



Regional Catastrophic Earthquake Mass Care and Sheltering Plan

Annex to the San Francisco Bay Area
Regional Emergency Coordination Plan

August 2011

Prepared by:
California Emergency Management Agency



Cities of Oakland, San Francisco, and San Jose
Counties of Alameda, Contra Costa, Marin, Monterey,
Napa, San Benito, San Mateo, Santa Clara, Santa Cruz,
Solano, and Sonoma



FEMA

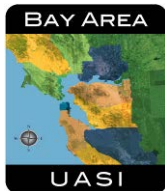
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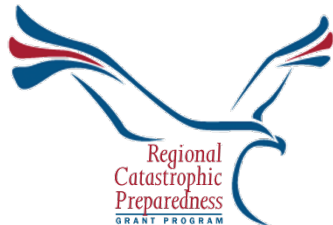
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Prepared for:



Bay Area Urban Area
Security Initiative

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This plan has been prepared for the Bay Area Urban Area Security Initiative Approval Authority (Approval Authority) on behalf of the counties and cities within the 12-county Bay Area region. The plan describes the general strategy for emergency response to an incident with regional impact. The plan has been prepared in accordance with the standards of the National Incident Management System, the California Standardized Emergency Management System, and other Federal and State requirements and standards for emergency response plans applicable as of the date of the plan's preparation.

The plan provides guidance only; it is intended for use in further development of response capabilities, implementation of training and exercises, and defining the general approach to incident response. The actual response to an incident, whether at the regional, county, or city level, is dependent on:

- The specific conditions of the incident, including the incident type, geographic extent, severity, timing, and duration
- The availability of resources for response at the time of the incident
- Decisions of Incident Commanders and political leadership
- Actions taken by neighboring jurisdictions, the State, and the Federal Government

These and other factors may result in unforeseen circumstances, prevent the implementation of plan components, or require actions that are significantly different from those described in the plan. The Approval Authority and its contractors; the counties, cities, and other organizations that have participated in plan development; the State; and the Federal Government are not responsible for circumstances related to the implementation of the plan during an incident.

The plan is not applicable outside the 12-county region that comprises the planning area.

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Foreword

The vulnerability of the San Francisco Bay Area to earthquakes is well known. According to the 2008 Uniform California Earthquake Rupture Forecast,¹ the probability of an **M** 6.7 or greater earthquake in the Bay Area in the next 30 years is 63 percent. An earthquake of this magnitude results in widespread and catastrophic damage.

A catastrophic earthquake in the Bay Area immediately overwhelms local, regional, and State emergency response capabilities. The region needs massive, rapid support from the Federal Government, other local governments in California, other states, and nonprofit and private-sector organizations. The effectiveness of the region's response affects the long-term recovery of the region's communities and economy. An effective response is possible only if comprehensive planning has taken place.

The Federal Government is providing funding under the Regional Catastrophic Preparedness Grant Program (RCPGP) to selected metropolitan areas throughout the United States to plan for catastrophic events. The San Francisco Bay Area is one of the metropolitan areas. The Federal Emergency Management Agency (FEMA) is administering the program. The Bay Area Urban Area Security Initiative (UASI) Program is implementing the RCPGP for 12 counties and two cities² in the Bay Area. The UASI Program used RCPGP funding to prepare plans in seven functional areas: Debris Removal, Donations Management, Interim Housing, Mass Care and Sheltering, Mass Fatality, Mass Transportation/Evacuation and Volunteer Management.

This document, the Regional Catastrophic Earthquake Mass Care and Sheltering Plan, has been prepared under the RCPGP. The document is based on a scenario event—a set of assumptions about a catastrophic earthquake in the Bay Area. Two of the assumptions are that the earthquake occurs on the San Andreas Fault and the magnitude is 7.9. In the 12-county Bay Area region, the scenario earthquake is projected to result in 331,400 people who need shelter.

This document is an annex to the Care and Shelter Subsidiary Plan of the San Francisco Bay Area Regional Emergency Coordination Plan (RECP), which UASI developed in 2008. The Plan is consistent with:

- Applicable local and State plans and requirements
- The San Francisco Bay Area RECP
- The San Francisco Bay Area Earthquake Readiness Response: Concept of Operations Plan, prepared by FEMA

¹ Edward H. Field et al., *The Uniform California Earthquake Rupture Forecast, Version 2 (UCERF 2)*, USGS Open File Report 2007-1437, 2008. Available at http://pubs.usgs.gov/of/2007/1437/of2007-1437_text.pdf.

² Alameda, Contra Costa, Marin, Monterey, Napa, San Benito, San Francisco, San Mateo, Santa Clara, Santa Cruz, Solano, and Sonoma counties and the cities of Oakland and San Jose

The Regional Catastrophic Earthquake Mass Care and Sheltering Plan was developed with the participation of the following:

- Alameda County Sheriff's Office
- American Red Cross Bay Area
- American Red Cross–FEMA Region IX
- American Red Cross Sonoma and Mendocino
- California Emergency Management Agency
- California Department of Social Services
- Collaborating Agencies Responding to Disaster
- Contra Costa County Emergency Medical Services Agency
- Contra Costa County Office of Emergency Services
- FEMA Region IX, Operational Planning
- Marin County Office of Emergency Services
- Monterey County Office of Emergency Services
- City of Oakland Office of Emergency Services
- San Francisco Department of Emergency Services
- San Francisco Human Services Agency
- City of San Jose
- San Jose State University
- City of Santa Clara Fire Department Office of Emergency Services
- Santa Clara County Office of Emergency Services
- Santa Clara County Social Services Agency
- Solano County Animal Care
- Sonoma County Department of Health Services
- Stanford Hospital Office of Service Continuity and Disaster Planning

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Executive Summary

The Regional Catastrophic Earthquake Mass Care and Sheltering Plan (Plan)³ is a scenario-driven, function-specific operations plan for mass care and sheltering in the immediate aftermath of a catastrophic earthquake in the Bay Area. A separate document, the Regional Catastrophic Earthquake Interim Housing Plan, describes the interim housing operations and transition to longer-term recovery that is also needed.

The Plan is an annex to the San Francisco Bay Area Regional Emergency Coordination Plan and is consistent with the San Francisco Bay Area Earthquake Readiness Response, Concept of Operations Plan, prepared by the Federal Emergency Management Agency (FEMA) and California Emergency Management Agency (Cal EMA).

ES-1 Scope

The scope of the Plan includes the following:

- The response to an **M** 7.9 earthquake on the San Andreas Fault.
- The response during the first year after the earthquake.
- Twelve counties in the Bay Area region: Alameda, Contra Costa, Marin, Monterey, Napa, San Benito, San Francisco, San Mateo, Santa Clara, Santa Cruz, Solano, and Sonoma and the cities in them.
- Mass care and sheltering roles and responsibilities, communications, and response operations that are applicable at the regional level.
- People who need care and sheltering, including those with access and functional needs. According to recent State and Federal guidance, emergency shelters are intended to be available and accessible to everyone in affected communities to the extent possible. This goal requires planning for people with a variety of access and functional needs, including those involving Communication, Medical, (Maintaining) Independence, Supervision, and Transportation. These five categories, often referred to as the CMIST needs, include unattended children, people with a wide range of disabilities and medical conditions, some elderly people, people in the criminal justice system, and people stranded without transportation far from a place where they would normally seek shelter or residence.

The scope does not include animal shelters, which is not a responsibility of the Regional Emergency Operations Center (REOC)/State Operations Center (SOC) Care and Shelter Branch. Nor does the scope of this plan include people with medically unstable conditions, an issue that is the responsibility of the Health and Medical Branch of the REOC/SOC. However, information that could be used to expand the scope to include these issues is provided.

³ For simplicity, the abbreviation of the title of this document is "Plan."

ES-2 Catastrophic Nature of the Earthquake

Threats and hazards resulting from the earthquake include structural and nonstructural damage to buildings and infrastructure, fires, subsidence and loss of soil-bearing capacity, landslides, hazardous materials spills and incidents, dam/levee failure resulting in flooding, and civil disorder. Many residential, commercial, and industrial buildings are rendered uninhabitable. The earthquake would affect all regional utilities and transportation networks significantly; large portions of the transportation infrastructure are damaged or destroyed. Utility and water supply damage, even in areas with less extreme structural impacts, would compound the problem of housing people.

The earthquake would result in:

- More than 400,000 displaced households
- More than 300,000 people seeking shelter
- More than 1 million people who need transportation assistance
- 1.8 million households without potable water
- 7,000 fatalities
- 50 million tons of debris

ES-3 Roles and Responsibilities in Mass Care and Sheltering

Providing mass care and sheltering services is the responsibility of many local, regional, State, and Federal agencies in collaboration with a number of nongovernmental organizations (NGOs) and private-sector entities. The responsibilities include assessing the situation; determining priorities for assessing the safety of possible shelter buildings; opening, staffing, and operating the shelters; requesting, receiving, and distributing resources for use at shelters and other centers of mass care; and establishing pickup points with entities that are directly responsible for transporting people in and out of affected areas.

ES-3.1 Local Governments and Operational Areas

Local governments (cities and counties) have the primary responsibility for providing care and sheltering for their residents. These tasks are often led by the departments of social services in each jurisdiction. County or city health and human service agencies, housing authorities, planning departments, and public works departments are also critical. These agencies are supported by the Operational Areas, which provide cross-functional and inter-jurisdictional communications and manage the flow of resource requests to and from Cal EMA.

ES-3.2 Regional and State Agencies

Cal EMA is a State agency that functions at both the regional and State levels. It was established by the California Emergency Services Act and is part of the Standardized Emergency Management System (SEMS). Cal EMA leads the regional-level response even if the REOC designated as its base of operations is

damaged by the earthquake. It also leads the State-level response, which includes managing the SOC and/or sharing the lead role at the State/Federal Joint Field Office (JFO). If activated, a Unified Coordination Group (UCG) establishes a JFO to facilitate the unified operation. When a JFO is established, the SOC transfers operations to that facility where State and FEMA are combined. In general, all Emergency Functions (ESFs) that support federal response and recovery efforts operate from the JFO once it is established. Cal EMA and other State agencies deploy staff to the JFO to ensure effective coordination with federal counterparts as part of the joint state/federal operation.

At the regional level, Cal EMA's responsibilities in mass care and sheltering include:

- Coordinating the regional response to the earthquake, including collection, verification, and evaluation of situation information and, for all resources dispatched through the State, allocating available resources
- Processing information and resource requests between the Operational Areas and between the Operational Areas and the State of California
- Coordinating mutual aid requests for emergency services between operational areas within the region

Cal EMA leads the State-level response by fulfilling these roles and responsibilities:

- Coordinating emergency response activities for care and sheltering whenever Operational Areas in a region activate their Emergency Operation Centers (EOC) in response to an incident
- Coordinating the implementation of Federal response operations in the region
- Facilitating information exchange with the various NGOs involved in response

The California Department of Social Services (CDSS), which is part of the Health and Human Services Agency (HHSA), coordinates State level support for local mass care and sheltering operations. The CDSS:

- Leads the Care and Shelter Branch in the REOC/SOC. The Care and Shelter Branch identifies and invites other agencies and organizations to provide support services and resources and prioritizes requests from the Operational Areas based on need and available resources.
- Provides material and human resources (including specialized resources to support people with access and functional needs) to assistance centers and Operational Areas.
- Coordinates the Functional Assessment Service Team program, which evaluates shelters' capabilities to meet various access and functional needs.

Many other State agencies have roles in mass care and sheltering.

ES-3.3 Federal Agency Responsibilities

The Federal agency with the primary role in mass care and sheltering is FEMA. FEMA is responsible for coordinating the Federal response and for coordinating the financial assistance available to the State and to local governments.

ES-3.4 NGOs

The American Red Cross (ARC) is the primary NGO in mass care and sheltering. The ARC works as a part of the mass care and sheltering system at the local, regional, State, and national government levels. The ARC is also the critical supporting organization to local governments and the Operation Areas in the Care and Shelter Branch of those EOCs. ARC chapters in the affected region open and operate shelters, provide food and other basic provisions, and provide liaisons at Operational Area EOCs. Chapters that are affected directly group to leverage their individual efforts. At the State level, ARC is the leading disaster relief NGO and the primary support agency to CDSS in its regional- or State-level response. The national-level ARC provides resources and staffing and logistical support for the sheltering response.

Other critical NGOs are the national and local Voluntary Organizations Active in Disaster, the Bay Area Coordinated Assistance Network, and the California Resiliency Alliance.

ES-4 Communications and Coordination

The primary issue in this Plan is mass care and sheltering. **Section 4** describes the organization of the incident activation and coordination, the information-sharing systems, and the manner in which the region requests, receives, and coordinates resources from outside. A second issue—creating, integrating, and dispensing public information—is also discussed.

Communications and coordination generally proceed by following the hierarchical processes established via SEMS and the function- or discipline-specific mutual aid systems. The processes used in a catastrophic earthquake are described, including any special or necessary steps that are different from more general processes. Requests for resources are likely to be difficult to fill and may involve direct State and Federal support and interaction more than in a non-catastrophic disaster. The role of the ARC and other entities in the communications systems and response processes is also discussed.

ES-5 Priorities for Response in Mass Care and Sheltering

Three levels of operational goals were developed as part of the planning process:

- Operational priorities
- Objectives
- Tasks

The operational priorities are the most overarching goals. Objectives were developed to organize the tasks undertaken to reach those goals. Tasks are the steps that must be taken by one of the entities with roles and responsibilities in care and sheltering.

Through an iterative process with a number of stakeholders throughout the region, the three levels of response priorities were developed. The tasks, in particular, are a critical addition to this operational plan. The development of tasks provides a link between local field-level operations guides and the higher level and mostly conceptual mass care plans that are currently in place.

Operational priorities, objectives, and tasks are developed for the four phases of response:

- Event (E) to E+72 hours
- E+72 hours to E+14 days
- E+14 days to E+60 days
- E+60 days to E+1 year

These operational priorities, objectives, and tasks are presented in **Section 5** of this Plan. The table for mass care and sheltering operations is in chronological order so that the approximate sequence of operational response steps can be seen and used in achieving an effective response. The objective that each task supports is also included in the table so that the links between the objectives and the priorities above them can be made. The table also lists the entities with primary and secondary responsibilities for performing the various tasks.

The table thus forms a true response timeline for mass care and sheltering. Together with the resources and the operational details provided below, the response timeline is the key product of this plan.

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1 Introduction

The Regional Catastrophic Earthquake Mass Care and Sheltering Plan (Plan)⁴ is a scenario-driven, function-specific operations plan for the 12 counties and 2 core cities of the San Francisco Bay Area region that describes mass care and sheltering operations in the aftermath of a catastrophic earthquake on the San Andreas Fault. The Plan is an earthquake-specific annex to the San Francisco Bay Area Regional Emergency Coordination Plan (RECP). It includes standard elements of the State Emergency Plan (SEP) but focuses on addressing the specific response needs that are generated by the earthquake. A separate document, the Regional Catastrophic Earthquake Interim Housing Plan, describes the operations related to the transition of displaced people from shelters to interim housing.

1.1 Purpose

The purpose of the Plan is to provide a guide for regional operations for the care and sheltering of individuals, including those with access or functional needs,⁵ who have been displaced by a catastrophic earthquake.

The Plan provides primarily operational details for sheltering but also includes some details for other aspects of mass care, including:

- Feeding
- Basic medical care
- Bulk distribution of emergency relief supplies
- Tracking affected populations

1.2 Objectives

The objectives of the Plan are to:

- Project the catastrophic impacts of the earthquake
- Define the planning assumptions
- Identify agencies with roles in mass care and sheltering operations and define the roles
- Describe the resources required for mass care and sheltering operations, and the systems and processes for integrating State and Federal resources into regional and local mass care and sheltering operations
- Identify recommended priorities
- Identify recommended time-based objectives to guide response operations
- Establish a response timeline of tasks for mass care and sheltering operations

⁴ For simplicity, the abbreviation of the title of this document is "Plan."

⁵ Individuals with access and functional needs are individuals who may require assistance to meet their needs in functional areas before, during, and after the scenario event. See **Section 2.3.2** and **Appendix A**.

1.3 Scope

The Plan describes regional mass care and sheltering operations in response to the earthquake.

The term “mass care and sheltering,” as used in this Plan, refers to the provision of temporary shelter for people displaced from their residences. A more general definition of “mass care” includes other services, such as mass feeding sites and provision of bulk food, water, clothes, and other humanitarian supplies that may be provided at places other than shelters.

The following issues related to mass care and sheltering are addressed by the Plan:

- Providing care and sheltering for people who have been displaced by the earthquake
- Mass care support for evacuation points throughout the region
- Providing care and sheltering for people with access and functional needs

The Plan briefly describes the following mass care and sheltering operations:

- Mass feeding
- Addressing the needs of people with critical medical conditions when they present themselves at shelters
- Bulk distribution of supplies and packaged goods to people outside of shelters
- Providing care for pets and service animals when people with companion animals present themselves at shelters
- Moving inmate populations out of correctional facilities that have been damaged by the earthquake

Appendix A contains a glossary of acronyms, abbreviations, and key terms.

1.3.1 Nature and Duration of the Earthquake

The scenario used in the development of this Plan is a moment magnitude (**M**) 7.9 earthquake on the northern segment of the San Andreas Fault. The impacts from the earthquake are catastrophic. Although the shaking from an earthquake and from aftershocks lasts only seconds or minutes, recovery can take several years. See **Section 2.1** for more information about impacts of the earthquake.

As described in the National Response Framework (NRF), a catastrophic event is any natural or human-caused disaster that results in an extraordinary level of casualties, damage, or disruption that severely affects the population, infrastructure, environment, economy, morale, and government functions of the area in question, and potentially the Nation as a whole. The earthquake will have a catastrophic impact on the Bay Area region. A map of the earthquake’s impacts, along with all other maps developed for this Plan, is presented in **Appendix B**.

1.3.2 Geographic Scope

The Plan includes the following 12 counties (see **Appendix B, Map B-1**):

- Alameda County
- Contra Costa County
- Marin County
- Monterey County
- Napa County
- San Benito County
- San Francisco County
- San Mateo County
- Santa Clara County
- Santa Cruz County
- Solano County
- Sonoma County

These counties and the cities in them will be affected directly by damage from the earthquake, regional disruption of critical infrastructure systems, and short- and long-term impacts to the economy. Adjacent counties, such as Mendocino, Sacramento, San Joaquin, and Stanislaus, may be affected directly by damage or indirectly by evacuations and other response actions. An **M 7.9** earthquake will also have significant effects on the rest of California and the Nation as a whole.

1.3.3 Time Frame

The time frame for the Plan begins with the occurrence of the earthquake and ends 1 year after the earthquake. The planning periods (phases) are given in hours and days after the event (E). The Plan does not address preparedness activities that may occur before the earthquake, or the housing or other long-term recovery activities that occur after 1 year.

1.4 Applicability

The Plan is consistent with the regional plans described below.

