

Appendix C-9: Mass Search and Rescue Operations

1.0 Situation

The ShakeOut Earthquake Scenario was based on a study that documented the most likely results of a 7.8 MW earthquake on the southernmost 300 km (200 miles) of the San Andreas Fault, between the Salton Sea (Imperial County) and Lake Hughes (Los Angeles County), occurring on a typical November morning with no exceptional weather conditions (i.e. no Santa Ana Winds, which would result in exponentially worse loss of life and property). This scenario was purposely chosen because it is the most likely—but not worst-case—scenario for a catastrophic earthquake in Southern California, and therefore provides a reasonable basis for planning assumptions in this OPLAN even if an actual catastrophic quake occurs on another of the faults that run through densely populated areas of Southern California. Although there are a number of faults capable of causing disastrous quakes in Southern California, the southern section of the San Andreas Fault has been identified as the most likely source of a catastrophic quake there. The San Andreas Fault is known to be capable of earthquakes exceeding even M 7.8, and the southern San Andreas has an infamous overdue recurrence interval.

The San Andreas Fault extends from the Salton Sea near the Mexican border to Point Reyes where it goes offshore. Modeling and predications estimate the size and intensity of a M 7.8 earthquake on the Southern Section to be 50 times greater than the Northridge Earthquake of 1994. According to the 2007 Working Group on California Earthquake Probabilities, California has a 99.7% chance of having a magnitude 6.7 or larger earthquake during the next 30 years. The Working Group reported the probability of an earthquake of this magnitude on the southern section of the San Andreas Fault in the next 30 years at 59%. Study of the San Andreas Fault continues to provide new insights into how the fault moves and what may trigger the next catastrophic quake.

According to current studies, the most likely result of a catastrophic earthquake on the southern section of the San Andreas will include:

1. 1,800 deaths
2. 53,000 injuries
3. Several thousand people trapped in collapsed buildings, some of which will be exposed to fire
4. 1,600 simultaneous ignitions that would normally require a first alarm fire department response
5. 1,200 urban fires cannot be controlled by the first-arriving fire engine
6. More than 133,000 buildings burned to the ground (without Santa Ana Winds).
7. \$213 billion of damages
8. The collapse of up to 5 high rise buildings
9. 300,000 (1 in 16) buildings significantly damaged

10. 255,000 displaced households (half will be in need of extended shelter)

There are several new factors that may affect the outcomes of a catastrophic earthquake in Southern California.

California *Shake Alert* (Earthquake Early Warning) System & *My Shake* app

and The first is the is the current development and implementation of Earthquake Early Warning (EEW) through the California Integrated Seismic Network (CISN) . It's well understood that continued implementation of Shake Alert will provide life-saving and injury-saving seconds of earthquake early warning for many residents of California.

Emerging Understanding of Potential Earthquake Triggers and Behavior Resulting from the Ridgecrest Earthquakes of July 2019.

Proposed California “Earthquake Box Alarm” Mutual Aid Quake Response

Access to areas requiring search and rescue is likely to be restricted by debris, collapsed bridges, major fires and urban conflagrations and their effects, outgoing traffic (residents and visitors attempting to evacuate), incoming traffic, flooding, landslides, and other factors. Therefore, multi-modal transportation must be considered. US&R task forces and other Mass SAR resources may require air or marine movement to reach the affected areas if surface routes are damaged or blocked. Mass SAR require route clearance in order to gain access to their assignments and to enable the medical evacuation of casualties and the movement of uninjured population. These impacts will exceed local resources; state and federal resources will be required.

California has robust and highly experienced Mass SAR capabilities, including the multi-tiered Urban Search & Rescue system. Through local and regional response and the California Fire & Rescue Mutual Aid System and ESF-4, emergency reaction to a catastrophic earthquake can rapidly include thousands of US&R-trained firefighters assigned to dozens of “typed” and non-typed US&R Companies, and hundreds of fire engines, aerial ladder trucks, paramedic units, helicopters, and other fire department resources; reinforced by 19 Cal OES US&R Type II), 12 California Regional US&R Task Forces (29 US&R-trained firefighters per task force); several rotator boom “Heavy Rescues” operated by local government fire departments; 8 state/national US&R Task Forces based in California (70 US&R-trained personnel per task force); additional California US&R modular response capabilities; 20 additional state/national US&R Task Forces deployed from outside California under the auspices of FEMA; and multitudes of additional out-of-state US&R resources available through interstate compacts in which California participates, and through the Emergency Management Assistance Compact (EMAC) .

