operations) of the SCEOP.

- XII. PLAN DEVELOPMENT AND MAINTENANCE.** SCEMD and designated stakeholders and partners identified in this plan will review this Appendix on a biannual basis and update/revise as necessary.
- XIII. AUTHORITIES AND REFERENCES.** See Attachment C (Authorities and References) to the SCEOP.
- XIV. ACRONYMS AND GLOSSARY.** See Attachment B (Acronyms and Glossary) to the SCEOP.