1.4.1 RECP

As stated above, the Plan is an incident-specific annex to the RECP, prepared by the Bay Area Urban Area Security Initiative (UASI) Program in 2008 and the California Emergency Management Agency (Cal EMA). The Plan is also consistent with the RECP Care and Shelter Subsidiary Plan. This plan will be adopted and maintained by Cal EMA to support the RECP Base and Subsidiary Plans.

The RECP provides an all-hazards framework for collaboration among responsible entities and coordination during disasters that affect the San Francisco Bay Area counties as a region. The RECP defines procedures for regional coordination,

collaboration, decision-making, and resource sharing among emergency response agencies in the Bay Area within the framework of the Standardized Emergency Management System (SEMS).

The RECP Base Plan and Care and Shelter Subsidiary Plan describes the coordinating role of the Regional Emergency Operations Center (REOC) in regional care and shelter operations. As described in **Section 2** of this Plan, the catastrophic nature of the earthquake may disrupt REOC operations. However, Cal EMA will implement alternative measures to maintain the regional function of SEMS to support Operational Area response activities. If activated, a Unified Coordination Group (UCG) will establish a Joint Field Office (JFO) to facilitate the unified operation.

1.4.2 CONPLAN

The Plan is also consistent with the San Francisco Bay Area Earthquake Readiness Response: Concept of Operations Plan (CONPLAN), prepared by the Federal Emergency Management Agency (FEMA) and Cal EMA. The CONPLAN describes the joint State-Federal response to an **M 7.9** earthquake on the San Andreas Fault in the Bay Area and includes annexes describing care and sheltering and temporary housing operations. The CONPLAN describes the establishment of a JFO with a UCG⁶ that will coordinate joint State–Federal operations in support of the response in the Bay Area.

1.5 Authorities, Regulations, Requirements

As an annex to the RECP, the Plan reflects the following:

- California Emergency Services Act (ESA)
- State of California Emergency Plan
- SEMS

Additional authorities, requirements, plans, and guidance documents applicable to this Plan are summarized in **Appendix C**.

1.6 Plan Organization

The Plan comprises a primary text and 8 appendices. The body of the Plan presents the core planning principles and operational elements for mass care and sheltering operations in the response to the earthquake. Because the scope of operations is so broad, the information in the Plan body is intended to be general, with more detailed information provided in the appendices.

⁶ As described in the CONPLAN, the JFO will be located in or adjacent to one of the affected Bay Area counties. The UCG will include the Federal Coordinating Officer, State Coordinating Officer, and other State and Federal senior leaders representing agencies with significant response and recovery roles. These descriptions are consistent with the California Catastrophic Incident Base Plan as well.

The Plan provides lists of resources (human, material, and informational) that are possessed by local governments, Operational Areas, the regional and State levels of Cal EMA, other California agencies and departments, Federal Government agencies and departments, NGOs and other nonprofit entities, and the private sector. The Plan provides information on how these resources are requested and provided in response to a catastrophic earthquake. It also provides information on the expected magnitude of the shortfalls of these resources and how the gaps might be closed.

The topics in the operations sections draw on the rest of the Plan. They synthesize the resources with the communications and coordination systems within it, and they tie each entity's general mission and roles and responsibilities to its specific actions and duties in the catastrophic earthquake. They spell out how the roles, resources, and communications systems are used to perform the necessary response tasks and, in doing so, how they attain the objectives and meet the highest-level operational priorities.

Not intended to be field-level response plans, the operations sections provide important details about the mechanisms through which the tasks are performed by the major and minor players in mass care and sheltering. When options are available, they are described; when conflicts or resource shortfalls are likely, they are illuminated; and any critical interactions between one level of government and another, or between public and private sectors, are prepared for.

Section 1 provides the scope and applicability of the Plan and the authorities, regulations, and requirements that provide the foundation for the operations that are discussed in the Plan.

Section 2 contains a description of the earthquake and its projected impacts, the assumptions underlying the earthquake, and the response to it.

Section 3 contains a description of the roles and responsibilities for coordination among agencies and different levels of SEMS and for management of the response agencies that respond to the earthquake.

Section 4 contains the response coordination system, activation, and communications for agencies responding to the earthquake.

Section 5 contains the priorities for the response, the objectives that support the priorities, the actions and resources necessary to achieve the objectives, and a response timeline for the earthquake.

Section 6 describes how the Plan is maintained, updated, and exercised.

Appendix A is a glossary of acronyms, abbreviations, and specialized terms used throughout the Plan.

Appendix B contains maps displaying information at the regional and county levels for various elements of the Plan.

Appendix C summarizes State and Federal plans, guidance documents, and regulations.

Appendix D presents the Hazards U.S. (HAZUS) earthquake analysis.

Appendix E presents an estimate of shelter demands for people with access and functional needs.

Appendix F identifies State agencies with supporting roles in mass care and sheltering.

Appendix G lists resources provided by Voluntary Organizations Active in Disaster (VOAD) member organizations.

Appendix H lists mass care and sheltering resources.

2 Situation and Assumptions

This section contains a description of the scenario earthquake and its projected impacts, and the general planning and mass care and sheltering assumptions that were used in the development of this Plan.

2.1 Scenario Earthquake

The scenario earthquake is an **M** 7.9 earthquake on the northern segment of the San Andreas Fault. The basis for the scenario is a HAZUS⁷ analysis performed by the Earthquake Engineering Research Institute, with support from the U.S. Geological Survey and Cal EMA, beginning in 2005 and modified in 2009 by URS Corporation for the Regional Catastrophic Preparedness Grant Program (RCPGP). Technical details of the HAZUS model and its specification for this project are presented in **Appendix D**.

The characteristics of the scenario earthquake and its impacts on the region are:

1. The earthquake occurs in January on a weekday at 1400 hours Pacific Standard Time.
2. A foreshock precedes the main shock by 20 to 25 seconds. There is no other warning.
3. The main shock lasts 45 to 60 seconds.
4. The epicenter is just outside the entrance to the San Francisco Bay, west of the Golden Gate Bridge.
5. The earthquake ruptures approximately 300 miles of the northern segment of the San Andreas Fault, from the San Juan Bautista area in the south to Cape Mendocino in the north.
6. Shaking is felt in Oregon to the north, Los Angeles to the south, and Nevada to the east.
7. The estimated magnitude is **M** 7.9 with a Modified Mercalli (MM) intensity of VIII (severe shaking/moderate to heavy damage) to IX (violent shaking/heavy damage) in widespread areas of the most severely affected counties. Pockets in the affected counties experience instrument intensity of MM X (extreme shaking/very heavy damage), particularly areas immediately adjacent to the fault and areas where liquefaction is likely to occur. The shaking intensity and areas where liquefaction is likely to occur are shown in **Appendix B, Maps B-2 and B-3**, respectively.

⁷ HAZUS is a loss-estimation software program developed by the National Institute of Building Sciences (NIBS) for FEMA. The version used for this analysis (HAZUS-MH MR3) was developed by NIBS in 2003. See **Appendix D** for more detail.

8. Ground shaking and damage occurs in 19 California counties, from Monterey County in the south to Humboldt County in the north and into the San Joaquin Valley.
9. Damage is catastrophic in the areas that experience shaking intensities of MM IX and X and high or very high levels of susceptibility for liquefaction, which are the areas adjacent to the fault in Marin, San Francisco, San Mateo, Santa Clara, Santa Cruz, and Sonoma counties. **Appendix B, Map B-4**, illustrates one aspect of these effects by showing the locations of completely or extensively damaged buildings.
10. Counties along the fault outside the Bay Area, such as Mendocino, may sustain damage and require response.
11. Central Valley counties such as Sacramento and San Joaquin may be affected immediately by evacuations and other response actions.
12. The rest of California and the Nation are affected significantly by the need to respond; the deaths, injuries, and relocations of the Bay Area residents; economic disruption; and media attention.
13. Threats and hazards resulting from shaking, surface fault rupture, and liquefaction include:
 - Structural and nonstructural damage to buildings and infrastructure, including widespread collapse of buildings
 - Widespread fires
 - Subsidence and loss of soil-bearing capacity, particularly in areas of liquefaction
 - Displacement along the San Andreas Fault
 - Widespread landslides
 - Hazardous materials spills and incidents
 - Dam/levee failure resulting in flooding
 - Civil disorder
14. Threats and hazards resulting from the main shock are aggravated or recur during aftershocks, which continue for months after the main shock.
15. The earthquake does not generate a tsunami or seiche, despite its magnitude.
16. Potable water supply systems suffer major damage because of the following:
 - Extensive damage to pipelines from ground deformation
 - Interruption of pumps and treatment due to power outages
 - Damage to treatment facilities, storage facilities, and distribution infrastructure
 - Contamination of potable water systems because of damaged lines

The number of households without potable water is provided in **Table 2-1**,⁸ based on the estimated damage to potable water pipelines and facilities, and derived using HAZUS.

17. The earthquake results in massive power outages, and auxiliary power systems and generators are not sufficient to meet critical needs. The number of households without electricity is provided in **Table 2-2**, based on the estimated damage to electrical facilities, substations, and distribution circuits.

Table 2-1. Number of households without potable water after the scenario earthquake.

County	Total Households	Households without Potable Water Post-Earthquake			
		E+24 Hours	E+72 Hours	E+7 Days	E+30 Days
Alameda	564,200	465,000	459,800	448,200	341,800
Contra Costa	384,600	105,700	85,700	45,600	N/A
Marin	105,300	56,300	48,600	29,300	N/A
Monterey	130,300	N/A	N/A	N/A	N/A
Napa	50,300	3,900	<100	0	0
San Benito	17,300	N/A	N/A	N/A	N/A
San Francisco	358,900	340,100	336,400	326,100	N/A
San Mateo	268,000	236,900	234,300	228,100	149,700
Santa Clara	624,700	516,800	512,300	502,700	423,100
Santa Cruz	95,800	16,100	6,500	<100	<100
Solano	140,900	12,500	3,700	<100	<100
Sonoma	182,900	87,800	81,900	69,100	<100
Total	2,923,200	1,841,100	1,769,200	1,649,400	914,900

Source: HAZUS analysis conducted by URS in 2009. The estimates were adjusted, by county, for population increases since 2000.

E = scenario event

N/A = Not available (HAZUS results are unreliable)

⁸ Numbers are rounded to the nearest hundred in all tables in this Plan.

Table 2-2. Number of households without electricity after the scenario earthquake.

County	Total Households	Households without Electricity Post-Earthquake			
		E+24 Hours	E+72 Hours	E+7 Days	E+30 Days
Alameda	564,200	23,600	13,700	5,400	1,200
Contra Costa	384,600	15,400	9,300	3,700	800
Marin	105,300	3,700	2,400	1,100	200
Monterey	130,300	N/A	N/A	N/A	N/A
Napa	50,300	2,000	1,200	500	100
San Benito	17,300	N/A	N/A	N/A	N/A
San Francisco	358,900	253,900	161,300	73,100	18,300
San Mateo	268,000	100,100	62,800	27,900	6,800
Santa Clara	624,700	57,100	34,300	14,400	3,400
Santa Cruz	95,800	15,500	9,600	3,900	800
Solano	140,900	5,600	3,200	1,400	300
Sonoma	182,900	60,000	40,400	19,700	5,000
Total	2,923,200	492,200	308,400	139,000	34,300

Source: HAZUS analysis conducted by URS in 2009. The estimates are adjusted, by county, for population increase since the year 2000. For Contra Costa, Napa, and Solano counties, the power loss is not accurately represented in HAZUS and is an average of losses for Alameda and Marin counties. HAZUS does not provide reliable results for Monterey and San Benito counties, but it can be assumed that there will be some power loss in these counties.

E = scenario event

N/A = Not available (HAZUS results are unreliable)

2.2 General Planning Assumptions

The general planning assumptions that will drive the mass care and sheltering response are:

1. Within 24 hours:

- Local governments proclaim a Local Emergency. The Governor of California proclaims a State of Emergency and requests that the President declare a disaster.
- The President declares a Major Disaster, making Federal assistance available under the Robert T. Stafford Disaster Relief and Emergency Assistance Act of 1988.
- The U.S. Department of Homeland Security and FEMA implement the Catastrophic Incident Supplement to the NRF and begin mobilizing Federal resources.

2. Because of extensive damage to building and transportation infrastructure in Oakland, the REOC in Oakland may not be functional. The REOC function within SEMS will persist but may operate at an alternate location, such as:
 - A REOC outside the region
 - The State Operations Center (SOC)
 - The JFO, once it is established, as part of the Cal EMA and FEMA UCG⁹
 - The SOC function is also active and operates out of the SOC or the JFO.
3. On a statewide basis, all elements of SEMS are functional, including communications and mutual aid systems. Cal EMA notifies the Operational Areas of the appropriate channels for communication with the regional function, once it has been established.
4. The response capabilities and resources of the local governments and the State in the region are quickly overwhelmed or exhausted.
5. A detailed and credible common operating picture cannot be achieved for 24 to 48 hours (or longer) after the disaster. As a result, response activities begin without the benefit of detailed and complete situational or critical needs assessments (except as available from scenario-based pre-disaster impact modeling).
6. First responders, providers of recovery services, and other critical response personnel are personally affected by the disaster and may be unable to report to their posts for days because of the damaged transportation infrastructure. First responders who are on duty may be held over for additional shift coverage.
7. Once the President declares a disaster and commits Federal resources, the State and Federal governments establish joint operations to provide assistance to local jurisdictions.
8. Massive assistance in the form of response teams, equipment, materials, and unsolicited volunteers begins to flow toward the region, providing urgently needed resources but creating coordination and logistical support challenges.
9. Because of damage to the transportation infrastructure, out-of-region mutual aid, State and Federal resources, and resources from other states cannot begin to arrive inside the worst impacted area for up to 72 hours.
10. Depending on location, some Operational Area Emergency Operations Centers (EOCs) experience significant damage, but others are partly or wholly operational.

2.3 Mass Care and Sheltering Assumptions

The following discussion outlines the mass care and sheltering assumptions associated with the scenario earthquake. The assumptions of damage, affected

⁹ According to the California Catastrophic Incident Plan, this joint Federal–State function is a critical part of responding to a disaster of this scale.

households, and displaced people are primarily from HAZUS but are supplemented with other available information.

2.3.1 General Demographic Information

The current population of the 12 Bay Area counties, as well as the cities of Oakland and San Jose, is shown in **Table 2-3**.

The approximate number of visitors to the Bay Area on a daily basis is shown in **Table 2-4**. Available tourism figures for Monterey and San Francisco counties were used to estimate daily visitor totals for the other counties in the Bay Area.

Of the general population, the number of people who do not speak English, or for whom English is a second language, is listed by county/city in **Table 2-5**.

The estimated number of homeless people in each county/city is provided in **Table 2-6**.

Table 2-3. Population in the region, by county and for Oakland and San Jose.

County/City	Population
Alameda	1,556,500
Contra Costa	1,060,400
Marin	258,600
Monterey	431,900
Napa	137,600
San Benito	58,000
San Francisco	845,600
San Mateo	745,800
Santa Clara	1,857,600
Santa Cruz	268,600
Solano	426,300
Sonoma	486,600
Regional Total	8,133,500
Oakland	425,000
San Jose	1,006,700

Source: 2000 U.S. Census, updated to 2009 figures using California Department of Finance data

Table 2-4. Estimated daily visitors to the region, by county.

County	Daily Visitors
Alameda	24,900
Contra Costa	17,000
Marin	4,200
Monterey	15,000
Napa	2,300
San Benito	1,000
San Francisco	75,000
San Mateo	11,900
Santa Clara	42,500
Santa Cruz	7,500
Solano	7,800
Sonoma	6,900
Total	216,000

Source: URS analysis in 2009 using visitor information provided by HVS Lodging Services and Monterey County Convention and Visitors Bureau

Table 2-5. Limited or non-English speakers in region, by county and for Oakland and San Jose.

County/City	Limited or Non-English Speakers
Alameda	256,400
Contra Costa	113,100
Marin	20,700
Monterey	106,700
Napa	17,100
San Benito	9,400
San Francisco	202,900
San Mateo	129,100
Santa Clara	379,000
Santa Cruz	36,200
Solano	39,100
Sonoma	44,100
Regional Total	1,353,800
Oakland	88,000
San Jose	249,800

Source: 2000 U.S. Census, updated to 2009 figures using California Department of Finance data

Table 2-6. Number of homeless people in region, by county and for Oakland and San Jose.

County/City	Homeless
Alameda	5,100
Contra Costa	4,200
Marin	1,800
Monterey	1,400
Napa	300
San Benito	N/A
San Francisco	6,400
San Mateo	1,800
Santa Clara	7,200
Santa Cruz	2,800
Solano	2,000
Sonoma	3,300
Regional Total	36,300
Oakland	2,800
San Jose	4,200

Source: County surveys, 2007–2009
N/A = Not available

2.3.2 Access and Functional Needs Populations

The State of California has embraced the model of general shelters for all residents except those with extremely fragile medical conditions. This implies that separate shelters are not designated for those with access and functional needs. In fact, given the no-notice nature of this disaster, people tend to go to the nearest shelter regardless of their needs. Therefore, all shelters must be prepared to receive all disaster victims that arrive. Individuals with access and functional needs may require assistance in one or more of the functional areas described below.

The State of California and the Federal Government describe five types of access and functional needs: Communication, Medical, (Maintaining) Independence, Supervision, and Transportation. These are often referred to as the CMIST categories. Access and functional needs populations¹⁰ are those whose members may have difficulty meeting these needs before, during, and after the scenario earthquake. The functional areas include, but are not limited to, the following:

¹⁰ As described in FEMA Comprehensive Preparedness Guide 301: Special Needs Planning.

- **Communication.** Individuals who have limitations that interfere with the receipt of and response to information need that information provided in ways they can understand and use. They may not be able to hear verbal announcements, see directional signs, or understand how to get assistance due to hearing, vision, speech, cognitive or intellectual limitations, and/or limited English proficiency.
- **Medical.**¹¹ Individuals who are not self-sufficient or who do not have adequate support from caregivers, family, or friends may need assistance with managing unstable, terminal, or contagious conditions that require observation and ongoing treatment; managing intravenous therapy, tube feeding, and vital signs; receiving dialysis, oxygen, or suction administration; managing wounds; or operating power-dependent equipment to sustain life. These individuals require the support of trained medical professionals.
- **(Maintaining) Independence.** Individuals who require support to be independent in daily activities may lose this support during an emergency or a disaster. Such support may include consumable medical supplies (diapers, formula, bandages, and other supplies), durable medical equipment (wheelchairs, walkers, or scooters), service animals, and attendants or caregivers. Supplying needed support to these individuals enables them to maintain their pre-disaster level of independence.
- **Supervision.** Individuals may lose the support of caregivers, family, or friends, or may be unable to cope in a new environment (particularly if they have dementia, Alzheimer's, or a psychiatric condition, such as schizophrenia or intense anxiety). If separated from their caregivers, as they would be during the disaster, young and school-age children may be unable to identify themselves and, when in danger, they may lack the cognitive ability to assess the situation and react appropriately.
- **Transportation.** Individuals who cannot drive or who do not have a vehicle—including children at school when the earthquake occurs—may require transportation support for successful evacuation. This support may include accessible vehicles (such as lift-equipped vehicles or those suitable for transporting individuals who use oxygen) or information about how and where to access mass transportation during an evacuation.