The Fire & Rescue resources would be augmented by law enforcement-based light search & rescue and wilderness SAR resources, provided through ESF-13 (the Law Enforcement Mutual Aid System).

These Mass SAR resources, in turn, would be bolstered by resources from the California National Guard and other U.S. military assets, some of which have urban search & rescue capabilities. A catastrophic earthquake would likely include international “typed” US&R Teams from other nations on request of California through the U.S. government using the International US&R Assistance Annex.

Assumptions

Thousands of collapsed buildings and other will require extensive search operations to locate thousands of potentially missing people. Hundreds and possibly thousands of people would be trapped in collapsed buildings, subway tunnels, and other structures, or beneath freeway overpasses, or in landslides and rockslides; or in floods from dam failures or tsunamis; or massive urban conflagrations and even wildland fire disasters if the quake occurs during extreme fire weather (or even in the midst of an ongoing wildfire siege like those the state experienced in 2017).

Urban fires and conflagrations would severely impact Mass SAR operations because of resource demand challenges and because fires moving through areas of damaged and collapsed structures would create additional critical urgency to Urban Search & Rescue operations to rescue as many people as possible before building in which they are trapped are impacted by fire.

To such an event, California (ESF-4 as lead and ESF-13 in support) would deploy Mass Search and Rescue capabilities including Urban Search and Rescue resources through the California Mutual Aid System. Federal US&R reinforcements would be deployed through Federal ESF-9 (Urban Search & Rescue) upon request from the Cal OES Fire & Rescue Division (California ESF-4), and coordinated by California through the appropriate command and control processes.

2.0 Mission

Mission Objectives

Locate and rescue victims missing or trapped in fully or partially collapsed structures using the standard five-stage system of Urban Search & Rescue/collapse rescue methodology. Conduct search operations using the standard US&R Search Marking System. Ensure sufficient Mass SAR resources to conduct rescues within the window of

survivability. Locate and rescue victims from other quake-related entrapments, including landslides, dam failure, tsunami, transportation mishaps, etc.

Rapidly reinforce local government responders by delivering Mass SAR capabilities including Urban Search & Rescue and other resources to save the greatest number of lives of trapped people in the shortest time possible (this objective is more critical where fires and urban conflagrations are threatening trapped victims).

Coordinate sustained round-the-clock Mass SAR/Urban Search & Rescue operations throughout the window of survivability, until all potential for live saves has been exhausted.

Priorities:

Rapidly recognize catastrophic earthquake occurrence using situational awareness tools and notifications (Shake Alert, California Integrated Seismic Network, Shake Map, etc).

Immediate Rapid Needs Assessment using all available sources including Shake Map, local government requests for assistance, reporting from Cal OES Regional field personnel, Fire & Rescue mutual aid requests, Law Enforcement mutual aid requests, news media reporting, etc).

Alert, Activation and Deployment of California Mass SAR resources for confirmed catastrophic earthquake conditions through the California Fire & Rescue and Law Enforcement Mutual Aid Systems (local government US&R companies, California Regional US&R Task Forces, California-based state/ national US&R Task Forces, Law Enforcement SAR resources, etc).

California request for appropriate initial federal Mass SAR resources including all available state/national US&R Task Forces.

Activate California ESF-4, ESF-13, and Federal ESF-9, and integrate Mass SAR planning, response, and coordination.

Activate other elements of California Mass SAR capabilities (California National Guard, etc)

Rapid needs assessments and confirmation of priority Mass SAR needs by local government, Cal OES Regional field personnel, and Mutual Aid requests.

Expanded requests for Mass SAR resources to include federal ESF-9 capabilities and up to 52 “typed” International US&R Teams.

Coordinate and support sustained round-the-clock Mass SAR operations until all viable trapped victims are located, rescued, and transferred to the appropriate prehospital care and medical systems, and until all possibilities of live rescues are exhausted.

3.0 Execution

Concept of Operations

Emergency Support Function (CA ESF4/13 – FED ESF9) Search and Rescue

Following a catastrophic earthquake in California, Mass Search & Rescue operations would be coordinated through California EF-4 (Fire & Rescue) as the lead, and EF-13 (Law) in support, and eventually with the Emergency Services Branch of the UCG Operations Section when it is activated.

