



**City of Los Angeles**

**Catastrophic Event 72-Hour Requirements Matrix and Source Information**

The essential operations in the City's **72 Hour Requirements Matrix** have been informed by scenario information contained primarily within the following documents in response to a 7.8 magnitude earthquake in the San Andreas Fault Seismic Zone (2008 Shakeout parameters):

- State of California Emergency Plan (SEP), July 2009.
- Southern California Catastrophic Earthquake Response Plan (SoCal ERP), October 2010.
- Southern California Catastrophic Earthquake Plan Estimation Report (SoCal CEP), October 2009. Populated with Los Angeles County estimated data. City of Los Angeles is 470 sq miles, representing 11.5% of the land area and 40% of the population in Los Angeles County.
- City of Los Angeles Earthquake Annex (Annex), February 2011.
- City of Los Angeles Functional Support Annexes (Function Annex), May 2011.
- City of Los Angeles Recovery and Reconstruction Plan (R&RP), September, 1994. Based on USGS studies outlining scope of impact for a catastrophic 7.8 magnitude earthquake in City of Los Angeles geographical areas.
- City of Los Angeles Emergency Management Department Emergency Plan (EMD DEP), January 2009.
- The ShakeOut Scenario (Shakeout), November 2008 (USGS Open-File Report and Circular 1324).

Current required outcomes are based on best-estimates and population extrapolations from source documents. It is recognized that the required outcome for each essential operation in the matrix below must be validated via observation and analysis of future exercises/actual events to credibly support the outcome assessments. Until validated, this product remains primarily illustrative in nature.

**1. Essential operation: Re-establish critical communications**

**Required outcomes:** Line-of-sight communications between critical local responders within 2 hours.

Communications among local, state, and federal government agencies within 8 hours; communications for response operations established in 24 hours.

**Source for metrics:** LAPD, LAFD, OEM and City of Los Angeles Oasis Satellite plan.

**2. Essential operation: Gain access into affected area (lines of transport/access)**

**Required outcomes:** Clear at least 3 ground routes to most impacted areas within the shake zone in 12 hours; 2 Airheads and port access to the most-impacted area(s) within 48 hours.

**Source for metrics:** Shakeout, Annex, and R&RP. The 12-hour ground access metric is a best-guess based on the damage expected from a 7.8 magnitude earthquake. Clearing ground access corridors from San Diego, Palm Springs, and Ventura (outside the shake zone) counties may take several days. Other existing routes along Highways 5 and 15 cross the fault line and offset may be 15 to 30 feet. Assessment of airport operational and emergency response capabilities will be reported to the LAWA Incident Management Center (IMC) within 30 minutes of impact. Ground access from operable airports may take several days.

**3. Essential operation: Establish safe and secure environment**

**Required outcome:** In the 470 square mile City of Los Angeles area, identify and safeguard obviously unstable buildings and secure (contain) areas of major fire activity within 12 to 48 hours to prevent public harm.

**Source for metrics:** SoCal CEP, Shakeout, Uniformed Service Group Response Report.

#### **4. Essential operation: Triage/treatment of injured**

**Required outcome:** Provide immediate lifesaving medical assistance to up to 22,500 injured in the first 12- 24 hours following disaster, representing 40% of the 50,000 injured expected across Los Angeles County.

**Source for metrics:** SoCal CEP Estimate Report. City of Los Angeles represents 40% of the Los Angeles County population.

#### **5. Essential operation: Search and Rescue**

**Required outcome:** Initiate Search and Rescue for survivors in impacted areas within 2 to 6 hours.

**Source for metrics:** SoCal CEP; California Urban Search and Rescue Task Forces.

#### **6. Essential operation: Commodities (Food and Water)**

**Required outcome:** Provide water and food for 750,000 survivors/displaced people for first 48 hours. Provide water and food for up to 750,000 survivors/responders for 14 days.

**Source for metrics:** Shakeout: The population inside the incorporated limits of the City of Los Angeles is approximately 4 to 6 million, depending on the time of day. Of that total population, City of Los Angeles EMD anticipates immediate temporary displacement of approximately 750,000 people due to uninhabitable or unsafe residences and individuals from unsafe work locations in the City.

#### **7. Essential operation: Shelter**

**Required outcome:** Provide temporary shelter for 750,000 survivors/displaced persons in first 48 hours.

Requirement for temporary shelter may continue for up to 14 days.

**Source for metrics:** Shakeout: Of the City of Los Angeles population (4 to 6 million), EMD anticipates immediate temporary displacement of 750,000 people due to uninhabitable or unsafe residences and individuals from unsafe work locations in the City who are unable to leave the area. Some identified shelter facilities may not be available due to earthquake damage.

#### **8. Essential operation: Restore essential infrastructure for response operations**

**Required outcome:** Restore emergency infrastructure in 24 to 48 hours (bottled water, generator power, portable sanitation).

**Source for metrics:** R&RP: Impacted area and cascading effects such as aftershocks and fires are considered.

#### **9. Essential operation: Decontamination**

**Required outcome:** Begin mass decontamination of people and critical equipment in 12 hours.

**Source for metrics:** Hazardous Materials Annex. During the 1994 Northridge earthquake, over 100 incidents of quake-related release of hazardous materials were reported.

#### **10. Essential operation: Command, Control, and Coordination**

**Required outcome:** Conduct mission essential functions and establish presence in 12hrs.

**Source for metrics:** Outcome based on the Annex; 12 hour metric is a best guess based on the catastrophic earthquake scenario.

#### **11. Essential operation: Recovery/storage of deceased**

**Required outcome:** Recover an estimated 400 deceased in first 24 hours and 1,200 per day in the days following (100% of estimated total in 2 days). Recovery hindered by debris. Number of deceased could double to 3,600 in the event of major fires resulting from the earthquake.

**Source for metrics:** SoCal CEP and Los Angeles County Department of Coroner (DEOC) Emergency Operations Plan, May 2011. DEOC is responsible for mass fatality issues, forensic operations, and family notification/assistance county wide. Assumption: Coroner EMAC/MOU and pre-identified, trained personnel, including National Guard, will augment activity within 24 hours of event. Federal support including Disaster Mortuary Operational Support Team (DMORT) expected to be activated—one team is in San Jose, CA.

**12. Essential operation: Post Event Public messaging, in-place protection, and evacuation**

**Required outcomes:** Provide guidance to public within first hour by Social Networks, internet, and radio. In-place protection information starts within first hours. Facilitate evacuation of citizens in high risk areas in first 2 to 12 hours.

**Source for metrics:** City of Los Angeles Crisis Communications Plan; R&RP.