The estimated numbers of people with access and functional needs who are expected to seek shelter after the earthquake are listed by subgroup, age, and county in **Table 2-7**. The subgroups are from U.S. census data. A full description of the methods used to develop these estimates is presented in **Appendix E**.

An estimated 1,416,000 children are in school at the time of the earthquake. **Table 2-8** is a breakdown by county and for Oakland and San Jose.

¹¹ The RCPGP Mass Care and Sheltering Plan does not include a component for analysis of medical sheltering. However, if counties and cities have plans for medical sheltering in place, those elements will be incorporated into the city and county mass care and shelter plans.

2.3.3 General Shelter Demand

An estimated 331,400 people in the 12-county Bay Area region are projected to seek shelter after the earthquake. This includes residents as well as the homeless and visitors or tourists in the region. The HAZUS projections for displaced residents as well as people without homes in the area (including the homeless and visitors) are listed in **Tables 2-9** and **2-10**, respectively.

Locally, risk factors such as high densities of mobile homes or soft-story structures, concentrations of retirement homes, or communities made up largely of non-English-speaking immigrants modify the regional totals. Local- and county-specific variations are dealt with more thoroughly in county and city mass care and sheltering plans.

The total shelter demand includes commuters who live in one of the 12 counties covered in the Plan and who commute to work in their own county or to a county in the 12-county region. Commuters do not change the total shelter demand, although they may need transportation assistance to a shelter in their county of residence. Commuters who do not live in the 12-county region but commute to work in the region are not included, but the number of these commuters is comparatively small.

2.3.4 Shelter Capacity and Shortfall

The assumptions and definitions relevant to regional shelter space capacity and shortfall are provided below.

- Most counties in the Bay Area region rely on shelters managed by the American Red Cross (ARC) to meet the needs of displaced residents. Although the ARC is the lead partner for providing disaster shelter, it works in collaboration with a network of government agencies, nongovernmental organizations (NGOs), community-based organizations (CBOs), and faith-based organizations (FBOs) to provide for the care and sheltering needs of communities affected by disaster.
- For this Plan, county representatives have designated primary shelters that may be the first to be opened by the ARC after the earthquake (see **Section 2.3.6**). Primary shelters were selected using various criteria, including the facility/location size, proximity to major roads, wheelchair accessibility, and expected functionality after the earthquake, based on staffing and resource availability.
- It is also likely that many spontaneous shelters are established by families, neighbors, NGOs, CBOs, and FBOs to provide shelter for those in need. However, the potential shelter space capacity offered through spontaneous sheltering cannot be measured before the earthquake and was therefore not factored into this Plan.
- As shown in **Table 2-10**, approximately 331,400 people seek shelter across the 12 Bay Area counties. Existing shelter capacity in the Bay Area, based on

data from the National Shelter System (NSS),¹² is provided in **Table 2-11**. The spatial distribution of these people is also represented in **Appendix B, Map B-5**, which displays numbers of people seeking shelter by census tract.

- The NSS assumes a pre-disaster shelter space capacity of 250,700 people in the 12 counties (see **Table 2-11**). This means that even if all NSS shelters are available after the earthquake, the regional disaster shelter space capacity shortfall is 80,700. However, not all shelters are available after the San Andreas Fault earthquake scenario described in this Plan because of damage either to the structures themselves or to the transportation infrastructure needed to move staff and supplies to shelter sites. This projected lack of facilities increases the potential shelter space capacity shortfall.
- The NSS describes each location in the database in terms of “disaster shelter capacity.” Sheltering space capacity in this Plan is measured using the disaster shelter designation, which requires a minimum of 40 square feet per person. This per-person figure is necessary to maintain the physical and mental health, safety, and security of shelter clients and staff.
- Large numbers of homes, hospitals, and small nursing facilities with medically unstable people are damaged. General population shelters see a large number of medically unstable people and lack staff and equipment to care for them. General population shelters initially have no place to send them because medical shelter capabilities are limited and take time to set up.
- Given the projected shelter space shortfalls, it is expected that shelters are initially overcrowded and that some sites have to be closed to new registrants in order to maintain safe and sanitary conditions.
- Establishment of shelters is expected to evolve over the course of the disaster response. As noted above, the NSS definition of “shelter capacity” is based solely on space. Availability of equipment and staff to support shelters is not included in the NSS calculation of capacity. While shelters may be established immediately following the earthquake, it is expected that supplies and services available at shelter sites may be initially lacking due to earthquake-related impacts. However, it is anticipated that as the response evolves, resources such as qualified staff, equipment, space, and provisions become more available, increasing the ability to effectively serve those in need of shelter.
- Of those shelters that are available, only some are fully accessible and/or able to meet the access and functional needs of a community’s population. Full shelter system accessibility and the ability to adequately support people with access and functional needs in shelters also expands over time as the response evolves and infrastructure and resources become available.¹³

¹² The NSS databases are managed by ARC and FEMA. Though the NSS does not include every shelter pre-designated by governments or ARC, it is the most comprehensive database of shelters in the region.

¹³ Preparedness planning is not a part of this Plan, but resources are available that could enable Operational Areas, ARC chapters, and other mass care and sheltering organizations improve the accuracy of estimates of demand for accessible shelters. For example, the City of San Jose/Santa Clara County has developed an assessment tool to survey accessibility of shelter sites.

Table 2-7. Number of people with access and functional needs in the region expected to seek shelter after the scenario earthquake, by county and for Oakland and San Jose.

Access/Functional Need Subgroup	Age in years	COUNTY												CITY ³		
		Alameda	Contra Costa	Marin	Monterey	Napa	San Benito	San Francisco	San Mateo	Santa Clara	Santa Cruz	Solano	Sonoma	Regional Total	Oakland	San Jose
Sensory disability	All	1,800	400	100	100	100	<100	2,100	600	1,500	100	100	300	7,200	900	900
Physical/mental/ self-care disability	5 to 15	500	100	<100	<100	<100	<100	300	200	400	20	<100	100	1,700	200	300
	16 to 64	4,600	800	300	200	200	<100	4,700	1,200	3,100	200	200	700	16,100	2,700	2,200
	>65	3,500	700	200	100	200	<100	4,900	1,200	2,700	100	100	500	14,200	1,900	1,600
Employment disability	16 to 64	5,500	900	300	200	200	<100	5,700	1,900	5,000	200	200	700	20,800	2,900	3,700
Go-outside-home disability ¹	16 to 64	3,300	500	200	100	100	<100	3,500	1,100	3,000	100	100	300	12,300	1,900	2,400
	>65	1,500	300	100	<100	100	<100	2,100	600	1,200	100	100	200	6,200	800	700
Inter-county commuters ²	—	8,900	1,000	800	<100	300	<100	20,900	5,000	7,300	100	100	200	44,600	N/A	N/A
Households without vehicle	—	2,100	200	100	100	100	<100	7,300	500	1,000	100	100	200	11,600	1,700	600

Source: URS analysis of U.S. census data, California Health Interview Survey, and data from the California Department of Finance and local chambers of commerce (2009); results rounded to the nearest hundred.

— = Not applicable

N/A = Not available

¹ Person who needs support outside the home.

² Commuters in a county jurisdiction on a typical day but who reside in a different county and thus need transportation.

³ Estimates for Oakland and San Jose are included in the regional totals for Alameda County and Santa Clara County, respectively.

Table 2-8. Estimated number of children (5 to 17 years old) in school at the time of the scenario earthquake, by county and for Oakland and San Jose.

County/City	Children in School at Time of Earthquake
Alameda	276,200
Contra Costa	207,500
Marin	38,500
Monterey	89,000
Napa	24,800
San Benito	13,600
San Francisco	88,400
San Mateo	123,100
Santa Clara	327,900
Santa Cruz	47,500
Solano	89,800
Sonoma	89,700
Regional totals	1,416,000
Oakland	76,000
San Jose	188,800
City totals	264,800

Source: U.S. census 2000 data, adjusted to 2009

Table 2-9. Estimated number of homeless people in the region and estimated number of visitors to region who seek shelter.

Homeless/ Visitor	Total	Seeking Shelter	
		Percentage	Number
Homeless	36,300	80%	28,900
Visitors	216,000	20%	42,400
Total			71,300

Source: HAZUS analysis conducted by URS (2009) and county sources (2007 to 2009)

Table 2-10. Estimated number of displaced people who seek shelter, by county and for Oakland and San Jose.

County/City	2009 Population	Displaced Households	Displaced People ¹	Seeking Shelter
Alameda	1,556,500	95,400	257,600	67,300
Contra Costa	1,060,400	17,500	47,200	12,800
Marin	258,600	8,000	21,600	4,900
Monterey	431,900	2,300	6,300	2,300
Napa	137,600	3,500	9,300	2,400
San Benito	58,000	300	900	300
San Francisco	845,600	116,800	315,300	64,500
San Mateo	745,900	41,700	112,600	26,000
Santa Clara	1,857,600	97,300	262,600	64,700
Santa Cruz	268,600	3,600	9,800	2,900
Solano	426,300	3,400	9,200	2,600
Sonoma	486,600	14,500	39,200	9,400
Regional totals	8,133,600	404,300	1,091,600	260,100
Homeless/Visitors (see Tables 2-6 and 2-9)				71,300
Regional Total Seeking Shelter				331,400
Oakland	425,000	36,100	97,500	29,000
San Jose	1,006,700	52,900	142,800	39,900
City totals	1,431,700	99,000	329,300	69,900

Source: HAZUS analysis conducted by URS (2009) and county sources (2007 to 2009)

¹ Number of displaced people based on 1 household = 2.7 people
HAZUS = Hazards U.S.

Table 2-11. Pre-earthquake shelter space capacity in the region, by county.

Counties	Number of Shelter Sites	Shelter Capacity
Alameda	242	37,100
Contra Costa	162	13,500
Marin	128	13,900
Monterey	129	15,300
Napa	22	4,100
San Benito	8	300
San Francisco	82	33,000
San Mateo	181	27,100
Santa Clara	172	33,200
Santa Cruz	76	29,200
Solano	59	12,400
Sonoma	139	31,600
Regional totals	1,400	250,700

Source: National Shelter System database

2.3.5 Pickup Points

Shelter space capacity is insufficient to meet the needs of people in the most damaged counties immediately after the earthquake. The Regional Catastrophic Earthquake Mass Transportation/Evacuation Plan includes a description of the process of establishing locations in damaged areas where people who are not able to find shelter can gather to be transported to less damaged areas of the region. The potential sites selected for departure and arrival are called “pickup points.” The evacuation pickup points were selected because they are close to areas where large numbers of people are expected to need transportation and along transportation routes that are prioritized for debris clearance. The criteria used to select evacuation pickup points and transportation routes are described and maps of the sites are provided in the Regional Catastrophic Earthquake Mass Transportation/Evacuation Plan.

The Regional Catastrophic Earthquake Mass Transportation/Evacuation Plan includes an estimate of the number of people who transit through pickup points. That Plan also designates local governments as the lead entities for operations at pickup points, although the California National Guard plays an important support role. The number of evacuees exceeds the number of people seeking shelter in the counties because it includes people who want to move out of the region after the earthquake as well as people for whom there is insufficient space at the shelter. Evacuees may include visitors or those who have alternative housing arrangements (including family, friends, hotels, or rental units) outside of the region.

Pickup points are established and run by local government. Because evacuees may have to wait as long as 24 hours at the evacuation pickup points, the Care and Shelter Branch of the local EOC may also be tasked to provide mass care support at pickup points. The Care and Shelter Branch coordinates provision of mass care support with the Transportation Branch or Unit of the EOC that is responsible for designating and managing evacuation points.

Operational Area and local government personnel at pickup points assist those with access and functional needs. Examples of individuals with needs relevant to this topic include unaccompanied minors and people who cannot hear or who have mobility disabilities. The Operational Area and local government also provide medical personnel at evacuation pickup points to assess medical needs of evacuees and arrange separate medical support for those who cannot be transported safely in vehicles used by the general population. Planning for medical care of evacuees is beyond the scope of this Plan.

2.3.6 Impact of Damage on Shelter Space Capacity

Table 2-12 is a list of the estimated county and regional post-disaster capacities of facilities that county representatives have designated for this Plan as primary shelters that may be opened after the earthquake. They were designated using a number of criteria, including their size, proximity to major roads, accessibility, and

Table 2-12. Estimated pre- and post-earthquake capacities (in number of spaces for sleeping) of NSS-designated primary shelters in the region by county.

County	Number of Shelter Spaces ¹		Percent Post-Earthquake
	Pre-Earthquake	Post-Earthquake	
Alameda	18,700	4,100	21.9%
Contra Costa	3,100	2,600	83.9%
Marin	5,900	400	6.8%
Monterey	10,300	5,300	51.5%
Napa	2,100	600	28.6%
San Benito	100	0	0.0%
San Francisco	30,700	0	0.0%
San Mateo	15,200	0	0.0%
Santa Clara	25,000	800	3.2%
Santa Cruz	23,600	0	0.0%
Solano	7,800	5,400	69.2%
Sonoma	24,000	0	0.0%
Regional total	166,500	19,200	11.5%

Source: National Shelter System database (2008) and HAZUS analysis (2009)

¹ Shelter space = 40 square feet per person

expected functionality after the earthquake, based on staffing and resource availability. Most of the primary shelters are school facilities. All of these shelters appear in the NSS database, but they are a subset of the total potential shelter capacity in the region. If one or more of these shelters are not available after a disaster, others are opened instead, as resources allow.¹⁴

In the immediate aftermath, the regional space capacity is projected to be initially limited to approximately 11 percent of the pre-earthquake space capacity. Using this formula and the totals in **Table 2-12**, if the number of people seeking shelter is 331,400, the estimated total regional shortfall is 312,200. Space capacity gradually increases as facilities are assessed, cleaned, and/or repaired.

The analysis of shelter space shortfall is limited to the initial availability of the structures. **Figure 2-1** is based on an analysis of recovery time of school-based shelters in the four most heavily affected counties (Alameda, San Francisco, San Mateo, and Santa Clara), as projected by HAZUS. The results assume that the recovery after the earthquake is the same as the recovery after a more

¹⁴ Damage results for school-based shelters were derived by removing from the NSS database school facilities that HAZUS projects to be less than 50 percent likely to be functional at E+24 hours. This assumes that a building that is not functional as a school because of damage will not be functional as a shelter. Projected damage to the non-school-based shelters is derived by removing any facility with an estimated ground-shaking intensity of 6 or greater from the list of expected available shelters.

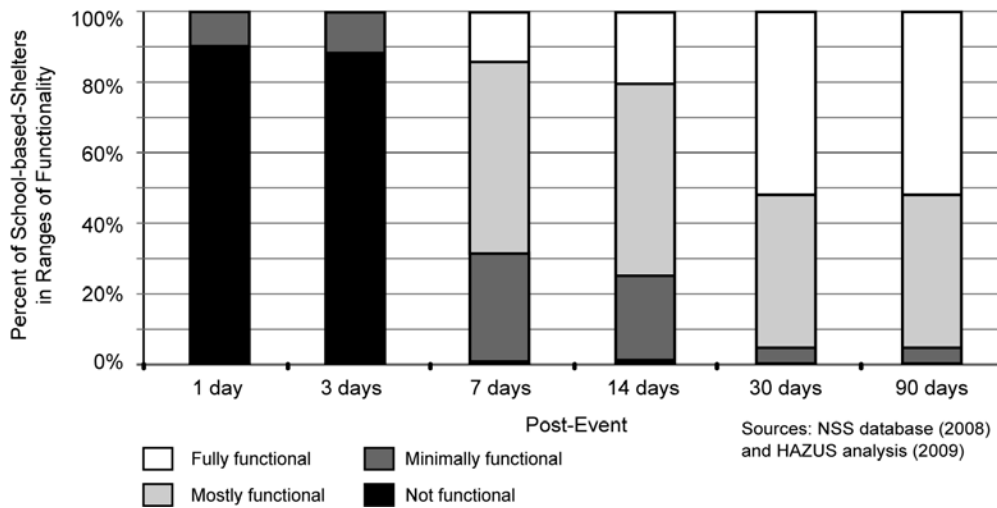


Figure 2-1. Estimated functionality of school-based shelters from E+24 hours to E+90 days in the four most heavily affected counties (Alameda, San Francisco, San Mateo, and Santa Clara).

localized earthquake; this assumption is optimistic. With the magnitude and geographic scope of the earthquake, the unavailability of the school-based shelters from E+24 hours to E+72 hours is likely to persist for several weeks.

Other relevant caveats are:

1. In these four counties, the majority of schools designated as shelters are not likely to be functional as schools until E+7 days. Even if a school is determined to be functional soon after the earthquake, a school district may not be ready to reopen the building as a school. Thus, the site may be available for shelter operations.
2. The presence of students in school facilities at the time of the earthquake may prevent those facilities from being used as shelters until students return home or are otherwise relocated.
3. Shelters in school facilities close or relocate when the local community decides to resume school operations.
4. The availability of qualified structural inspection personnel to certify the safety of potential facilities is limited.
5. Many facilities designated as shelters lack backup power generators, making their accessibility to the transportation network important.

In general, the shelter shortfall is expected to be quite severe for the first week or two following the earthquake. Thus, shelters beyond the immediately and directly affected counties are needed, and the evacuation of residents from affected communities to beyond the region is initiated. Even if no other large disasters occur simultaneously (e.g., conflagration), the NSS database does not include sufficient

shelter space capacity to meet the anticipated needs of the population requiring it following the earthquake:

- Total number of NSS shelter sites = 733
- Shelter space capacity = 89,902
- Shelter demand = 331,400

2.3.7 Spontaneous Shelters

Large numbers of affected residents choose not to sleep at shelters and prefer to stay near their residences in vehicles, in tents, or at other temporary shelters; however, many seek food, supplies, or other services at shelters.

Spontaneous shelters, which are not pre-designated or known by local government, open in communities within hours of the earthquake. CBOs and FBOs initially manage many of these spontaneous shelters.

Spontaneous or unplanned shelters are not likely to be properly supported for several days after the earthquake and need outside resources. Spontaneous shelters are a local government issue. Local governments decide whether to support spontaneous shelters—by bringing them into the shelter network by providing information and resources—or to consolidate the spontaneous shelters with government-sanctioned shelters, including those operated by the ARC.

2.3.8 Mega-Shelters

Mega-shelters (facilities with populations greater than 1,000)¹⁵ may open in the first week after the earthquake to shelter large numbers of people seeking short-term shelter (up to E+14 days). Most local plans do not cover the specifics of mega-shelters, but possible sites include stadiums, convention centers, military bases, and the like. In the less damaged areas, these shelters could begin to close and return to other uses within E+14 days to speed community recovery. However, in the hardest-hit areas, these shelters could take much longer to close. The large open spaces surrounding mega-shelters may also be used for other activities such as staging of supplies and commodities, or distribution of bulk goods. These operations may continue beyond E+14 days even when shelter operations demobilize. Although possible mega-shelters may be pre-designated in some counties, in other counties, no plans or agreements to guide the opening and operations of these facilities may exist.