- Response of all available local gov. US&R Companies proximal to the impacted zone
- Deployment of all 12 Cal Regional US&R TFs
- Response of available “typed” US&R Companies thru Fire & Rescue Mutual Aid System
- Deployment of all 19 Cal OES US&R Trailers
- Deploy Cal OES Type I Engine Strike Teams (each with US&R Type III capability)
- Deploy all 8 California-based state/national US&R Task Forces (except those unable to Activate due to the local disaster)
- Deploy Law SAR Teams to conduct light SAR and wilderness SAR in impacted areas

California Mutual Aid Region	US&R State & National Task Forces	US&R Regional Task Forces	US&R ICS Type 1	US&R ICS Type 2	US&R ICS Type 3	OES US&R ICS Type 3	US&R ICS Type 4	US&R ICS Type 2 OES Trailers
R-I	3	8	33	14	13	21		2
R-II	2	1	11	6	10	26		5
R-III				1		13		1
R-IV	1		5	4	6	19		5
R-V		2	3	2	6	13		2
R-VI	2	1	13	5	19	22		4
Totals	8	12	65	32	54	114		19
Statewide US&R Companies/TF's				304				

Many responders from local government in impacted zone will be committed to other life-saving operations, or may be incapacitated, or may even be missing

“Reflex time” (notification to arrival) for many Mass SAR assets will may be lengthy due to transportation disruption and other factors

International US&R assistance annex (international US&R Teams to California) has yet to be fully tested in a U.S. disaster

Effective coordinated command/control of Mass SAR operations to avoid delays and redundant efforts in a wide area catastrophe

Fire following earthquake effects

The state’s resources would be augmented by federal response on California’s request, through Federal ESF #9 (Urban Search and Rescue), consisting of four primary agencies (FEMA, USCG, DOI/NPS, and DoD), which provide specialized SAR capabilities during incidents or potential incidents requiring a coordinated Federal response.

Immediate request for all 20 state/national US&R Task Forces from outside California, through FEMA

Request International US&R Teams (52 INSARAG-recognized US&R Teams)

Federal US&R teams and related federal Mass SAR resources would be coordinated and supported with assistance from the FEMA US&R Incident Support Teams (IST). For catastrophic-level events requiring the deployment of all of the nation's state/federal US&R Task Forces, with the obvious need for more US&R resources, FEMA may also request military support through the DoD "Military Support to FEMA US&R Concept of Operations (CONOP)".

The "Military Support to FEMA US&R CONOP" provides for the augmentation of the National US&R Response System with either general purpose or specially trained military personnel. Although these military augmentation forces will be integrated into US&R operations through the US&R IST, they are expected to be self-sufficient regarding life-supporting items while utilizing existing military logistical supply processes. SAR-specific logistical support may need to be fulfilled through the US&R IST logistical support process.

On request of California, FEMA may also request international US&R response through the U.S. Agency for International Development/Office of Foreign Disaster Assistance (USAID/OFDA) using the International US&R Assistance Annex. International US&R teams would be coordinated and supported with assistance from the FEMA US&R Incident Support Teams (IST). These teams would operate within the same framework as the National US&R Response System, using protocols established by the International Search & Rescue Advisory Group (INSARAG), which are designed for efficient integration of International US&R Teams into the operations of any host nation that requests their assistance.

Fire & Rescue Resources for Mass Search & Rescue

There are more than 6,000 all risk fire engines in the California Fire & Rescue Mutual Aid System, including local government fire departments and state agencies (e.g. Cal Fire). Cal OES maintains a fleet of 114 Type I engines (each of which has California FIRESCOPE Type III US&R equipment and Capabilities), 40 Type III fire engines, 12 water tenders, and other fire & rescue resources assigned to local government fire departments across the state.

California is home to 8 state/national US&R Task Forces, one Internationally typed “Heavy” or “Medium” US&R Task Force (USA-2, Los Angeles County Fire Department), and 12 Regional US&R Task Forces. The state has 65 FIRESCOPE Type I US&R Companies, 32 Type II US&R Companies, 54 Type III US&R Companies, 19 Cal OES California FIRESCOPE Type II US&R Trailers., and dozens of US&R companies that currently are not typed.

California Fire & Rescue Mass SAR resources also include 13 Cal OES Swiftwater/Flood Search & Rescue Teams, 6 California FIRESCOPE Type I Swiftwater Rescue Teams, 9 California FIRESCOPE Type II Swiftwater Rescue Teams, and 2 California FIRESCOPE Type III Swiftwater Rescue Teams.

To help manage hazardous materials releases and spills that will inevitably impact Mass Search & Rescue operations, California has 35 California Type I Haz Mat Teams, 35 Type II Haz Mat Teams (12 of which are Cal OES Type II Haz Mat Vehicles issued to local government fire departments), and 2 Type III Haz Mat Teams.

Mobilization of Mass Search & Rescue Resources

Mobilization of multi-tiered local, regional, state, national, and international Mass Search & Rescue resources to a catastrophic earthquake striking Southern California can include transportation over roads, off-road, by air (rotary and fixed wing), by sea, and by rail. First responder units will respond mostly by ground initially, with some rotary aircraft response. Alternate modes of transportation will become more important as damaged road, rails, airports, and even ports become evident.

For the eight state/national US&R Task Forces based in California and the 20 out-of-state FEMA US&R Task Forces, there are well-established systems for fixed-wing or rotor wing transportation. FEMA has the capability of expediting out-of-state US&R Task Forces and other elements of the National US&R Response System toward federal staging areas in and around California even while state ESF-4 (the California Fire & Rescue Mutual Aid System) and federal ESF-9 collaborate to determine where they will be assigned. There will likely be a need for in-state transportation resources (e.g. semi-trucks with flatbed trailers, box trucks, ships, trains, and even military hovercraft capable of transporting personnel, canines, and tons of search and rescue equipment and support supplies to move out-of-state US&R Task Forces to assignments established by California (including the Emergency Services Branch of the UCG Operations Section, once established).

OPERATIONAL COORDINATION

In a catastrophic earthquake in California, the initial and sustained response of Mass Search and Rescue resources will be coordinated through the normal process of mutual

aid disaster response (the Fire & Rescue Mutual Aid System, EF-4, as the Mass SAR lead and Law Enforcement SAR resources, EF-13, supporting).

Once established, the Emergency Services Branch of the UCG Operations Section will be responsible for approving subsequent CA ESF 4/13 and Federal ESF9 mobilization and demobilization activities, requisitions for accountable property to support Federal ESF #9 activities, and coordination with senior Federal, State, and local officials. UCG ESF #9 activities are managed by the CA ESF 4/13 and FED ESF9 Leaders, who report to the UCG Emergency Services Branch Chief. The ESF #9 Leader ensures that UCG strategic objectives are accomplished and identifies procurement limitations. USG ESF #9 functions include, but are not limited to, providing Federal, State, and local officials with technical assistance in the acquisition and utilization of CA ESF 4/13 and FED ESF9 resources through advice, incident command assistance, management, and coordination of US&R Task Forces, and obtaining CA ESF 4/13 and Federal ESF9 logistic support.

The Cal OES Fire & Rescue Division (state ESF-4, supported by state ESF-13) would determine the resources required to conduct Mass SAR following a catastrophic earthquake, and would make the appropriate requests through interstate compacts, EMAC, and working with federal ESF-9. Through the National US&R Response System on request of the Cal OES Fire & Rescue Division/ESF-4, FEMA may deploy one or more US&R Incident Support Teams to report to the appropriate command as directed by the state, to help coordinate the operations of out-of-state US&R Task Forces and other federal SAR resources requested by California. On request of California (through the UCG Operations Section, once established), FEMA may also request international US&R response through the U.S. Agency for International Development/Office of Foreign Disaster Assistance (USAID/OFDA) using the International US&R Assistance Annex.

Air Coordination Group

Through Cal OES, the California Air Coordination Group (CACG), when established, will help coordinate aviation operations in support of Mass SAR operations and other disaster response activities. The Air Operations Branch will be activated at the direction of the State Operations Center (SOC), sized to meet the needs of the incident, phased in its operational approach, and include coordination at the local, state and federal levels. Joint state and federal Aviation Operations may be established when required and appropriate.

Initially, seven agencies will be contacted to stand up the AOB and include, the Federal Aviation Administration, Bureau of Land Management (as a national airspace coordinator), California Office of Emergency Services, California Department of Transportation, California Highway Patrol, California Department of Forestry and Fire Protection (CAL FIRE), and the California Air National Guard. These agencies will assign an Area Command Air Operations Branch Director (AOBD) and notify the SOC

Operations Director. As the SOC sends SAR mission requests to the AOB, the AOBD will talk and prioritize air missions. The AOBD will activate air operations components and any additional CACG members needed to support Mass SAR and other operations. The AOB will be responsible establishing a means to track and coordinate aviation resources in support of Mass SAR and other disaster operations. Mission tasking in support of Mass SAR may include (but not limited to), damage assessment, air lift evacuations, tactical search and rescue operations, and resource movement.

International US&R Support

On request of California, FEMA may request international US&R response through the U.S. Agency for International Development/Office of Foreign Disaster Assistance (USAID/OFDA) using the International US&R Assistance Annex. International US&R teams would be coordinated and supported with assistance from the FEMA US&R Incident Support Teams (IST). These teams would operate within the same framework as the National US&R Response System, using protocols established by the International Search & Rescue Advisory Group (INSARAG), which are designed for efficient integration of International US&R Teams into the operations of any host nation that requests their assistance.