Planning to support locally established mega-shelters is an issue for local governments. Mega-shelters are complex facilities that require multi-agency management and support structures. If a local government has designated locations to be used as mega-shelters, the local mass care and sheltering plan should include descriptions of their capacities, the lead management agency for that site, the

¹⁵ This threshold was used in the UASI Guide for Shelter Operations after a Disaster, which was developed with the support of the ARC, the California Department of Social Services, and local county stakeholders.

resources and staff needed to run them, and the timelines for their activation and operation.

2.3.9 Shelter Shortfall, Delayed Shelter Surge, and Population Trends

Initially, shelter demand may be limited somewhat by the choices of many displaced residents to sleep near their properties in vehicles, tents, or other temporary structures or in nearby spontaneous shelters. However, with the projected length of time for restoration of power and water systems and the emotional impact of ongoing aftershocks, many of these people choose to relocate to an existing shelter, to self-evacuate, or to receive assistance in being evacuated after their own resources are depleted.

Aftershocks and other secondary effects of the earthquake cause additional damage, and the red-tagging of residential buildings through the ongoing building inspection process increases shelter populations over time. Because of this damage, and because shelter supplies from beyond the affected county or the region may not be able to reach damaged areas until several days after the earthquake, major shortfalls of shelter capacities in the region are expected.

The water system is not repaired in the most affected counties until weeks after the earthquake. People whose homes suffered little or no damage may initially choose to stay in their homes until power and water are restored. With a projected delay in utilities restoration, affected residents are expected to leave their homes for alternative shelter. This exacerbates the shortfall.

Some people may choose to go to established shelters; others may need transportation assistance to evacuate the area, if the transportation infrastructure remains limited. People seeking shelter but who cannot find available space in their immediate communities need to be evacuated. The Regional Catastrophic Earthquake Mass Transportation/Evacuation Plan describes the expected need for evacuation and the operational details of how evacuation occurs throughout the region.

Local governments and local ARC chapters first direct their immediately available resources to supporting primary shelters. In the weeks after the earthquake, additional shelters listed in the NSS are inspected and cleared for occupancy, and transportation routes are opened to provide access to additional shelters.

Beginning about a week after the earthquake, a second surge of residents seeking shelter creates a further a shortfall of shelter resources, while the mass care and sheltering response is close to operating at full capacity. Shelter demand peaks sometime around E+14 days.

2.3.10 Household Pets and Service Animals Needing Shelter

Animal care is beyond the scope of this Plan. However as first steps for animal-specific planning, this Plan offers assumptions and analysis regarding the number of

household pets that may need shelter. The estimated number of household pets requiring shelter is shown in **Table 2-13**.

Table 2-13. Estimated number of displaced household pets in the region expected to need shelter.

Assumption	Households	Animals
Number of displaced households	404,300	N/A
60% of households have animals	N/A	242,600
50% of households with animals have two or more animals	N/A	121,300
Total displaced animals	N/A	363,900
Displaced animals brought to shelters or evacuated with owners (estimated 60% of total displaced animals)	N/A	218,300

Source: CONPLAN with data updated to 2009.
N/A = Not applicable

In compliance with local and State health regulations, ARC-managed shelters allow service and support animals to accompany shelter residents. Although sheltering of pets and other companion animals is outside of ARC's mission, the ARC can coordinate with Operational Areas, local governments, CBOs, and other nonprofits to help support animal shelters as needed.

The NSS does not currently account for a location's capability to shelter pets onsite; this criterion will be included in future iterations of the NSS. Service and emotional support animals are not considered pets and are exempt from restrictions regarding facility and transportation access.¹⁶

2.3.11 Other Shelter Needs

Other shelter needs resulting from the impacts of the earthquake are:

- Determination of who needs shelter services and the location of these people
- Provision for the basic medical support requirements of the general shelter population, including contagious disease monitoring and control, providing access to prescription medications, the provision of first aid, and monitoring of people with chronic health conditions
- Identification of people who are considered medically fragile and those with access and functional needs

¹⁶ See **Appendix A** for a definition of emotional support animal and the implication of the distinction.

- Evaluation of residents in shelters, once established, by local health or social service departments, Functional Assessment Service Teams (FAST),¹⁷ or other groups to understand and address these needs
- Further evaluation of shelter residents to identify any special safety or security considerations (e.g., presence of sex offenders)
- Identification of locations that are not suitable for people with access and functional needs (e.g., no wheelchair access)
- Access to shelter sites (transportation routes)
- Utilities or alternate methods (e.g., water trucks, gas-powered generators) for shelter facilities
- Staff and supplies to support shelters and meet shelter demand
- Specialized staff and supplies, including medical staff, FAST or similar teams, durable medical equipment, and common medicines, to satisfy the estimated access and functional needs shelter populations
- Security inside and around the shelter facility
- Private areas in shelters to support access and functional needs populations
- Hygiene and sanitation facilities and supplies
- Feeding and distribution supplies, equipment, and staff for shelters and for mass feeding or supply distribution away from shelters
- Accessible transportation support for people who need services not provided in current shelters
- Ongoing assessment of shelter resident needs, including access to recovery program information and family reunification support

2.3.12 Populations in Correctional Facilities

The estimated populations, space capacity, and occupancy rates in county and State correctional facilities in the Bay Area region are presented in **Table 2-14**. Damage to county and State correctional facilities in the region has not been projected. However, it is assumed that several of these facilities are damaged and require evacuation. **Appendix B, Map B-6**, shows the location of jails and correctional facilities in the 12-county Bay Area region. The mass care and shelter of these populations are generally handled by the agencies that manage the jail facilities and may be coordinated with the State Law Enforcement function.

As **Table 2-14** shows, correctional facilities in the region have limited space capacity to house additional prisoners who need to be relocated because of damage to the correctional facility. Thus, it is necessary to relocate inmates of damaged facilities to facilities outside the region. Security for State prisoners is a State responsibility. If State prisons are damaged in the earthquake, the counties currently hosting those

¹⁷ The California Department of Social Services (CDSS) developed the concept of FAST in 2008 to assess the needs of people with access and functional needs at shelters. A description of the concept is available at <http://www.dss.cahwnet.gov/dis/res/pdf/AppendixB.pdf>.

facilities may not initially be able to depend on State law enforcement agencies to provide security.

Table 2-14. Number of facilities, space capacity, estimated populations, and occupancy rates in county and State correctional facilities as of 2009.

County/ State	County	Number of Facilities	Total Space Capacity	Estimated Population	Occupancy Rate
County	Alameda	2	4,800	4,400	92%
	Contra Costa	5	2,300	1,700	75%
	Marin	1	400	300	79%
	Monterey	1	1,200	1,200	100%
	Napa	1	264	N/A	N/A
	San Francisco	5	2,200	2,200	100%
	San Mateo	2	1,100	1,100	100%
	Solano	2	1,100	1,100	100%
	Sonoma	3	1,600	1,100	67%
	Santa Clara	5	6,000	4,700	77%
	Santa Cruz	4	400	400	100%
	San Benito	2	200	100	50%
State (county location of facility)	Marin	1	3,300	5,200	159%
	Monterey	2	5,500	11,600	209%
	Solano	2	5,900	9,100	154%

Source: County and State departments of corrections
 N/A = Not available

3 Roles and Responsibilities

This section discusses the relevant local, regional, State, Federal, and private-sector entities involved in mass care and sheltering. It describes the regional structure of the response to the earthquake and the roles and responsibilities of the agencies and organizations that support the region. It also summarizes the regional structure as described in the RECP Care and Shelter Subsidiary Plan. That plan and the RECP Base Plan should be consulted as needed for further details. The roles and responsibilities of the agencies in the structure are also summarized here and fully described in the RECP. **Figure 3-1**, adapted from the RECP, illustrates the hierarchical organization of the response agencies and their interactions within SEMS.

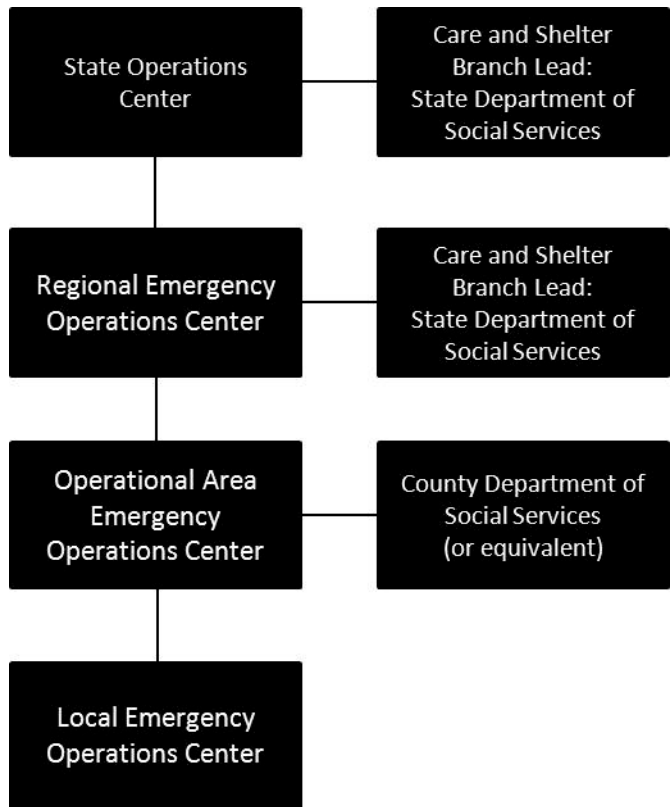


Figure 3-1. Standardized SEMS organizational levels.

Mass care and sheltering operations generally include the following:

- Sheltering
 - Establishing and operating emergency shelters for general populations (including resources to assist people with access and functional needs), and for relief workers.

- Mass care services
 - Various mass care services may be provided at or collocated with shelters, pickup points for evacuation, or other designated service sites. Mass care services may also be delivered via mobile outreach to those in need of care services who have remained in residences or are gathered in spontaneous shelters.
- Feeding
 - Includes fixed and mobile feeding sites.
 - May include bulk food distribution from points of distribution (PODs).
- Basic medical care
 - Providing first aid and mental health support to shelter residents.
 - The ARC is able to provide basic nursing support (not limited to first aid) and mental health support. These services do not supplant regular medical services, which are to be provided by local government agencies. These agencies must request additional resources through their own channels.
 - Shortfalls noted by government may be resolved through the Medical Health Mutual Aid system, as described in the Medical Health Subsidiary Plan of the RECP.
- Bulk distribution of emergency relief supplies
 - Establishing, staffing, and operating sites for distributing emergency goods, including food, water, sanitation supplies, and first-aid supplies.
 - Distribution processes are locally determined and based in part on the types and degrees of need and the ability of the private sector to provide them through commercial trade.
- Support services for improving post-disaster welfare inquiries
 - ARC uses multiple family-reunification mechanisms to enable information to be shared among disaster survivors and their family and friends following a disaster.
 - FEMA provides welfare services, including family reunification and tracking of affected populations.

The preceding elements are usually included in mass care and sheltering. However, this Plan is limited primarily to the sheltering component.

It is important to note that providing effective mass care and shelter is a necessarily collaborative effort of the shelter network of government and nongovernmental agencies operating at all levels of response. While local government and the ARC hold lead roles in the provision of care and shelter, the ability to meet communities' mass care and shelter needs following the earthquake depends on effective coordination among governmental agencies, the ARC, and other NGOs at all levels of response.

With the expected damage to shelters, large numbers of people need to be evacuated to safe shelter beyond their communities or their own counties or outside the region. The Regional Catastrophic Earthquake Mass Transportation/Evacuation Plan uses the term “pickup points” for the gathering places where people are to be picked up for transportation to a shelter or outright evacuation.

Because of the large numbers of people expected at pickup points and the potential length of time that they have to wait for transportation, counties support the sites with limited mass care services. The mass care services at a pickup point may include, depending on availability of resources and staff:

- Registration of people as they arrive
- Water and, if available, snacks
- Sanitation/restrooms
- First aid
- Minimal sleeping space and bedding material (no cots)
- Security
- Basic space accommodations made for people with access and functional needs
- Public information provided in modes appropriate for all, including those with access and functional needs.

Because pickup points are not expected to support evacuees for longer than 24 hours, cots and other equipment for longer-term sheltering are not provided except for special circumstances. In an earthquake of this magnitude, however, people may have to gather at pickup points for longer than 24 hours, particularly in areas isolated by damage to the transportation system.

3.1 Sheltering

3.1.1 Local Government

In accordance with SEMS, response begins at the field level: the local government that has jurisdiction coordinates response activities. Under the California ESA:

- The cities in the Operational Area are responsible for the care and sheltering of their residents.
- The county government is responsible for local care and sheltering of residents in unincorporated areas of the Operational Area.
- A county or city department of social services is usually the lead local agency for these activities.¹⁸

In general, local governments evaluate and request necessary resources, and the Operational Area agencies respond to those requests.

¹⁸ The local government agency may be titled differently, but it is usually the department that also manages social service programs for residents on a daily basis.

3.1.2 Operational Areas

The Operational Areas support local governments when their resources are overwhelmed. The EOC in each Operational Area coordinates information, response activities, and community needs. In most, but not all, counties of the San Francisco Bay Area region, a county-level department of social services leads the Care and Shelter Branch in an Operational Area EOC.

In general, Operational Areas evaluate and request necessary resources, and the regional, State, and Federal government agencies respond to those requests.¹⁹ More specifically, when local governments are overwhelmed, the Operational Areas:

- Coordinate disaster response operations of, and respond to mutual aid resource requests from, local governments—including sheltering, general and specialized staff, and equipment and transportation—within an Operational Area in support of the ARC and local government agencies and other care providers
- Facilitate transportation and sheltering for people with access and functional needs and for medically fragile populations
- Forward requests for care- and shelter-related resources to the appropriate Regional Mutual Aid Coordinator and the Care and Shelter Branch at the REOC and forward other resource requests to the Operations Section of the REOC
- Conduct initial notification and establish ongoing communications with the general public and media
- Consolidate information about the activities of NGOs and private-sector companies in order to coordinate operations with government response
- Coordinate the information collected by State and Federal assessment teams in the Operational Area

3.1.3 Regional Organizations

The 12 counties that compose the area addressed by this Plan are in the Cal EMA Coastal Region. As described in **Section 2**, the functions of the regional level within SEMS may be assumed at an alternate REOC location, at the SOC, or at the JFO.

A UCG may be established in a JFO to facilitate the unified operation of State and Federal agencies. When a JFO is activated, the SOC transfers operations to that facility where State and FEMA are combined. In general, all Emergency Support Functions (ESFs) that support federal response and recovery efforts operate from the JFO once it is activated. Cal EMA and other State agencies deploy staff to the JFO to ensure effective coordination with federal counterparts as part of the joint State/Federal operation. State operational structures as outlined in the Plan are relevant until the JFO is activated.

¹⁹ The Response Information Management System (RIMS) may be a key component of this request forwarding and processing system, when it is available and during certain phases of the response. These and other operational details are discussed in **Section 5**.

The REOC is the State's primary point of contact for Operational Areas in the region. It performs or supports a variety of activities that are performed directly with the Operational Areas or are done by ensuring effective coordination through existing mutual aid systems. The roles and responsibilities of the REOC are to:

- Coordinate the regional response to the earthquake, including collection, verification, and evaluation of situation information and, for all resources dispatched through the State, the allocation of available resources
- Process information and resource requests between the Operational Areas and between the Operational Areas and the State
- Coordinate mutual aid requests for emergency services between Operational Areas in the region²⁰
- Maintain liaison and coordination with the SOC and with State and Federal agencies in the region as required
- Receive and disseminate emergency warnings

The Care and Shelter Branch at the REOC is led by the California Department of Social Services (CDSS) and includes supporting agencies such as ARC, The Salvation Army, and others as needed. The Branch Director may identify and invite other agencies and organizations—from the public sector, private sector, and CBOs—to provide support services and resources. The Branch Director prioritizes requests from the Operational Areas based on need and available resources. When the Care and Shelter Branch is established, the CDSS, a State agency acting at the regional level, leads the Care and Shelter Branch, as illustrated in **Figure 3-2**, and is supported by the ARC. The roles and responsibilities of the ARC are developed in **Section 3.1.6.5**.

²⁰ Including the direct coordination of all mutual aid requests other than those provided through established discipline-specific systems, such as the Disaster Medical/Health, Law Enforcement, and Fire and Rescue Mutual Aid Systems.

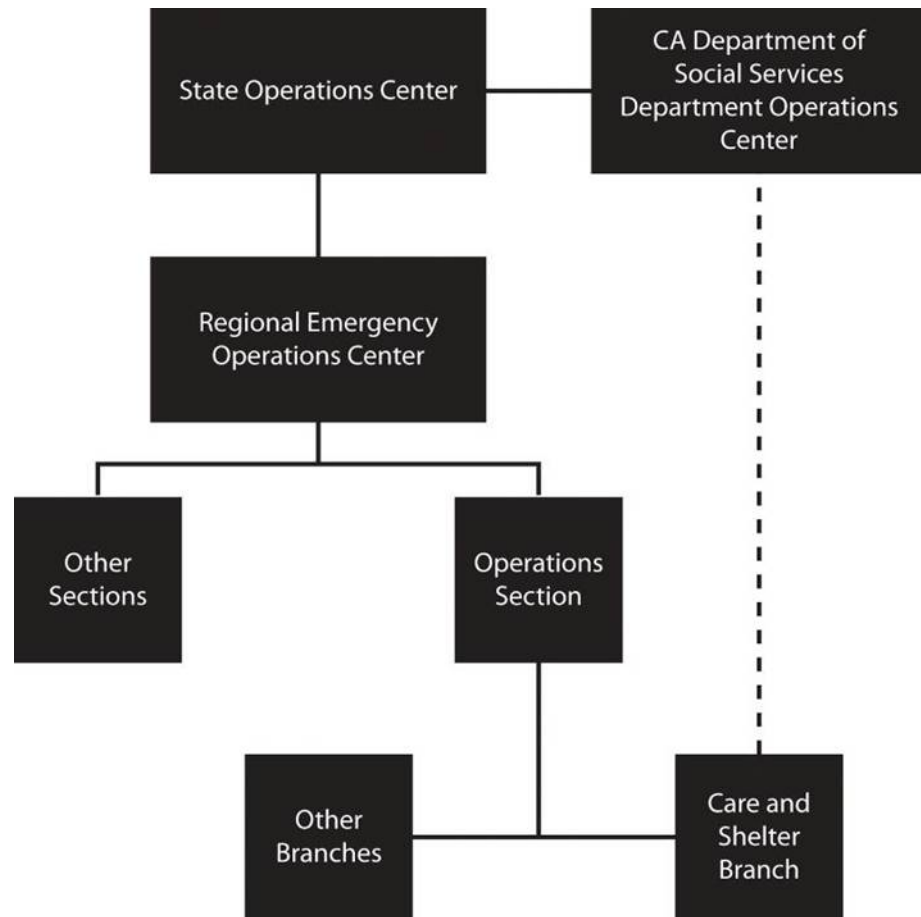


Figure 3-2. Organizational structure of the Care and Shelter Branch within SEMS.