By Phase – 2a, b, c, 3 Coordination Requirements

Essential Elements of Information (EEl)s

The Department of Defense (DoD) defines Essential Elements of Information (EEI) as the critical items of information needed by the commander by a particular time to relate with other available information and intelligence to assist in reaching a logical decision. Generally, EEI revolve around critical data, focused on the operational objectives established by the Unified Coordination Group. For example, EEI necessary during immediate response efforts may relate to the status of medical facilities, number of patients by categories, status of transportation systems, and status of utility infrastructure. EEI will generally be in the form of: on-scene information, predictive modeling and imagery.

As some of the first state resources to navigate impacted and difficult-to-access areas, and with their in-depth knowledge of structural and infrastructure stability, status and safety, Urban Search & Rescue resources can provide invaluable communications and data to the local, regional, state, and federal command systems. The data about damage and other consequences that US&R assets transmit from impacted areas will be especially important in the response to a catastrophic earthquake.

Information Collection Plan (ICP)

In response phase 2A operation coordination/situational assessment will release the first information collection plan. Through this plan a timely and synchronized flow of essential elements of information will begin to flow into the State Operation Center (SOC). The information collection plan is a crucial step California's Multi-Agency Coordination System (MACS) process of collecting, analyzing, validating, prioritizing, allocating and resourcing critical needs throughout the impacted area. The ICP process of collecting Essential Elements of Information (EEl)s must be clearly understood by all

participating in response, support, and recovery operations. The ICP process is outlined below:

1. Raw Data Documented
2. Analyze the Information for CIRs/EEIs
3. Process the Data into Actionable Information
4. Update Information, Tracking and Maintaining
5. Direction (UCG, C&GS, Plans, Operations, Logistics, Finance and Admin.)
6. Disseminate/Distribution of the Information

Journalize/Archiving – Records Management

Logistical Supply Chain Requirements

- Emergency Fuels – Example require all Mass SAR Components

Emergency Fuels Support

SAR TF Ground/Air Fuels Types Consumption Rate Total

	Weekly	Monthly
Unleaded	140,000	600,00
Diesel	140,000	600,000
Jet Fuel	160,000	690,000

Natural Gas (NG)

Propane

Other

Note: These are best fuel use estimates for the 28 State/Federal US&R Task Forces and rotorcraft. This does not include: State Regional Task Forces of 12 teams, other teams coming into the state, and international teams. Local/Regional teams are estimated to require at least double these amounts.

Organizational Structure to support Geographic Operations (Branches/Divisions)

CONCEPT OF OPERATIONS (By Phase 2a, b, c, 3)

CA ESF 4/13, with coordination assistance from FED ESF9 will continue to reinforce Mass Search and Rescue Operations through the deployment of multi-tiered US&R resources from within California, and eventually through the assignment of out-of-state Mass Search & Rescue resources requested by California.

First Responder Resources

The initial response to a catastrophic earthquake in California will include thousands of firefighters staffing all-risk Type I and III fire engines, dozens of water tenders, dozens of aerial ladder trucks, dozens of fire patrol units, and other Fire & Rescue resources that are part of the California Fire & Rescue Mutual Aid System. It would also include up to 114 Cal OES Type I engines with Type III US&R capabilities, 40 Cal OES Type III fire engines, and 12 Cal OES water tenders.

The initial and secondary response would include many of California 65 “typed” Type I US&R Companies, 32 Type II US&R Companies, 54 Type III US&R Companies, and 19 Cal OES California FIRESCOPE Type II US&R Trailers.

The reinforced response would include California’s 12 Regional US&R Task Forces and the 8 California-based state/national US&R Task Forces.

Reinforced response for quake-related flooding and hazardous materials emergencies could also include 13 Cal OES Swiftwater/Flood Search & Rescue Teams, 6 California FIRESCOPE Type I Swiftwater Rescue Teams, 9 California FIRESCOPE Type II Swiftwater Rescue Teams, 2 California FIRESCOPE Type III Swiftwater Rescue Teams. And many of the 35 California Type I Haz Mat Teams, up to 35 Type II Haz Mat Teams (12 of which are Cal OES Type II Haz Mat Vehicles being issued to local government fire departments), and 2 Type III Haz Mat Teams.

State/National US&R Task Forces

The 8 state/national US&R Task Forces based in California will be Activated and deployed through the California Fire & Rescue Mutual Aid System.

For the up to 20 State/national US&R Task Forces responding from outside California, the FEMA US&R Incident Support Team (IST), through federal ESF-9 working with California ESF-4, will be assigned as appropriate to conduct urban search & rescue operations. Once a state/national US&R task force is assigned to an area of operations, its Task Force Leaders will report to the Authority Having Jurisdiction (AHJ) to receive and complete operational assignments.

The AHJ, along with assigned state/national US&R Task Forces and the US&R IST, performs continuous needs assessments to determine if additional federal resources

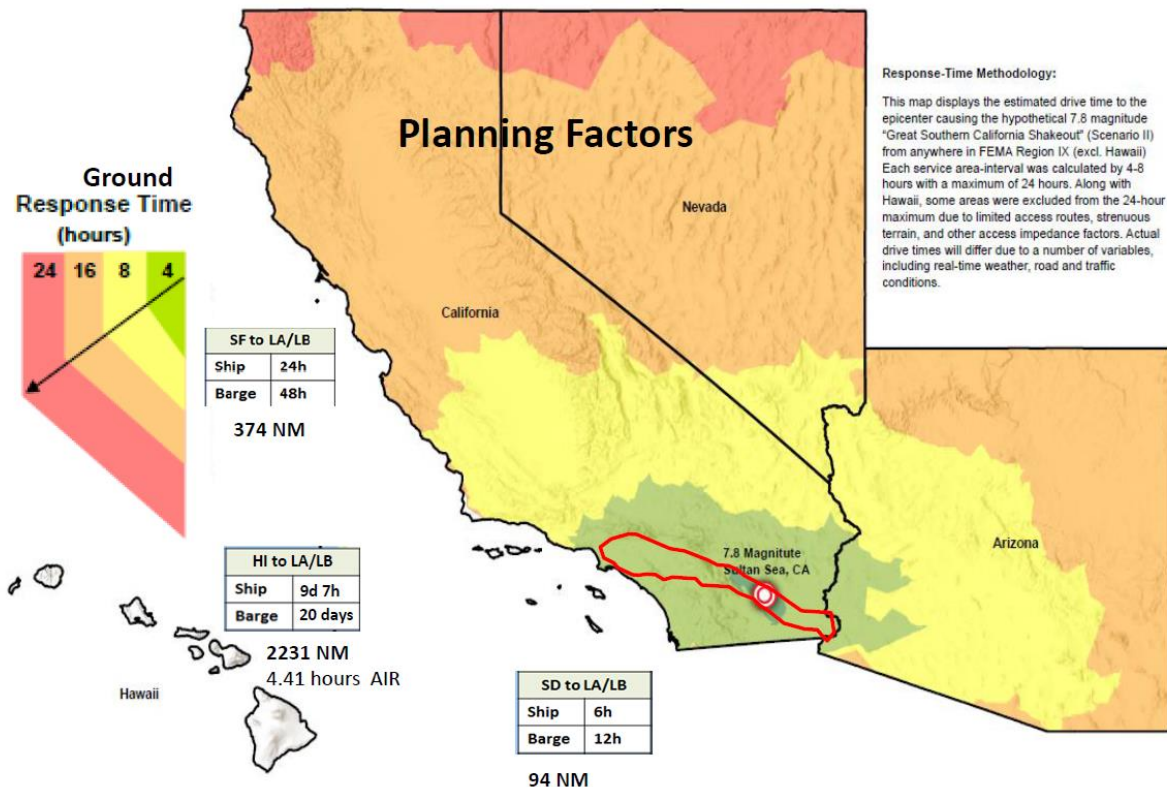
will be required to accomplish the US&R mission. The AHJ and the state/national US&R assets will report on the progress of US&R work accomplishments and needs to determine if state/national US&R task forces or other federal search & rescue assets are to be requested or reassigned.

The state/national US&R assets will be coordinated with California EF #4 working with Federal ESF-9 to determine assignments. A catastrophic earthquake will require round-the-clock search and rescue operations for multiple operational periods, potentially for several weeks or more. Therefore it is likely that some state/national US&R Task Forces will be assigned to a series of assignments, one after another, as they complete assignments and are made available for additional assignments.

As in other disasters around the nation resulting in major structure collapse, it is possible that state/national US&R Task Forces and other US&R/Mass SAR assets may also be requested to assist in technical human remains recovery operations that required US&R capabilities and resources in void spaces, or when shoring operations are required, or when delayering and other heavy or technical means are needed to ensure personnel safety and the integrity of recovery operations .