3.1.4 State of California

According to the SEP, the State coordinates mass care and shelter operations through the Care and Shelter Emergency Function (EF-6).

This section summarizes the responsibilities of the State agencies with the largest roles in supporting EF-6. **Appendix F** summarizes the responsibilities of agencies with smaller, supporting roles. The SEP contains the full description of all State agencies in disaster response.

3.1.4.1 SOC

In addition to its regional role, Cal EMA runs the State-level response by fulfilling these roles and responsibilities:

- Coordinates emergency response activities for care and shelter whenever Operational Areas in a region activate their EOCs in response to an incident
- Coordinates the implementation of Federal response operations in the region
- Facilitates information exchange with the various NGOs involved in the response

- Addresses issues or problems that arise in the regional response efforts
- Coordinates Emergency Management Assistance Compact (EMAC) requests

According to the California Emergency Act, Cal EMA can task State agencies to support care and shelter activities when the Governor proclaims a state of emergency. To initiate that proclamation, Cal EMA provides the Governor with initial information about the earthquake and its effect on the population and local government.

The Cal EMA Office of Access and Functional Needs identifies the needs of people with disabilities before, during, and after a disaster. There are other specific needs of people without disabilities that still require special planning. These include non-English speakers, unaccompanied minors, the elderly, and others. The necessary resources for meeting these needs are to be incorporated into all aspects of emergency management systems.

In accordance with SEMS and under the Presidential declaration of a major disaster, Cal EMA makes all requests for Federal assistance. Cal EMA determines whether Federal resources should be requested for the region and formally requests resources through FEMA.

3.1.4.2 HHS

The California Health and Human Services Agency (HHS):

- Leads EF-6 to coordinate emergency services, and provide support related to care and sheltering, public health, and medical services
- Directs the various departments of the agency to provide resources that support mass care and sheltering

3.1.4.3 CDSS

The CDSS, a department of HHS, has a broad set of roles and responsibilities, most of which are coordinated through the CDSS Disaster Services Section. The roles and responsibilities include:

- Leading the coordination of State care and shelter support for Operational Areas through the REOC
- Identifying material and key human resources (including specialized resources to support people with access and functional needs) to assistance centers and Operational Areas
- Coordinating the FAST program, which evaluates shelters' capabilities to meet various access and functional needs

Through the Care and Shelter Branch of the REOC, or SOC, CDSS:

- Coordinates mass care and sheltering information and resource requests across regions and Operational Areas using the mutual aid system and response capabilities from other regions in California

- Monitors, prioritizes, and coordinates distribution of State resources to affected Operational Areas
- Establishes and maintains ongoing communications with the Care and Shelter EOC Branch Directors
- Submits requests to Cal EMA to have State agencies redirect their personnel to provide added support resources
- Communicates with FEMA ESF #6 (Mass Care, Emergency Assistance, Disaster Housing, and Human Services)

The CDSS also operates a Department Operations Center (DOC) after the earthquake. The CDSS DOC:

- Deploys staff to the Care and Shelter branches of the REOC and SOC
- Identifies sites on State-owned land that are suitable for shelters, feeding sites, and staging areas
- Conducts advanced planning
- Identifies internal CDSS resources to support operations
- Coordinates the use of State property, staff, and materials for care and shelter response
- Carries out planning and operational assignments as assigned by the SOC Care and Shelter Branch

3.1.4.4 CDPH

The California Department of Public Health (CDPH):

- With the Emergency Medical Services Authority (EMSA), coordinates services for people with medical needs beyond those that can be handled in general population shelters
- Monitors the sanitation of shelter sites, the health of shelter residents, and the safety of food and water in affected areas
- Supports those with medically related access and functional needs in the shelters, including medication

Some of the other departments of HHS that play key roles in supporting EF-6 include the following:

- Department of Aging, which supports seniors and functionally impaired adults by providing members for FASTs. It also monitors affected senior populations through local area agencies on aging.
- Department of Community Services and Development, which maintains information related to CBOs that can provide outreach and additional social services.
- Department of Developmental Services, which:
 - Provides facilities for sheltering, food preparation, and medical equipment or supplies for its client individuals that reside in State-operated facilities

- Assists in making shelter sites accessible to people with developmental disabilities
- Provides staff for FASTs, monitors licensed facilities where the Department has clients, and assists in the relocation of affected facilities
- Provides some facility use on vacant property at its developmental centers for use as a site to establish alternate sheltering
- Department of Mental Health, which coordinates mental health services for shelter workers and people affected by the earthquake. The department supports assessment teams to evaluate individuals' needs for mental health services to be provided in shelters.
- Department of Rehabilitation, which provides a variety of services, including providing staff for FASTs, to support people with access and functional needs.

3.1.4.5 California Volunteers

Another State office with disaster-related responsibilities is California Volunteers. California Volunteers:

- Manages programs and initiatives to increase the number and impact of Californians involved with service and volunteering
- Coordinates volunteer activities related to disaster response and recovery, including the necessary training, equipment, and transportation
- Coordinates volunteer activities with the Aidmatrix network—an online resource implemented by Cal EMA to coordinate the receipt and distribution of donated skills, products, or funds

3.1.4.6 California National Guard

The California National Guard:

- Provides some facilities that can be used as shelters
- Provides logistical support, including distribution of supplies
- Provides key operational support at pickup points, including crowd control
- Supports those aspects of mass transportation and evacuation that intersect with care and sheltering
- Provides security support including security at shelters

3.1.4.7 Supporting State Agencies and Departments

Other State agencies and departments provide services according to need. These may include:

- California Conservation Corps
- California Department of Education
- California Department of Food and Agriculture
- California Department of General Services

- California Department of Housing and Community Development
- California Department of Parks and Recreation

The roles and responsibilities of these agencies are summarized in **Appendix F**.

3.1.5 Federal Government

Under a Presidential declaration of a major disaster, the Federal Government provides financial resources and direct Federal assistance in response to requests from the State. This assistance may be for mass care and sheltering operations and housing assistance, as necessary to save lives, protect public health and safety, protect property, and promote recovery. FEMA is responsible for coordinating the Federal response and for coordinating the financial assistance available to the State and to local governments.

In accordance with the NRF and its annexes, the Federal Government organizes its resources according to ESFs, each of which is led by a specified Federal agency. ESF #6 implements services and programs to assist individuals and households affected by potential or actual disasters. FEMA is the ESF #6 coordinator and primary agency, and its roles and responsibilities are therefore to coordinate Federal resources as required to support local, tribal, and State governments and NGO missions regarding mass care, sheltering, emergency assistance, housing, and human services. In the scenario event, ESF #6 may:

- Open and support shelters in impacted areas, including mega-shelters
- Coordinate the reception of evacuees in other states
- Provide Federal staff and resources to support shelters managed by ARC and local governments

3.1.6 Private-Sector Entities and NGOs

This section summarizes the roles and responsibilities of key private-sector entities and NGOs participating in or collaborating with the Care and Shelter Branch, including VOAD and other NGOs.

3.1.6.1 VOAD

The nationally based VOAD is a coalition of nonprofit NGOs that respond to disasters as part of their overall mission. In response to a significant event, VOAD enables members to provide more effective services through communication, coordination, cooperation, and collaboration. National VOAD members and the services they provide are listed in **Appendix G**.

The local chapters of VOAD member agencies form the Northern California VOAD, which:

- Responds to events throughout the Bay Area region and the State

- Initially supports the mass care operations of Operational Areas and local governments with the resources of national nonprofit organizations
- Works within SEMS and local government structures

3.1.6.2 Local NGOs

Locally based NGOs include CBOs and FBOs. Their individual roles and responsibilities are too numerous to list here. Generally, CBOs and FBOs throughout the region may:

- Provide services to meet needs that local governments may not be able to address
- Link to government through existing contracts or relationships
- Have agreements with the ARC to manage shelters using trained staff and caches of shelter supplies

3.1.6.3 Bay Area CAN

The Bay Area Coordinated Assistance Network (CAN) is a regional database that tracks the disaster assistance provided to individuals by NGOs after a disaster. CAN is supported by Northern California VOAD, United Way, and several Bay Area foundations. San Francisco Collaborating Agencies Responding to Disaster (CARD; a collaboration of CBOs) is the system manager of the database, with backup support from the American Red Cross Bay Area (ARCBA) Chapter. Currently, the CAN database is available for use in most counties in the region; exceptions are Monterey, San Benito, and Solano counties. Member agencies of CAN share information about assistance provided to individuals affected by the earthquake.

3.1.6.4 CRA

The California Resiliency Alliance (CRA) is a not-for-profit organization dedicated to facilitating and linking community-based public-private partnerships to strengthen the State and local capacity to prevent, protect, respond, and recover from disasters. The CRA member organizations are businesses in northern California that can provide response resources (space, equipment, commodities, technological solutions, liaison support, and more) to EOCs and REOC or SOC functions.

Responsibilities of CRA members include:

- Linking businesses to EOCs and information centers to improve communication and coordination during disasters
- Assisting State and local public health departments in distributing vaccines and medical supplies
- Pledging resources through a web-based registry that can be quickly tapped by first responders to add surge capacity and improve supply chains (the donations registry works in coordination with the State's implementation of Aidmatrix)

3.1.6.5 ARC

The ARC works with lead support agencies of the care and shelter response system at the local, regional, State, and national government levels. The ARC is also the critical supporting organization for the CDSS in the Care and Shelter branches of the SOC and REOC.

Local level. ARC chapters that are affected directly by the disaster are given the authority necessary to launch a response and initiate service delivery within their jurisdictions. The ARC chapters that operate in the San Francisco Bay Area region have the following responsibilities:

- Establish liaisons at each Operational Area EOC
- Open shelters at designated pre-identified sites
- Provide food, emergency first aid, disaster mental health assistance, disaster information, and bulk distribution of relief items
- Integrate community resources to enhance shelter and support services, and fill gaps in resource availability

Regional level. ARC chapters that are affected directly group together and form an Area Management Structure to combine chapter efforts as soon as communications and transportation access allow. The Area Management Structures have the following responsibilities:

- Coordinate service delivery in their combined jurisdictions
- Forward consolidated support requests through internal requesting mechanisms
- Identify a headquarters location and a warehouse to support their operation.
- Establish a liaison at the REOC

The following groupings based on geographic proximity are proposed for Area Management Structures:

- Area One Chapters: Sonoma, Silverado/Napa, and ARCBA (Solano and Marin counties)
- Area Two Chapters: ARCBA (San Francisco and San Mateo counties)
- Area Three Chapters: ARCBA (Alameda and Contra Costa counties)
- Area Four Chapters: Santa Clara Valley, Monterey/San Benito, Santa Cruz and Carmel

State level. At the State level, ARC is the leading disaster relief NGO and the primary support agency to CDSS in its regional- or State-level response. A 2009 Memorandum of Understanding describes the operating relationships between the ARC and CDSS. Under it, the ARC, in collaboration with government and other NGO partner agencies, has the following responsibilities:

- Set up and operate shelters
- Provide food, shelter, emergency first aid, disaster mental health assistance, disaster information, and bulk distribution of relief items

- Integrate community resources to enhance shelter and support services, and fill gaps in resource availability
- Provide support to the SOC Care and Shelter Branch
- Support the State Care and Shelter Emergency Function

3.1.7 Roles and Responsibilities in Animal Sheltering

The Pets Evacuation and Transportation Standards Act of 2006 amended the Stafford Act to allow local and State governments to be reimbursed for the care and shelter of household pets and service or support animals following a major disaster or emergency.

The primary strategy for sheltering animals is to establish animal shelters that are collocated with human shelters so that pet owners may easily visit and assist with the care of their animals. With the exception of service animals, companion animals are not allowed into human shelters. This Plan is about sheltering people, but it also provides an overview of the agencies responsible for animal care and the ways in which the agencies interact with Operational Areas, the REOC and SOC, and the Federal Government.

Local governments are expected to establish separate shelters for animals in areas near shelter sites for people and to involve the animal owners in the care and management of their animals, to the extent they are able to do so safely. These animal shelters may be established in a different section of the same facility that houses people, but are operated under the management of local governments, appointed agencies, or NGOs.

The California Department of Food and Agriculture is the lead State agency for animal-related issues. Each county has a designated Animal Coordinator who oversees local government activities to provide care and shelter for companion animals. The County Animal Coordinator generates resource requests through the county's department of agriculture, which participates in local EOC structure according to needs.

When the local governments exhaust their animal care resources, they direct requests for additional support to the State, in accordance with SEMS and supported by California Animal Response in Emergency System (CARES). CARES identifies the State-level resources and the means by which these resources can be made available to help local government with animal issues during disaster.

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4 Coordination and Communication

The communications and coordination section of this Plan describes the overall approach to mass care and sheltering operations. **Section 4.1** describes the organization of the incident activation and coordination, the information-sharing systems, and the manner in which the region requests, receives, and coordinates outside resources. **Section 4.2** conveys the plan for creating, integrating, and dispensing public information.

4.1 Mass Care and Sheltering Communications and Coordination

This section describes the communications for mass care and sheltering, with an emphasis on the sheltering efforts that are expected to occur in the affected 12-county region covered in this Plan.

4.1.1 Activation, Coordination, and Communication

This section explains how governmental organizations and NGOs activate themselves to respond to the disaster, coordinate their efforts internally and with each other, and set up and run communications systems.

4.1.1.1 Local Governments

The local governments, including county and city agencies, activate their EOCs. The local government(s) may request that the Operational Area EOC is also activated. This proceeds in accordance with local policies and as discussed in the Local Mass Care and Sheltering Plans developed for each Operational Area. Generally, local government EOCs coordinate with the Operational Area EOCs.

4.1.1.2 Operational Areas

The Operational Area is the jurisdiction responsible for coordinating emergency response within a county, including cities and special districts. During an emergency, when a local government has activated its EOC to support the field level of response, the Operational Area activates its EOC and coordinates mass care and sheltering operations with the REOC.

4.1.1.3 REOC

Based on the RECP, this section describes the organization of the Care and Shelter Branch and its position in the Cal EMA organization. As explained in **Section 2.2**, it is assumed that the REOC in Oakland is not functional immediately after the earthquake. However, regional operations continue to be coordinated by the REOC and supported by the SOC. This general approach lasts until a REOC can be established in the affected region.

The Care and Shelter Branch of the SOC is part of the Operations Section. The Operations Section's larger role is described in the RECP Base Plan. The Care and Shelter Branch, under the Branch Director, supports Operational Areas in their efforts to coordinate the sheltering of displaced people.

Cal EMA activates its REOC as soon as possible. It establishes communications networks with all active Operational Area EOCs as soon as it is able. It also begins to coordinate with relevant State agencies, FEMA, ARC, and other NGOs involved in care and sheltering response.

4.1.1.4 REOC Care and Shelter Branch

The REOC Care and Shelter Branch resides in the REOC Operations Section. The staff of this Branch are assigned by the Branch Director, collect and share shelter information among participating agencies (the ESF #6 Group at the SOC or JFO), assist the Branch Director with advance planning, facilitate communications and mass care and shelter requests among agencies and with Operational Areas in the region, and coordinate mass care and shelter requests. As an added tool for response planning, **Appendix H** contains a list of resources, material and human, to support mass care and sheltering.

State operational structures as outlined in the Plan are relevant until the JFO is established by the State and FEMA. Once a JFO is established, Mass Care units of the State and FEMA are combined in the JFO. Staff from CDSS will relocate to JFO to support the UCG in coordinating the Care and Shelter Emergency Function. CDSS maintains its State coordination roles for EF-6 at the JFO.

4.1.1.5 State DOCs

State departments with responsibility for mass care and sheltering may manage their response operations from within their respective DOC. As noted, the CDSS is the lead State agency for care and shelter operations. The CDSS DOC manages the CDSS-supplied resources that are deployed to the region. These may include FAST personnel working in shelters and CDSS program staff who implement assistance programs. The CDSS DOC operational activities include collecting and interpreting information from across the region. Monitoring information from the affected areas enables the CDSS DOC to allocate department personnel and supplies to meet ongoing Operational Area needs.

4.1.1.6 RCG

The REOC or SOC Director may activate a Regional Coordination Group (RCG) to provide guidance on decisions regarding allocation of resources and coordination of response activities. The RCG consists of the relevant branch directors of the Regional Operational Section, the Operations Section Chief, the REOC Director, representatives of affected Operational Areas, and subject matter experts. If RCG identifies complex mass care issues, a task force may be convened by the REOC or SOC Director.

4.1.1.7 *Mass Care Task Force*

A mass care task force may function at a regional, State, or joint Federal–State level, depending on its intended purpose. The task force:

- May be composed of local, State, Federal, and NGO representatives and subject matter experts
- May be convened for circumstances in which an immediate solution is required or to develop a solution that is implemented over time
- Provides analysis and recommends action to the REOC or SOC Director or for consideration by the Regional Coordination Group

Some of the issues to be expected in the disaster response include:

- Allocating mass care resources among counties
- Transporting residents to shelters between counties in and beyond the affected areas
- Assisting those people with access and functional needs beyond those of the general population
- Distributing food or supplies to those who choose to self-shelter or to stay in spontaneous shelters

4.1.1.8 *Coordination with NGOs*

NGOs support government mass care and sheltering operations by providing information to Operational Area EOCs, the REOC and SOC, and EF-6. EF-6 and EOC Care and Shelter Branches collect reports from NGOs that summarize each organization’s response activities. These reports include:

- Estimates of numbers of evacuees and shelter residents
- Estimates of number of people receiving food or distributed commodities
- Reports of unmet needs and resource shortfalls
- Reports of available resources

Critical issues such as mass care support for government-run evacuation pickup points, regional consolidation of shelters, and the transition of residents from regional shelters to interim housing may require the participation of NGOs in a mass care task force, if it is activated by the UCG or by REOC or SOC directors.

The ARC plays a key role at the Operational Area, regional, State, and Federal response levels; ARC operations are described further in **Section 4.1.1.9**.

A private-sector liaison position may be established at local government EOCs and at the REOC and SOC to coordinate information exchange with the business community. The CRA trains private-sector representatives to be effective liaisons at the local, regional, and State levels. These private-sector liaisons provide the government response organizations with information about the availability of resources from the business community and the critical needs of the private sector to ensure business continuity and rapid economic recovery in the region.

Regional NGOs may include members of the Northern California VOAD.

Appendix G lists the national and northern California members of VOAD, along with the resources and services they provide in support of shelter and housing operations.

According to the scale of operational needs throughout the region and the resources and services available from NGOs, representatives from these organizations may be assigned as liaisons to the Cal EMA Care and Shelter Branch at the regional or State levels. A liaison provides information about a particular NGO's activities in the field and provides a communications link with the NGO's operational command in order to coordinate response activities and the deployment of resources.

NGOs in the region may also be members of CAN. The ARC Bay Area Chapter activates CAN by contacting San Francisco CARD in San Francisco. Activation of the CAN database automatically notifies all members of CAN. The system managers post a description of the earthquake and an initial assessment of the situation. Throughout the response, members post their own situation assessment on the CAN system. As member agencies process disaster claims, they update the CAN database. The CAN remains active as long as member agencies continue to provide assistance to individuals affected by the earthquake.

4.1.1.9 *Coordination with the ARC*

Coordination with the ARC is described at length in this Plan because of the organization's central role in mass care and sheltering response. ARC representatives work internally and within Operational Area, regional, State, and Federal emergency response structures to:

- Set up and operate shelters
- Provide food, emergency first aid, disaster mental health assistance, disaster information, and bulk distribution of relief items
- Integrate community resources to enhance shelter and support services and fill gaps in resource availability
- Provide support for family reunification

ARC has representatives in emergency management structures at all levels of government. Additionally, ARC uses its own internal disaster management structures to communicate and coordinate its agency response activities with a range of partner agreements.

- ARC establishes a Disaster Relief Operation (DRO) following the earthquake to provide a clear line of internal communications between the organization's national headquarters and ARC chapters. The ARC national headquarters manages DRO activities and communicates directly with DRO Operations Management, which communicates with ARC chapters.
- ARC provides liaisons to the Care and Shelter Branches at Operational Area EOCs and the REOC to serve as the EOC link to the ARC DRO headquarters.

If for some reason the liaison is unavailable, the Operational Area EOC may directly contact the ARC DRO.

- Chapters that are affected directly by the disaster group together to form an area management structure to combine chapter efforts as soon as communications and transportation access allow. The ARC chapters coordinate service delivery in their combined jurisdictions and forward consolidated support requests through their internal resource request mechanisms.

4.1.2 Information, Coordination, and Resource Requests

In this Plan, resource requests and information follow the same paths described by SEMS and explained in the RECP: from local government, to the Operational Area, through the REOC, and to the State. The State communicates with the Federal agencies at the JFO and the UCG through the SOC function.

Information, resource requests, and situation reports related to mass care and sheltering flow from the field to local government EOCs, Operational Area EOCs, the REOC, to the SOC/JFO. The REOC receives the reports from the Operational Area EOCs and compiles summaries for the care and shelter emergency function at the JFO.

4.1.2.1 Information Sharing, Reporting, and Situational Awareness

Information sharing, reporting, and situational awareness are described in the RECP Base Plan and the Mass Care and Shelter Subsidiary Plan. This section provides a summary of the Subsidiary Plan details and additional information pertaining specifically to mass care and sheltering operations in response to a catastrophic earthquake.

Regionally, all activities described next must be coordinated and integrated across local governments and Operational Areas, as well as among and across the NGOs, other groups working in individual cities and counties, and at the regional level.

In responding to a catastrophic earthquake, the JFO uses the established communications functions that support State and Federal responses to other disasters. California has established essential communications support procedures among Operational Area EOCs, the REOC, the SOC, and other State agencies, providing information links for elements of the California emergency organization. This communications infrastructure includes the use of the Response Information Management System, the Operational Area Satellite Information System, and the California portion of the National Warning System.

4.1.2.2 Local Government

Local government agencies (cities and special districts in the Operational Area) initiate the mass care and sheltering response and are ultimately responsible for the welfare of the displaced residents. Information about the needs of displaced

residents is generated by the local government. Following a disaster, the local government identifies the shelter demand:

- How many people need shelter, including estimations of those with access and functional needs
- How many facilities are available to provide shelter, with an emphasis on buildings that provide equal access to all residents of the community
- Quantity and availability of supplies to support shelters, including specialized items for identified access and functional needs

Following SEMS, the local government EOC collects situation reports from the DOCs (if they exist in the local government) or the field to initiate and manage a coordinated care and shelter response.

According to the RECP, a local government contacts the Operational Area when additional resources are needed to meet the overwhelming needs of its residents. In support of its resource requests, the local government EOC forwards situation reports that summarize local actions to the Operational Area.

4.1.2.3 Operational Area

The Operational Area receives situation reports and resource requests from its local governments. The Operational Area, through its EOC, directly coordinates shelter activities in unincorporated areas of the county. The Operational Area responds to requests with resources to the extent that they are available after a catastrophic event. In general, the local EOC request directs resources to the shelter in need or to a nearby staging area for distribution to a number of local shelters or directly to residents who need support but choose not to use shelters. It is likely that local government resources become immediately depleted.

As resources are fully deployed or rapidly expended and cannot meet the needs of local government shelters, the Operational Area makes a formal request to the Care and Shelter Branch at the regional level of SEMS for those resources. Each request includes a description of the needs, the duration and location of the needs, and any special conditions or issues involved.

4.1.2.4 Regional Support of Care and Sheltering Resource Requests

The REOC responds to Operational Area requests in a number of ways, including any combination of the following actions:

- Brokering resources among Operational Areas
- Coordinating with the ARC DRO through an ARC liaison at the REOC
- Coordinating with NGOs
- Requesting resources from the State through the SOC

The Care and Shelter Branch at the regional level receives situation reports and resource requests from the Operational Areas and passes them either to the appropriate branch in the REOC or on to the SOC.

4.1.2.5 State and Federal Support of Care and Sheltering Resource Requests

The SOC allocates available State resources across the region and works within the EMAC to obtain resources and support from other states. Federal and State operations are coordinated through EF-6 of the UCG located at the JFO. The Care and Shelter Branch at the SOC compiles situation reports and resource requests received from the REOC. The SOC Care and Shelter Branch will forward resource requests and mission tasks to the manager of the separately established CDSS DOC. The CDSS DOC:

- Assists with filling State agency resource requests that support care and shelter operations
- Coordinates delivery of requested supplies to the Operational Area staging areas; some of these are State-owned, and others may be purchased from private vendors or be received from other jurisdictions

When State resources are exceeded, the SOC requests Federal Government assistance by sending the request to FEMA at the JFO. Under ESF #6, FEMA directs resources from Federal agencies, contractors, and vendors.

In addition to coordinating commodities and supplies that directly support local government shelters and displaced residents who shelter outside of those facilities, FEMA may also coordinate the deployment of resources to aid the State in assessments of shelter needs, structural safety for use as shelters, and interim housing alternatives.

4.1.2.6 ARC Resource Requests

ARC brings many resources to bear in performing its role in mass care and sheltering response. At the same time, following a catastrophic disaster, the organization cannot perform its role without resources and services provided through government channels. This means that ARC uses multiple resource management strategies to manage internal and external resource requesting and provision. Resource management channels may differ, depending on not only the resources or service needed, but also the status of response to the disaster.

Three of these resource management channels are:

- ARC representatives in impacted jurisdictions may request resources through ARC internal channels; those resources may be delivered to the impacted Operational Area without any resource request through government channels.
- Before establishing the ARC DRO, an ARC chapter uses its own locally available resources for its mass care and shelter activities. During this time, the support requests of ARC chapters are routed first to the ARC State coordinating chapter and, when appropriate, to the ARC national DOC.
- Once the DRO is established, ARC chapters continue to use their own locally available resources. Additionally, ARC chapters request ARC resources through the DRO. The Operational Area EOC ARC liaison may request

resources through local government channels. Additionally, Cal EMA recognizes that this system does not adequately address the resource request process for a catastrophic event, as the local jurisdiction will be overwhelmed and the ARC response would cross Operational Area jurisdictions to address this issue. The State has agreed, in concept, that for a catastrophic incident, ARC resource requests may be made directly to the State rather than through the Operational Area.

4.1.2.7 Medical Shelter Needs

This Plan does not include details for medical needs at shelters. However, according to the RECP, medical Operational Area coordinators monitor the activities of hospitals and local medical response organizations, which can include private or government entities. When local medical needs, including those found in shelters, cannot be met by the county, these Operational Area coordinators make a request for mutual aid support to the Regional Disaster Medical Health Coordinator, who brokers resources among counties in the region or makes a request to medical Joint EOC, where CDPH and EMSA manage the deployment of State-level medical and health resources.

Decisions by CDPH and EMSA are supported by situational information gathered in the field by medical teams that may be activated. Components of those teams and their mission are determined by the location and type of medical needs, as first described in situation reports compiled by either the Care and Shelter Branch or the Medical Health Branch.

4.2 Public Information

Procedures for gathering, preparing, and dispensing public information are described in the SEP. They are summarized here.

Cal EMA coordinates the State's emergency public information efforts and supports other State agencies in their messaging. Cal EMA's Joint Information Center (JIC) is established in Sacramento; during disasters, it delivers public information through the media and through the Public Information Officer. Each Operational Area's Public Information Officer is the lead contact for the JIC. The Operational Areas develop and release public information specifically about shelters and mass care activities in their jurisdictions. The REOC is informed about these local mass care and sheltering activities but does not release county-specific public information about them.

FEMA leads the effort to disseminate information to individuals and public officials about Federal assistance programs. It also develops targeted outreach programs for groups that may require help accessing information or understanding eligibility requirements.

4.2.1 Public Information Systems and Resources

A number of message delivery systems, networks, and other communications channels have been formed to improve the public information process. These include:

- California State Warning Center, run by Cal EMA
- Emergency Alert System and the Emergency Digital Information System, which can distribute messages from the National Weather Service; California Warning System; Law Enforcement Radio System; and other proprietary media
- Bay Area Emergency Public Information Network, formed by many Bay Area Public Information Officers
- Telephone services such as Reverse 911, 211 (operated by the California Alliance of Information and Referral Services and United Ways of California, which provides non-emergency updates on social services), and 311 (operated in San Francisco by the San Francisco Fire Department and in San Jose by the General Services Agency, which relays emergency alerts and public information)
- Outdoor public warning systems (e.g., sirens)
- Other media, including Internet websites, social media, and technology to reach people with access and functional needs

These systems and organizations are one aspect of public information, and the actual content is the other key element. The necessary public information for effective mass care and sheltering response is summarized in this section; the summary is related to the operational steps that are described in **Section 5**.

4.2.2 Public Information for Mass Care and Sheltering

Initial damage assessments and situational reports are integrated in order to gain situational awareness and begin estimating the amount and location of the demand for mass care and sheltering services. This information is then used to begin opening priority shelters. The public needs to be informed about the availability of these shelters and the actions to take upon arrival at a shelter, a pickup point, or a distribution point for commodities. The public is also to be told what they can and cannot bring to these facilities.

Once opened, shelter operations are coordinated with the Transportation Branch for effective transportation to and from the shelter sites. When pickup points are established, the public is provided with information regarding locations, requirements, and processes. When animal shelters are established, the public is similarly provided with information regarding locations, requirements, and processes there as well.

For people who cannot access or choose not to use shelters, other types of public information (e.g., where and how they can receive bulk relief supplies) and systems that can be used to track displaced residents and reunify households is disseminated.

Throughout the period when shelters and other mass care and relief operations are operating, public information also includes news about the processes of building inspections and safety assessments of damaged homes.

To reach the widest possible audience, public messaging is:

- Developed at or below a third-grade reading level
- Disseminated in languages other than English, such as Spanish, Chinese (Mandarin and Cantonese dialects), Japanese, Korean, Tagalog, and Vietnamese; dissemination may be accomplished by direct translation or through outreach to media that operate in those languages
- Delivered both visually and audibly to accommodate the visually and hearing impaired
- May require multiple communications channels (e.g., Emergency Alert System, Emergency Digital Information System)

Any information directed at people with specific functional needs is included in all announcements and not provided in a segregated manner. Government agencies partner with local CBOs with enhanced knowledge of access and functional needs populations and ask them to amplify the reach of any communications efforts.

5 Operations

The purpose of this section is to provide an operational plan for mass care and sheltering after the earthquake. Accordingly, this section presents:

- Operational priorities and objectives for the response
- Resources that can be used to achieve those goals
- Operational details of how mass care and sheltering are provided
- A response timeline that specifies the individual tasks to be done as part of the response

As this Plan is an annex to the RECP Mass Care and Sheltering Subsidiary Plan, the objectives contained in this section are applicable at the regional level. Some objectives include tasks related to interim housing; however, the operational plan for interim housing is provided in the Regional Catastrophic Earthquake Interim Housing Plan.

5.1 Priorities and Objectives

This section provides an outline of:

- Operational priorities for mass care and sheltering operations
- Objectives that support those priorities

The objectives are described according to the general phases of the response. The phases are:

- E to E+72 hours
- E+72 hours to E+14 days
- E+14 days to E+60 days
- E+60 days to E+1 year

Sections 5.1.1 through **5.1.4** present the operational priorities and objectives by time frame. Following that, **Section 5.4** contains a comprehensive response timeline for mass care and sheltering. The timeline shows the individual tasks used to meet these objectives and the agencies responsible for performing them. The timeline also reflects other events or actions that may occur during the response period that can affect the response of Operational Areas throughout the region.

5.1.1 E to E+72 Hours

This section presents the priorities and objectives for the first 72 hours after the earthquake.

5.1.1.1 Operational Priorities

The operational priorities for this period are:

- Identify the need for shelter

- Initiate the supply network
- Initiate shelter operations

5.1.1.2 Objectives

The objectives that support the operational priorities for this period are described below. Each objective is elaborated on in **Section 5.4**, which presents the tasks that are carried out to meet that objective.

- Coordinate initial damage assessment and other situational reports related to mass care and sheltering
- Evaluate the current shelter resource capabilities of the agencies with mass care and sheltering responsibilities
- Evaluate the ability of the road network to move people and supplies into shelters
- Develop situational awareness of the current and ongoing need for shelter in the general population
- Coordinate with the agencies involved in mass evacuation to establish pickup points and provide mass care services
- Evaluate the need to shelter jail populations
- Notify all agencies that support shelter operations with staff and supplies

5.1.2 E+72 Hours to E+14 Days

This section presents the priorities and objectives for the period from 72 hours to 14 days after the earthquake.

5.1.2.1 Operational Priorities

The operational priorities for this period are:

- Provide shelter to those who need it
- Evacuate those who need to be evacuated
- Begin to develop an interim housing strategy

5.1.2.2 Objectives

The objectives that support the operational priorities are described below. Each objective is elaborated upon in **Section 5.4**, which presents the tasks that are carried out to meet that objective.

- Initiate damage assessment and building inspections of shelter sites
- Mobilize staff and supplies for shelters and pickup points
- Begin to open shelters
- Establish a task force for shelter operations, as needed
- Evaluate the access and functional needs of shelter residents

- Identify shelter residents with critical medical conditions who cannot be served in general population shelters
- Monitor the capability of currently open shelters to serve their residents
- Provide information to the Construction/Engineering Branch about routes that must be opened to support shelter operations
- Coordinate with the Transportation Branch to locate and establish sites for transferring and receiving evacuees that provide:
 - Pickup points for initial collection of evacuees
 - Reception centers to receive evacuees
- Coordinate with the Law Enforcement Emergency Function for the movement of affected jail populations to shelters that are separate from those of the general population
- Establish communications systems between mass care sites and EOCs
- Initiate animal shelters
- Support people who choose not to use shelters by providing information and bulk supplies to the extent possible
- Initiate governmental and nongovernmental systems for tracking displaced residents and reunifying households
- Prepare and disseminate information to local residents
- Prepare and disseminate information to tourist populations
- Initiate registration for individual housing assistance
- Collect data from damage assessments and building inspections of housing
- Establish Local Assistance Centers (LACs)/Disaster Recovery Centers (DRCs)

5.1.3 E+14 Days to E+60 Days

This section presents the priorities and objectives for the period from 14 days to 60 days after the earthquake.

5.1.3.1 *Operational Priorities*

The operational priorities for this period are:

- Maintain full shelter capability
- Fully integrate support for individuals with access and functional needs throughout the shelter system
- Continue to support people who choose not to use shelters by providing information and bulk supplies to the extent possible
- Maintain support of shelters for pets and service animals
- Initiate the transition from shelters to interim housing

5.1.3.2 Objectives

The objectives that support the operational priorities are described below. Each objective is elaborated upon in **Section 5.4**, which presents the tasks that are carried out to meet that objective.

- Maintain ongoing situational awareness of shelter activities
- Monitor and coordinate the capabilities of agencies, vendors, and other organizations to support shelters and displaced residents
- Fully integrate resources for people with access and functional needs, pets and service animals, and resupply of shelters and distribution sites that support people outside shelters
- Identify opportunities to close shelters and return residents to homes or other available housing
- Evaluate safety assessments and building inspections of homes
- Facilitate restoration of moderately damaged dwellings

5.1.4 E+60 Days to E+1 year

This section presents the priorities and objectives for the period from 60 days to 1 year after the earthquake.

5.1.4.1 Operational Priorities

The operational priority for this period is to complete the transition of displaced families from shelters to interim housing.

5.1.4.2 Objectives

The objectives that support the operational priority for this period are described below. Each objective is elaborated upon in **Section 5.2** which presents the tasks that are carried out to meet that objective.

- Close shelters and end bulk distribution operations
- Provide wraparound services to support those who transition to interim housing
- Coordinate the restoration of services to support community recovery
- Facilitate the return of displaced families to local communities

5.2 Resources for Mass Care and Sheltering

This section describes the on-hand resources for mass care and sheltering and resources potentially available from other organizations that the numerous responding entities may use to achieve the objectives listed above.

5.2.1 Primary Shelters

FEMA and ARC maintain a database, the NSS, of sites potentially suitable for shelter throughout the region. With the damage expected from the earthquake, many of the facilities may not be safe, transportation routes may not be open to

move shelter supplies, and utility outages may render a site unusable. Each county has pre-designated primary shelters selected from potential shelters in the NSS database. The owners of these pre-designated facilities generally have statements of understanding with the ARC to make the sites available as shelters if they are needed. The ARC surveys sites following disasters to ensure that they meet ARC standards for shelters.

As part of the process for preparing this incident-specific response Plan, each county selected primary shelters to consider for analysis. **Appendix B, Map B-7**, shows the locations of the potential primary shelters designated by local county governments.

This Plan's pre-designated primary shelters are facilities that have the following characteristics:

- Are expected to be functional as a shelter soon after the earthquake
- Meet basic accessibility standards (i.e., at a minimum, this includes wheelchair ramps and additional space, though other components may be available in some locations) for people with functional and access needs
- Can be supplied for immediate opening with existing supplies stored onsite and in nearby caches
- Can be opened within hours of the earthquake and staffed initially by workers trained in ARC shelter operations
- Are located close to main transportation routes

5.2.2 Pickup Points

According to the Regional Catastrophic Earthquake Mass Transportation/Evacuation Plan, Operational Areas support local governments to establish pickup points to move or receive people who cannot find shelter in their own communities. Pickup points, which are described further in the Regional Catastrophic Earthquake Mass Transportation/Evacuation Plan, are established according to locations of affected populations throughout the region and the availability of transportation routes. Pickup points are used for the boarding of people leaving a jurisdiction or, in counties that are minimally affected by the earthquake, as reception centers. Details about the locations and features of the pickup points are provided in the Regional Catastrophic Earthquake Mass Transportation/Evacuation Plan; a summary of these resources is presented here.

5.2.3 Mega-Shelters

Mega-shelters may be opened by local, State, or Federal governments. Mega-shelters are complex facilities and require multi-agency management structures and support. There is no formal list of regional mega-shelters because the various Operational Areas have different plans and policies for mega-shelters. However, the Guide for Shelter Operations after a Disaster, prepared by the Bay Area UASI,

provides some guidelines to opening and managing these large and complex operations.