Southern California Catastrophic Earthquake Plan Regional Response Times Ground / Maritime

Seattle/Tacoma
1274 NM to LA/LB 5.3 Days
Portland 1083 NM to LA/LB 4.5 days



Mass Search and Rescue Capabilities Tables by Agency/Organization

Structural Collapse Search and Rescue (Urban Search & Rescue)

US&R Typing Locations

Type 1 US&R Task Force (US&R Heavy)

- Areas of specialization include:
 - High angle rope rescue including highline systems
 - Pre-cast concrete construction
 - Steel frame construction
 - Confined space rescue (permit required)
 - Weapons of Mass Destruction (WMD)

/Hazardous Materials (HazMat) operations

- Mass Transportation rescue
- Swiftwater and Flood Rescue
- Advanced life support intervention
- 70 personnel per Task Force
- 80 personnel in WMD operational mode

Type 2 US&R Task Force (US&R Medium)

- Areas of specialization include:
 - Light frame construction
 - Heavy wall construction
 - Basic rope rescue operations
 - Confined space rescue (no permit required)
 - HazMat conditions
 - Trench and excavation rescue
 - Advanced life support intervention
- 28 personnel per Task Force

Type 3 US&R TF (Light) Areas of specialization include:

- Light frame construction
- Low-angle rope rescue
- 22 personnel per team

Type 4 US&R TF (Basic)

- Areas of specialization include:
 - Surface rescue
 - Non-structural
- 6 personnel per team

California Regional US&R Task Forces (29 members each)

RTF-1: Marin County (MRN)

RTF-2: Los Angeles County Area E (XLE)

RTF-3: Long Beach Fire Dept (LOB)

RTF-4: Los Angeles Area C (XLC)

RTF-5: Fresno (FRN)

RTF-6: San Bernadino (BDC)

RTF-7: Ventura County (XVE)

RTF-8: Los Angeles County Fire Dept (LAC)

RTF-9: Los Angeles City Fire Dept (LFD)

RTF-10: Orange County (ORC)

RTF-11: Bakersfield (BKF)

RTF-12: Santa Barbara (XSB)

FEMA/National US&R Response System

State/National US&R Task Force Locations¹⁰

1. AZ-TF1 - Phoenix, Arizona - Phoenix Fire Department
2. CA-TF1 - Los Angeles, California - Los Angeles City Fire Department
3. CA-TF2 - Los Angeles County, California - Los Angeles County Fire Department
4. CA-TF3 - Menlo Park, California - Menlo Park Fire Department
5. CA-TF4 - Oakland, California - Oakland Fire Department
6. CA-TF5-Orange County, California - Orange County Fire Authority
7. CA-TF6 - Riverside, California - Riverside Fire Department
8. CA-TF7 - Sacramento, California - Sacramento Fire Department
9. CA-TF8 - San Diego, California - San Diego Fire Department
10. CO-TF1 - State of Colorado
11. FL-TF1 - Miami-Dade County, Florida - Miami-Dade Fire Rescue Department
12. FL-TF2 - Miami, Florida - Miami Fire Department
13. IN-TF1 - Marion County, Indiana
14. MD-TF1 - Montgomery County, Maryland - Montgomery County Fire & Rescue Service
15. MA-TF1 - Beverly, Massachusetts
16. MO-TF1 - Boone County, Missouri - Boone County Fire Protection District
17. NE-TF1 - Lincoln, Nebraska - Lincoln Fire & Rescue Department
18. NJ-TF1 – State of New Jersey
19. NV-TF1 - Clark County, Nevada - Clark County Fire Department
20. NY-TF1 - New York City, New York - Fire Department of New York, New York City Police Department
21. OH-TF1 - Miami Valley, Ohio
22. PA-TF1 - Commonwealth of Pennsylvania
23. TN-TF1 - Memphis, Tennessee - Memphis Fire Services

24. TX-TF1 - College Station, Texas - Texas Engineering Extension Service
25. UT-TF1 - Salt Lake City, Utah-Unified Fire Authority
26. VA-TF1 - Fairfax County, Virginia - Fairfax County Fire and Rescue Department
27. VA-TF2 - Virginia Beach, Virginia - Virginia Beach Fire Department
28. WA-TF1 - Puget Sound region, Washington

All 28 State/National USAR Task Forces are Type 1 capable and also can deploy as Type II, III, or IV Task Forces & Modular US&R response.