Though many counties in the region do not have formal plans and agreements in place to formally designate a facility as a mega-shelter, the central location and the large-scale features of sites such as arenas and community colleges are recognized by counties. Mega-shelter sites can be expected to meet a number of response needs, including:

- Shelter and feeding for large numbers of people (more than 1,000 people)
- Assistance services provided by government agencies, NGOs, and CBOs to help residents return home or find replacement housing
- Distribution site for commodities to support people sheltering on their own
- Pickup points

5.2.4 ARC Resources for Mass Care and Sheltering

To perform mass care and sheltering activities, ARC chapters rely on a combination of services and material resources from both internal and local government channels. The ARC generally provides the following resources and services through its own channels.

Basic shelter equipment, which often includes the following:

- Cots (standard and accessible)
- Blankets
- Feeding equipment (e.g., food storage containers)
- Food and beverages
- First-aid supplies
- Personal hygiene supplies
- Sanitation supplies
- Towels
- Recreational supplies
- Occasional supplemental clothing for shelter residents

The ARC generally makes resource requests to its government partners for specialized personnel, supplies, or property access, including the following:

- Site security
- Building structural inspections
- Services (trained personnel and material assets)
 - Public transportation support for shelter residents
 - Public health support for issues such as contagious disease monitoring
 - Traffic control at large shelters
- Supplies

- Portable showers
- Portable toilets
- Durable medical equipment
- Generators and fuel
- Hand-wash stations
- Access
 - Access to use public buildings or other government sites (e.g., fairgrounds)
 - Access coordination when roads are closed or have use restrictions (including potential for escort for movement of large quantities of supplies)

5.2.5 Other NGOs and Private-Sector Resources

In addition to governmental entities, CBOs and FBOs provide various social services to the general population and people with access and functional needs on a daily basis. Because people regularly depend on such programs, continued provision of such resources and services is critical after a catastrophic earthquake. Local governments typically maintain relationships with individual organizations through contracts managed by related government departments such as social services or public health. The organizations may also interact with government through associations that may advocate on their behalf or participate in emergency planning.

In the Bay Area, people can access the services of CBOs through information and referral services such as 211 (Eden I&R), United Way/Helplink, and other similar agencies. The UASI Guide for Shelter Operations after a Disaster provides information about how to access CBO services in a disaster. Collaborations of CBOs and FBOs active in Bay Area counties prepare community agencies to survive disasters and to link to government during response operations.

Businesses and the resources and services they provide also contribute to government response. Government already has contracts with private vendors; after the scenario earthquake, the larger resources provided by industries such as construction, hospitality, financial, insurance, and retail can support immediate relief and longer-term recovery for each county.

When timely exchange of critical information is needed from nongovernmental agencies responding to the earthquake, the Care and Shelter Branch Director invites liaisons from those agencies to work directly with the branch at the regional- or State-level operations center. The liaisons may not have decision-making authority, but they provide a direct link between the Care and Shelter Branch and the NGO. The ARC has agreements with the counties and the State to provide liaisons to the Care and Shelter Branch whenever EOCs, a REOC, or the SOC is activated.

The other major resource that NGOs and private-sector organizations provide is family reunification services. The ARC uses multiple family linking mechanisms (including the web-based Safe and Well system and call centers described below) to enable information to be shared among disaster survivors and their family and

friends following a disaster. Immediate needs of disaster survivors are addressed first; resources are directed toward family reunification activities as those resources become available.

Services such as temporary cellular sites, portable phone units, or temporary U.S. Postal Service mail boxes may be provided by private vendors and/or government to assist in family reunification. The Safe and Well system is an ARC web-based voluntary registry that can be used to share information about the welfare and general location of disaster survivors. The Safe and Well system is not proprietary to those staying in ARC shelters and can be used by anyone with Internet or phone access (or staying at non-ARC shelters).

Registration in the Safe and Well system occurs separately from ARC shelter registration. Therefore, not all ARC shelter residents are necessarily registered in the Safe and Well system. Similarly, an individual's registration in the Safe and Well system does not necessarily indicate that the individual is an ARC shelter resident. Because direct use of the Safe and Well system requires Internet connectivity, it is not likely to be immediately available at shelters following the scenario earthquake. Connectivity in ARC shelters is contingent upon accessibility of transportation routes.

5.2.6 State Resources

The SEP describes potential State resources for supporting local mass care and sheltering operations. State departments that support mass care and sheltering through EF-6 are described in **Section 3**. Their resources are requested through the Care and Shelter Branch of the SOC according to processes described in the SEP and the RECP.

According to the SEP, the HHSA leads EF-6. CDSS is the department in that agency that coordinates State support for the mass care and sheltering response through the Care and Shelter Branch of REOC and SOC.

Through its DOC, CDSS has access to resources within the department to support mass care and sheltering, including:

- Programs such as Emergency Food Assistance Program and Electronic Benefit Transfer for food and cash that provide a variety of targeted social services
- Limited caches of equipment such as special cots or wheelchairs to support shelter residents with access and functional needs, available through Cal EMA Office of Access and Functional Needs

Once activated by Cal EMA, CDSS and its Disaster Services Section staff assist in the mass care and shelter function by compiling information from Operational Areas and other sources that tracks shelter status and feeding services. Through EF-6, CDSS coordinates response to requests for State resources, supporting ARC in sheltering operations, and ensuring that the needs of emergency responders are being handled by the appropriate State agency.

5.2.6.1 VEST

The CDSS Disaster Services Section staff can be augmented with trained members of the Volunteer Emergency Services Team (VEST). VEST is composed of approximately 100 employees from various State departments who have volunteered for membership. Recruited, trained, and deployed by CDSS, VEST members may be used to assist at one of the REOCs to help coordinate mass care and shelter functions.

5.2.6.2 FAST Program

The CDSS DOC manages the State FAST program. The FAST program was established in 2008 to evaluate access and functional needs in local shelters. A FAST is a group of trained employees that can be deployed to assess the needs of the disaster victims with access and functional needs. The purpose of the FAST program is to provide a combination of government and nongovernment staff to conduct functional assessments as people with needs arrive at general population shelters, so that they can remain at the site.²¹ A limited number of counties also have FAST.

5.2.6.3 Medical Assistance

The CDPH and the EMSA are part of the HHSA and jointly manage the Medical Health Branch of the State-level response. The specific roles of these agencies are described in **Section 3**. Medical resources are accessed through the Medical Health Mutual Aid System described in the RECP. Medical resources include the equipment, services, staff, and organizations to meet people's medical needs that cannot be served in a general-population shelter. As described in **Section 3**, the resources of a disaster shelter are intended only to meet basic medical needs such as first aid or support for people who can otherwise independently provide for their own medically related, functional need.

5.2.7 Federal Resources for Care and Sheltering

FEMA maintains caches of mass care supplies in anticipation of the sudden surge in resource needs that arise immediately after a major disaster. Because of the expected lack of information in the first hours of local and State response operations, FEMA pushes mass care resources into the region ahead of formal resource requests. These commodities and supplies directly support local government shelters and displaced residents who shelter outside those facilities. Pushed resources may also include Federal staff to aid the State in assessments of shelter needs, structural safety for use as shelters, and interim housing alternatives. Details on how pushed Federal resources are activated and deployed can be found in **Section 5.3.3.1**.

²¹ Due to the recent establishment of FAST and the inconsistency in its early adoption by various counties, no estimate can be made of the number of teams currently in the place statewide or locally.

5.2.8 Resources To Support Animal Care and Sheltering

Some counties in the region (e.g., Contra Costa, Sonoma) have formed agreements with veterinary associations and groups to provide local medical care and assistance at animal shelters co-located with regular shelters. These associations are not necessarily responsible for operating the shelters but they provide critical staff support and expertise for animal care at shelters. As noted above, CARES identifies the State-level resources and the means by which these resources can be made available to help local government with animal issues during a disaster.

Other information about animal sheltering is available in Section 5 of the Bay Area UASI Guide for Shelter Operations after a Disaster, in the State Emergency Plan, and in Section 4.9 of the RECP Care and Shelter Subsidiary Plan.

5.3 Mass Care and Sheltering Operations

Section 4 contains a description of the communications systems that are crucial to providing mass care and sheltering. **Section 5.2** describes the resources available for these functions. This section describes those operational processes that responding entities follow as they fulfill their various roles and responsibilities using the communications systems and resources at their disposal. The rest of **Section 5.3** provides operational details for mass care and sheltering.

Section 5.3.1 through **5.3.3** provides an overview of mass care and sheltering operations, including event analysis and evaluation, establishment of shelters, and ongoing support of shelters.

5.3.1 Event Analysis and Evaluation

The primary event analysis activities in mass care and sheltering are listed below. **Section 5.1** previewed these activities, and **Section 5.4** provides a timeline for the following tasks related to them:

- Collect and consolidate damage assessment and other situational reports²²
- Assess and monitor the need for and availability of:
 - Spaces in shelters and staff to operate the shelters
 - Supplies to support operations at pickup points, shelters, mega-shelters, spontaneous shelters, and points of mass care service provision
 - Animal care and shelters
- Evaluate the need for and availability of other services to support sheltering activities (e.g., mental health services, medical evaluation services, child-care services, and security services)
- Notify State agencies with relevant roles and responsibilities that their participation and resources are required

²² Damage assessments may initially be based on pre-disaster impact modeling until field information is available.

- Coordinate with the REOC or SOC Law Enforcement Branch to assess the need for mass care support of evacuated jail populations

The anticipated shortfall of primary shelter space is verified by local governments and reported to the Operational Area EOC, REOC, SOC, and FEMA at the JFO, in accordance with SEMS and the RECP. Daily monitoring of shelter activity and ongoing assessments of housing and infrastructure damage continues in the weeks after the earthquake. Anticipation of the surge in shelter and evacuation needs, supported with current situational information, may help Operational Area EOCs and the REOC and SOC to mitigate the expected shelter resource shortfalls.

5.3.2 Establishment of Shelters

Shelters may be managed by local, State, and Federal government, CBOs, FBOs, or a combination of these entities with agreements to provide shelter services. Many but not all of these shelters are from the list of pre-designated shelter sites that are intended to be the priority locations for shelter establishment.

Establishing shelters requires the following actions:

- Mobilize local, State, and Federal resources for sheltering and supporting pickup points according to county needs.
- Prepare and disseminate public information
- Initiate systems for tracking the movement of shelter residents and reunifying households
- Monitor and track unmet needs
- Activate the providers of resources for animal shelters in the region

5.3.3 Ongoing Support of Shelters

As shelter residents are able to transition out of shelters, the following actions are taken to support shelters that continue to remain open:

- Coordinate establishment of individual assistance centers in counties with local, State, and Federal agencies (LACs)
- Resupply shelters with food, water, equipment, and support services such as sanitation
 - Collaborate with the Transportation Branch(es) and Debris Management Branch(es) at the EOCs to select routes, prioritize delivery or most-needed resources, and so on.
- Staff shelters with necessary personnel, including specialties such as security, sanitation, clerical/registration, logistics, and feeding
- Monitor and support counties to track shelters and shelter residents
- Support county efforts to close shelters and return residents to their homes or available housing

5.3.3.1 *Resource Pushing and Staging: Overview*

According to the CONPLAN, on notification of a catastrophic disaster in an urban center, both FEMA and the ARC immediately “push” pre-existing caches of commodities for disaster relief to staging areas close to the impacted area. These commodities include mass care and sheltering supplies in anticipation of shortfalls of these resources. Historically, these resource pushes have occurred before official local requests are made, meaning that resources are initially pushed into the impacted area based on pre-determined allocation percentages rather than on resource requests made through emergency management channels in the impacted area.

FEMA and the ARC pull from separate resource caches and generally, but not always, move resources separately into the impacted area. In this scenario, with limited access, FEMA and the ARC are likely to rely on many of the same resources to move the commodities into the impacted areas.

Resource pushing and staging—FEMA. The bulk of supplies being distributed come from FEMA, which pushes pre-existing caches of commodities for disaster relief to Federal operations staging areas and mobilization centers. Supplies are then staged until assessments are made as to where they are needed; FEMA may not deliver the commodities beyond the staging areas until the State requests the resources. State resource requests provide FEMA with information regarding designated State staging areas and PODs to best reach populations in need, but supplies are moved from staging areas based on assumptions about the situation status and without an accurate picture of conditions in the affected areas.

In accordance with the CONPLAN, a UCG of Cal EMA and FEMA coordinates State and Federal response operations in the region. FEMA may fill State resource requests by sending resources from a Federal operations staging area to a State staging area. FEMA-provided supplies may be delivered to State staging areas or distributed directly to local government, shelters, or other service delivery sites. State and local government representatives coordinate with FEMA logistics to accept some shipments directly. FEMA moves resources to the State-level staging area that is perceived to be closest to the affected area with best available local transportation systems to facilitate disaster relief supply distribution throughout the affected area. Likely candidates for this include Travis Air Force Base in Fairfield, and relatively unaffected cities such as Livermore in eastern Alameda County or King City in Kings County.

On arrival of supplies at State staging areas, FEMA uses its own assets, along with assistance from the National Guard, and State agencies with logistics capability to further move supplies into affected areas or PODs. However, National Guard air resources are in short supply because their primary tasks are lifesaving, rescue, and evacuation of severely injured people. Additionally, many National Guard assets are overseas and not available.

Resource pushing and staging—ARC. ARC initially pushes resources into the affected area for an earthquake of this magnitude based on pre-determined

allocation percentages, rather than on resource requests made from the affected area.

The ARC process for pushing national resources begins at ARC National Headquarters. Once a disaster occurs that is expected to exceed resources in ARC regional chapters, ARC operations management staff members quickly assess the potential scope of the needs and estimate the service delivery demands. This is translated into the estimated number of out-of-area staff, mobile kitchens, trailers with shelter equipment, packaged meals, communications and computer equipment, etc., that need to be moved into the area. ARC operations management either places the resources on standby or, if situation information is solid, ships them to staging areas.

As with FEMA, the ARC typically establishes staging areas for personnel and supplies and then assesses and responds to local needs with supplies. The ARC attempts to establish a facility as close as possible to the State- and/or FEMA-level staging area, to facilitate the movement of supplies out of the staging area and into an ARC facility where ARC staff can continue moving supplies into and within affected areas.

ARC resources also come from around the country, and the ARC may consolidate shipments with FEMA shipments to move ARC supplies more quickly. Once the material arrives at the staging sites, it is allocated and moved forward, based on priorities established by the ARC management team on the ground (working with State/local government to gain access to the impacted area and deliver the materials). If commodities must be moved by air or water, generally the ARC partners with State/Federal agencies for support. Logistical staging areas have also been staffed by the National Guard in the past, and similar participation in the scenario disaster is expected.

Normally, the ARC arranges its own transportation, using commercial trucking and air carriers. However, because of the impact on normal operations in a disaster of this scale, the ARC is likely to make transportation requests from the State and FEMA for access and security as well as movement support. There is likely to be a need for the National Guard's specialized transportation assets.

Movement of resources into affected areas. As resources are moved closer to the affected area, resource movement becomes more challenging because of damage to and debris on transportation routes, restricted airspace, and a lack of information. Cal EMA is beginning to plan for State-level logistical support for moving Federal supplies into affected areas following a catastrophic earthquake, but currently the concept is not fully developed.

Air assets are necessary, as many roads are impassable. Because fixed-wing landing sites need to be inspected before aircraft can land, helicopters—which can land on more uneven terrain than fixed-wing aircraft can—play an important role in resource distribution into the affected areas. However, National Guard air resources are in short supply because their primary tasks are lifesaving, rescue, and

evacuation of severely injured people. Also, many National Guard assets are overseas and not available.

5.3.3.2 Supporting Spontaneous Shelters

As assumed above, spontaneous shelters are opened in an unplanned manner by volunteer organizations or by groups of individuals such as neighbors. The locations, sizes, needs, and relief activities of these shelters may not be known by local governments. Spontaneous shelters may not initially meet ARC standards. However, they provide a valuable service in the immediate hours after an earthquake because they are opened by a CBO that wants to fulfill a need that government may not yet be available to meet.

Though not initially sanctioned, local governments may take the following actions to include spontaneous shelters into the larger network of government-supported shelters:

- Leave operations and management of a spontaneous shelter as it has been and support the independent shelter by providing needed information and resources
- Work with the sheltering entity to incorporate the shelter more formally into the sheltering system and offer management of such a shelter where appropriate; then operate the shelter according to the system described throughout this Plan
- Close the shelter and either absorb the residents into existing formal shelters or assist them in being transported out of the affected region and into interim housing
- Ensure that the status of shelters that remain open is entered in the NSS; seek coordination with ARC and other agencies to support those shelters

5.3.3.3 FAST Program's Operational Support of Shelters

The FAST program was described earlier as being a resource for evaluating the ability of access and functional needs to be met at shelters. When requested, FAST is deployed as shelters are opened and remains in the shelters until it is determined that it is no longer needed. FAST may transfer to other shelters and return to shelters as needed or requested. FAST works directly with shelter personnel and other emergency response workers to assist in identifying and meeting essential functional needs so that people in need can maintain their health, safety, and independence during disasters. FAST identifies the need for durable and consumable medical supplies and prescribed medications to support persons who need assistance with essential activities of daily living

FAST monitors the support for essential functional needs that is provided to individuals who have been assessed and determined to be safely accommodated in a shelter. Such accommodations include the following:

- Ensure that essential prescribed medications are obtained

- Obtain essential durable and consumable medical supplies
- Offer personal help with activities of daily living such as managing non-acute medical and chronic conditions in order to maintain the independence of individuals
- Support individuals with cognitive limitations
- Offer interpreters and other communications support to individuals who require communications assistance such as those with visual and hearing disabilities and limitations or language/cultural limitations
- Assist individuals who have conditions that affect mobility
- Assist individuals with chronic but stable respiratory conditions such as heart disease, asthma, emphysema, or allergies
- Assist individuals with temporary limitations such as recovery from surgery, accidental injuries, or pregnancy
- Manage and coordinate processes that address requirements to maintain functional/medical support operations

5.3.4 Transition from Shelters to Interim Housing

The transition from shelters to interim housing involves demobilizing and closing shelters, identifying interim housing alternatives, providing individual housing assistance, and establishing interim housing. It also includes assisting counties and cities in providing services (e.g., mental health services, social services, and housing assistance services) to residents leaving the shelters. See the Regional Catastrophic Earthquake Interim Housing Plan for more information.

5.3.5 Demobilization of Shelters

Demobilization of shelters begins with the consolidation of shelters as their residents depart, then the actual closing of shelters in areas where residents are able to return to their homes or transition to interim housing. Coordinating with the local, county, State, Federal, and private agencies and organizations serving shelter residents prevents service gaps or duplication of services.

5.4 Response Timeline

A comprehensive response timeline that shows the phase, tasks to be completed, the objectives they support, and the entities involved is shown in **Table 5-1**.

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Table 5-1. Response timeline for mass care and sheltering operations.