There are 28 state/national US&R Task Forces strategically located across the United States. In US&R Type I Task Force configuration (see organizational chart below), they are staffed with 70 personnel and is supplied with tons of equipment and supplies. Up to 10 additional support personnel may be activated when a state/national US&R Task Force travels by ground transportation. All state/national US&R Task Forces have CBRNE capabilities and are staffed with 10 additional Haz Mat Specialists in CBRNE configuration. Each state/national US&R Task Force can conduct Operational Coordination, Situational Assessment, Technical and Canine Search, Rescue, prehospital care of Task Force personnel and entrapped survivors, Haz Mat Detection, and Haz Mat Decontamination. Each state/national US&R Task Force can also deploy

in the lighter and faster US&R Type III US&R Task Force configuration with 29 personnel. Some state/national US&R Task Forces are capable of simultaneously deploying as a Type III Task Force in addition to the Type I US&R Task Force. The state/national US&R Task Forces, being rostered two or three deep in every position, can also deploy a second layer of personnel to double the manpower and bolster round-the-clock operations.

Type I US&R Task Force

- Seven state/national US&R Hazardous Materials Equipment Push Packages (HEPP) caches are strategically located across the United States to extend US&R operational periods when hazardous materials releases are involved, and/or when decontamination of US&R Task Force personnel is likely to be required. The California-based HEPP cache is located in and maintained by CA TF-7 (Sacramento). The others are based at NV TF-1; CO TF-1; TX TF-1; IN TF-1; MD TF-1; FL TF-2.

Article 4.5 – Urban Heavy Rescue Act

§ 8584. Short title

This article shall be known and may be cited as the Urban Heavy Rescue Act of 1988.

§ 8584.1. Legislative intent; acquisition and maintenance of units and gear by fire and rescue division; positioning and availability; personnel training

(a) It is the intent of the Legislature that the state have an urban heavy rescue capability in the event of a major earthquake. It is also the intent of the Legislature that the Office of Emergency Services and the State Fire Marshal's Office pursue the necessary funding to carry out this article through the normal budget process.

(b) The Fire and Rescue Division of the Office of Emergency Services shall acquire and maintain urban heavy rescue units and transportable caches of search and rescue

gear, including hand tools and protective gear. The division shall position the units and caches to ensure a rapid response of personnel and equipment anywhere in the state, and ensure that a unit will be available on the scene within one hour of a major earthquake.

(c) The State Fire Marshal's Office shall coordinate the training of personnel in the use of the units and equipment in cooperation with the Office of Emergency Services.

¹ Southern California Catastrophic Earthquake response Plan. *Annex B* January 2011, p. 1

¹ Personal correspondence from Joe Hiponia, Training Coordinator, DHS/FEMA Urban Search & Rescue Branch, *Catastrophic Response Course of Action*

¹ FEMA Operations Manual, *National Urban Search and Rescue (US&R) Response System*. September 2012, p.36

¹ FEMA Urban Search and Rescue (US&R) Incident Support Team (IST), *Operations Manual*, January 2000, p. IV-1

¹ FEMA Urban Search and Rescue (US&R) Incident Support Team (IST), *Operations Manual*, January 2000, p. IV-1

Table C-9-1: <Table Caption>

<TableHeader>		
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3.1.1 <Heading 3>

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Figure C-9-1: <Figure Caption>

Coordinating Structure

Tasks by Phase

Phase 1 (Pre-Incident)

- ESF 1: Transportation
 - <Stakeholder Organization>
 - <Task>

- <Stakeholder Organization>
 - <Task>
- ESF 2: Communications
 - <Stakeholder Organization>
 - <Task>
 - <Stakeholder Organization>
 - <Task>
- Etc.

Phase 2a (Immediate Response)

- ESF 1: Transportation
 - <Stakeholder Organization>
 - <Task>
 - <Stakeholder Organization>
 - <Task>
- ESF 2: Communications
 - <Stakeholder Organization>
 - <Task>
 - <Stakeholder Organization>
 - <Task>
- Etc.

Phase 2b (Deployment)

- ESF 1: Transportation
 - <Stakeholder Organization>
 - <Task>
 - <Stakeholder Organization>
 - <Task>
- ESF 2: Communications
 - <Stakeholder Organization>
 - <Task>
 - <Stakeholder Organization>
 - <Task>
- Etc.

Phase 2c (Sustained Response)

- ESF 1: Transportation
 - <Stakeholder Organization>
 - <Task>

- <Stakeholder Organization>
 - <Task>
- ESF 2: Communications
 - <Stakeholder Organization>
 - <Task>
 - <Stakeholder Organization>
 - <Task>
- Etc.

Phase 3a (Short-term Recovery)

- ESF 1: Transportation
 - <Stakeholder Organization>
 - <Task>
 - <Stakeholder Organization>
 - <Task>
- ESF 2: Communications
 - <Stakeholder Organization>
 - <Task>
 - <Stakeholder Organization>
 - <Task>
- Etc.

Pre-scripted Mission Assignments

4.0 Administration, Resources, and Funding

5.0 Oversight, Coordinating Instructions, and Communications

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