Time Frame	Line	Operations	Objective	Coordinating Entity	Supporting Entity	Details/Comments
E to E+72h	1	Collect initial windshield surveys of damaged neighborhoods	Develop situational awareness of the current and ongoing need for shelter and other mass care operations in the general population	Local governments	Local first responders, ARC	Also: FASTs, ESF #1, if available
	2	Collect assessments of damaged roads, bridges, overpasses, runways, and other critical transportation infrastructure	Develop situational awareness of the current and ongoing need for shelter and other mass care operations in the general population	Operational Area EOC Transportation Branch	N/A	N/A
	3	Activate the REOC or SOC coordination structures	Develop situational awareness of the current and ongoing need for shelter and other mass care operations in the general population	Cal EMA	N/A	N/A
	4	Establish communications with Operational Areas and Cal EMA personnel in region	Develop situational awareness of the current and ongoing need for shelter and other mass care operations in the general population	Cal EMA	N/A	N/A
	5	Collect situational information from activated local EOCs	Develop situational awareness of the current and ongoing need for shelter and other mass care operations in the general population	Cal EMA	ARC, Care & Shelter Branch	N/A
	6	Begin to deliver electronic, written, and/or verbal reports to the EOCs, REOC, and SOC, RRCC (if operational) with whatever technologies are available and serviceable at that time	Provide daily situational status updates and reports	Cal EMA	N/A	N/A
	7	Begin projections of damage assessments from U.S. Geological Survey, California Geological Survey, Northern California Earthquake Center, and others	Develop situational awareness of the current and ongoing need for shelter and other mass care operations in the general population	Cal EMA	ARC, Care & Shelter Branch	N/A
	8	Obtain information on the locations, numbers, and demographics of displaced and potentially displaced populations	Develop situational awareness of the current and ongoing need for shelter and other mass care operations in the general population	Operational Areas and local governments	Care & Shelter Branch ARC	Care & Shelter collects this information from Operational Areas and local government
	9	Collect summaries of first-responder reports from Operational Areas to identify the magnitude and extent of structural damage, fires, broken water mains, and other infrastructure	Develop situational awareness of the current and ongoing need for shelter and other mass care operations in the general population	Cal EMA	Law & Fire Mutual Aid	N/A
	10	Collect other reported information from Operational Areas on damage to schools, hospitals, office complexes, malls, and other places with high concentrations of people	Develop situational awareness of the current and ongoing need for shelter and other mass care operations in the general population	Cal EMA	Local first responders, Operational Areas and local governments	N/A
	11	Begin formal safety inspections by county inspectors, State Assessment Team members, and others; red-, yellow-, or green-tag buildings as appropriate	Develop situational awareness of the current and ongoing need for shelter and other mass care operations in the general population	DGS	Operational Areas, OSHPD, SAP	N/A
	12	Begin consolidating all of the above information to develop a region-wide awareness of total demand	Develop situational awareness of the current and ongoing need for shelter and other mass care operations in the general population	Cal EMA	Operational Areas, ARC	N/A
	13	Finalize and send pre-scripted orders and requests for Federal support	Develop situational awareness of the current and ongoing need for shelter and other mass care operations in the general population	Cal EMA	ESF #6	N/A
	14	Assess the condition and capacity of pre-designated staging areas for incoming supplies and equipment in and around the affected area	Develop situational awareness of the current and ongoing need for shelter and other mass care operations in the general population	JFO Logistics Section	FEMA	N/A
	15	Estimate current number of people needing sheltering services and anticipate capability for Operational Area to support sheltering needs	Evaluate the need to open shelters for humans and animals	Operational Areas	ARC, local governments	Care & Shelter Branch collects this information from Operational Areas and local government
	16	Collect estimates of access and functional needs to project equipment and modifications needed to support shelter residents	Evaluate the need to open shelters for humans and animals	Operational Areas	Care & Shelter Branch, ARC	N/A
	17	Update initial estimates of demand for shelter on multiple spatial scales: neighborhood, city, county, and regional	Evaluate the need to open shelters for humans and animals	Operational Areas and local governments,	CGS, ARC, Care & Shelter Branch	Care & Shelter collects this information from Operational Areas and local government
	18	Evaluate need for ancillary sheltering services, including mental health, medical evaluation, childcare, site management, and security	Evaluate the need to open shelters for humans and animals	Operational Areas and local governments,	CDPH and FAST assessment teams, EMSA, DDS, CDCR, CBO/VOAD resources	Care & Shelter collects this information from Operational Areas and local government
	19	Develop and distribute estimated total shelter demand by location	Evaluate the need to open shelters for humans and animals	Operational Areas and local governments	ARC	Care & Shelter collects this information from Operational Areas and local government

Table 5-1. Response timeline for mass care and sheltering operations.

Time Frame	Line	Operations	Objective	Coordinating Entity	Supporting Entity	Details/Comments
E to E+72h (cont.)	20	Coordinate reports of shelter demand and shortfall of space among ARC, the REOC and SOC, and all other shelter-related organizations	Evaluate the current shelter resource capabilities of the agencies with mass care and shelter responsibilities	Care & Shelter Branch	ARC, Operational Areas	N/A
	21	Notify all local government agencies with roles in care and shelter about the scale and location of demand for shelter	Notify all agencies that support shelter and other mass care operations with staff and supplies of the need to provide those resources	Operational Areas	Care & Shelter Branch	Care & Shelter provides suggested list of resources
	22	Notify ARC and other nongovernmental mass care and sheltering organizations about scale and location of demand for shelter	Notify all agencies that will support shelter and other mass care operations with staff and supplies of the need to provide those resources	Operational Areas and local governments, EF-6	Care & Shelter Branch	N/A
	23	Notify California agencies and Federal government agencies about extent of damage and degree of demand for shelter	Notify all agencies that support shelter and other mass care operations with staff and supplies of the need to provide those resources	Cal EMA	N/A	N/A
	24	Integrate regional information regarding damage to structures suitable for or designated as shelters	Coordinate initial damage assessment and other situational reports related to mass care and sheltering	Cal EMA	N/A	N/A
	25	Obtain rosters/databases of ARC-listed shelters, city- or county-listed shelters, and other sources of known or designated shelter buildings and verify assessments of facilities with Operational Areas	Evaluate the current shelter resource capabilities of the agencies with mass care and shelter responsibilities	Care & Shelter Branch	Cal EMA, Operational Areas, ARC	Cal EMA regional ESCs in Operational Areas
	26	Contact the local ARC chapters in the affected area to request that they open shelters and begin operations	Coordinate initial damage assessment and other situational reports related to mass care and sheltering	Operational Areas and local governments	ARC	N/A
	27	Evaluate condition of pre-designated pickup points, including transportation routes to the sites	Coordinate initial damage assessment and other situational reports related to mass care and sheltering	Transportation Branch	N/A	N/A
	28	Designate the pre-arranged sites throughout the region to use for evacuation departure and reception points	Coordinate initial damage assessment and other situational reports related to mass care and sheltering	Transportation Branch	EF-6, ARC	N/A
	29	Collect estimates of the number of shelterees with access and functional needs through analysis of requests for types of equipment and other resources for categories of need	Coordinate initial damage assessment and other situational reports related to mass care and sheltering	Operational Area	Care & Shelter Branch, CDPH, CBO/VOAD resources	FAST and other State assessment teams may support as needed
	30	Collect summaries of city, county, and ARC safety assessments and/or inspections of buildings or other structures to be used as shelters	Open pickup points for humans and animals	Local governments	Operational Areas, DGS	N/A
	31	Notify Operational Areas of the pickup points to be opened in their jurisdiction	Open pickup points for humans and animals	REOC Transportation Branch	Care & Shelter Branch, local government and Operational Areas	N/A
	32	Notify supporting agencies for mass care support for pickup points as requested by Operational Areas	Open pickup points for humans and animals	Care & Shelter Branch	ARC	N/A
	33	Begin requesting additional staff Federal agencies and other organizations to support Operational Area inspection teams; begin "redirect" of state employees	Open pickup points for humans and animals	Cal EMA	Governor's Office, HHSA	EF-6 and Governor's Office can redirect State employees; Cal EMA coordinates Mutual Aid requests
34	Revise estimates of available shelter space in the region as a whole (from pre-event capacity minus damaged/unsafe facilities)	Coordinate initial damage assessment and other situational reports related to mass care and sheltering	Operational Areas and local governments	Care & Shelter Branch, ARC	Care & Shelter collects this information from Operational Areas and local government	
35	Evaluate the affected region's capability of sheltering organizations to staff and supply shelter facilities and pickup points, given the impacts of the event.	Evaluate the current shelter resource capabilities of the agencies with mass care and shelter responsibilities	Operational Areas and local governments	Care & Shelter Branch, Transportation Branch	Care & Shelter collects this information from Operational Areas and local government	
36	Determine , from regional summaries, how many shelters and beds therein can be opened and by when	Evaluate the current shelter resource capabilities of the agencies with mass care and shelter responsibilities	Operational Areas and local governments	ARC, Care & Shelter Branch	Care & Shelter collects this information from Operational Areas and local government	
37	Develop a plan that projects the expected opening dates and capacities of pickup points and regular shelters throughout the affected region	Evaluate the current shelter resource capabilities of the agencies with mass care and shelter responsibilities	Care & Shelter Branch	JFO, Cal EMA	N/A	

Table 5-1. Response timeline for mass care and sheltering operations.

Time Frame	Line	Operations	Objective	Coordinating Entity	Supporting Entity	Details/Comments
E to E+72h (cont.)	38	Aggregate projected timelines of shelter openings (as reported by Operational Areas) and distribute to the other Operational Area EOCs, Cal EMA, and other appropriate agencies or organizations	Evaluate the current shelter resource capabilities of the agencies with mass care and shelter responsibilities	Care & Shelter Branch	N/A	N/A
	39	Provide region-wide projected shelter openings (based on information from Operational Areas) and locations of pickup points to Transportation Branch	Evaluate the ability of the road network to move people and supplies into shelters	Care & Shelter Branch	Transportation Branch	Transportation Branch should incorporate into road restoration plans
	40	Conduct a gap analysis of road availability vs. priorities for road clearance and route restoration	Evaluate the ability of the road network to move people and supplies into shelters	Transportation Branch	Cal EMA, Care & Shelter Branch	N/A
	41	Collect updates on priority roadway clearance for each operational period	Evaluate the ability of the road network to move people and supplies into shelters	Transportation Branch	Cal EMA, Care & Shelter Branch	N/A
	42	Coordinate the movement into the affected areas of State staff and supplies necessary for mass care support of pickup points	Open pickup points for humans and animals	Care & Shelter Branch	ARC, Transportation Branch	N/A
	43	Coordinate communications systems among pickup points, EOCs, the REOC and SOC, and ARC	Open pickup points for humans and animals	Cal EMA	ARC, EF-6, Transportation Branch	Cal EMA is lead for communications from locals EOCs through Region to State (and eventually Federal); and with Transportation Branch to coordinates with evacuation and mass care at pickup points
	44	Formulate agreements for mass care support needed at additional pickup points outside the affected region	Open pickup points for humans and animals	Cal EMA	ARC, Care & Shelter Branch	N/A
	45	Coordinate a common public information message regarding locations of shelter and pickup points	Open pickup points for humans and animals	JFO JIC	Operational Areas	N/A
	46	Identify necessary supplies and equipment needed to support the sheltering operation, identify the best source and initiate the request to have the supplies/equipment provided where needed	Notify all agencies that support shelter and other mass care operations with staff and supplies of need to provide those resources	Operational Areas and local governments, Cal EMA	ARC	N/A
	47	Evaluate need for these same supplies for people who are self-sheltering or staying at spontaneous shelters	Notify all agencies that support shelter and other mass care operations with staff and supplies of need to provide those resources	Operational Areas and local governments	ARC, Care & Shelter Branch	N/A
	48	Mobilize State resources for shelter and pickup points according to county needs, including supplies and equipment to make facilities accessible to those with access and functional needs, security measures, site managers, tracking systems to register shelter residents and evacuees, trained personnel, vendor agreements, FAST and other resident evaluation and support resources. (Resources depend on availability and receipt of requests)	Notify all agencies that support shelter and other mass care operations with staff and supplies of need to provide those resources	Care & Shelter Branch	Operational Areas, Local FASTs where appropriate	Not all counties participate in the FAST program and do not have functioning teams
	49	Provide a prioritized list of needed supplies, staff, and services to these organizations that support shelter operations	Notify all agencies that support shelter and other mass care operations with staff and supplies of need to provide those resources	Care & Shelter Branch	Operational Areas	N/A
	50	Estimate total demand for animal shelters	Evaluate the need to open shelters for humans and animals	Operational Areas and local governments, CDFA	County Animal Control Agencies	N/A
	51	Activate the California Animal Response in Emergency System (CARES) program	Open pickup points for humans and animals	CDFA	N/A	N/A
52	Support county coordination with Veterinarian organizations and other animal-related organizations to begin processes for animals that are parallel to those for humans	Open pickup points for humans and animals	CDFA	County Animal Control Agencies	N/A	
53	Develop public messages to direct companion animals from general human population shelters to animal shelters once they are established	Open pickup points for humans and animals	CDFA	Cal EMA JIC, County Animal Control Agencies	N/A	
54	Support county animal shelter activities with expertise and resources, if available.	Evaluate the need to open shelters for humans and animals	CDFA	N/A	N/A	

Table 5-1. Response timeline for mass care and sheltering operations.

Time Frame	Line	Operations	Objective	Coordinating Entity	Supporting Entity	Details/Comments
E to E+72h (cont.)	55	Sort the hospitals, care facilities, and assisted living communities into categories of damage, based on info from regional situation reports	Evaluate the need to support hospitals and nursing homes as they shelter their populations at the time of the event	EMSA	CDPH, OSHPD	Remove severely damaged facilities from further consideration because they are invoking their own evacuation or patient-transfer plans
	56	Compile locations of damaged hospitals, care facilities, and assisted living communities, with estimated numbers of residents affected	Evaluate the need to support hospitals and nursing homes as they shelter their populations at the time of the event	EMSA, CDPH	Care & Shelter Branch	Initial assessments from Operational Areas and local governments; State-level agencies compile and evaluate
	57	Assess access and functional needs of residents in damaged hospitals, care facilities, and assisted living communities	Evaluate the need to support hospitals and nursing homes as they shelter their populations at the time of the event	EMSA, CDPH	Care & Shelter Branch	FAST and other assessment teams; coordinate with county assessments
	58	Sort the prisons, jails, and other correctional facilities into categories of damage, based on regional situation reports	Evaluate the need and ability to shelter jail populations	Law Enforcement Mutual Aid	N/A	Apply head counts at each facility to develop estimates of total demand
	59	Invoke Law Mutual Aid system to begin mobilizing extra-regional resources for securing jails and/or transporting their populations	Evaluate the need and ability to shelter jail populations	Law Enforcement	Dept. of Corrections	Coordinate with the California Department of Corrections to begin assisting local or county law enforcement bodies with prisoner transfer
	60	Evaluate Operational Area ability to support populations in minimally or moderately damaged facilities that are sheltering in place	Evaluate the need to support hospitals and nursing homes as they shelter their populations at the time of the event	Operational Areas and local governments	Care & Shelter Branch	This involves various REOC/SOC sections and related State agencies
	61	Evaluate Operational Area ability to support populations in minimally or moderately damaged jail facilities that are sheltering in place	Evaluate the need and ability to shelter jail populations	Law Enforcement	Care & Shelter Branch, Dept. of Corrections	N/A
	62	Assess access and functional needs among prisoners to be relocated as well as the capacity of receiving facilities to meet those needs	Evaluate the need and ability to shelter jail populations	Law Enforcement	Cal EMA OAFN	N/A
	63	Establish situation reporting among ARC Operations, FEMA, the REOC, and SOC, RRCC (if operational) and all other shelter-related organizations in the region	Coordinate initial damage assessment and other situational reports related to mass care and sheltering	Cal EMA	Care & Shelter Branch	RIMS and situation reports; working through previously activated regional- and State-level functions
	64	Monitor unmet access and functional needs of residents in shelters	Coordinate initial damage assessment and other situational reports related to mass care and sheltering	Care & Shelter Branch	ARC, , VOAD	Operational Area situation reports
	65	Monitor the locations where affected populations are gathering and anticipate locations where they will gather	Coordinate initial damage assessment and other situational reports related to mass care and sheltering	Operational Areas and local governments	Care & Shelter Branch, ARC, VOAD, CBOs	N/A
	66	Monitor the need for separate medical shelters to care for incarcerated people whose critical medical needs cannot be met in general population shelters	Evaluate the need and ability to shelter jail populations	EMSA	Care & Shelter Branch	N/A
	67	Deliver electronic, written, and/or verbal reports to the EOCs, REOC, and SOC, RRCC (if operational) with whatever technologies are available and serviceable at that time	Provide daily situational status updates and reports	Cal EMA	N/A	N/A
	68	Distribute those reports more widely as required	Provide daily situational status updates and reports	Cal EMA	N/A	N/A
E+72h to E+14d	69	Establish a report-retention system and implement/apply it regularly	Provide daily situational status updates and reports	Cal EMA	N/A	N/A
	70	Implement the planned systems and technologies for communications after the EOCs are activated (to begin during the E to E+72h phase, but may take several days to be fully functional)	Establish communications systems between mass care sites and EOCs	Cal EMA	Care & Shelter Branch, DGS	N/A
	71	Coordinate local responses with unified State/Federal Emergency Function/ESF #6 structure at the SOC/JFO, when it or they are open and functioning	Establish communications systems between mass care sites and EOCs	Cal EMA	FEMA, EF-6	N/A
	72	Collect and consolidate damage assessment and other situational reports from Operational Areas, which include similar information as in the E to 72-hour phase	Initiate damage assessment and building inspections of shelter sites	Cal EMA	CGS	Include projections of damage assessments from U.S. Geological Survey, California Geological Survey, Northern California Earthquake Center, and others

Table 5-1. Response timeline for mass care and sheltering operations.

Time Frame	Line	Operations	Objective	Coordinating Entity	Supporting Entity	Details/Comments
E+72h to E+14d (cont.)	73	Continue formal safety inspections by county inspectors, State Assessment Team members, and others; red-, yellow-, or green-tag buildings, as appropriate	Initiate damage assessment and building inspections of shelter sites	DGS	OSHPD, Building & Construction	N/A
	74	Continue integrating and coordinating all above information (through the EOCs) to develop local and region-wide awareness of total demand	Initiate damage assessment and building inspections of shelter sites	Care & Shelter Branch	JFO	N/A
	75	Monitor changing shelter space capacity throughout the region and estimate magnitude of local shelter space shortfalls	Initiate damage assessment and building inspections of shelter sites	Care & Shelter Branch	N/A	Consolidate Operational Area information regarding damage to structures suitable for or designated as shelters
	76	Report results of aggregated demand for shelter and shortfall of space to the ARC, Cal EMA, and to any/all other shelter-related organizations	Initiate damage assessment and building inspections of shelter sites	Care & Shelter Branch	ARC	Based on information provided by Operational Areas and local governments in earlier tasks
	77	Establish contact with the ARC Disaster Relief Operation to coordinate shelter services in the affected area	Begin to open additional shelters	Care & Shelter Branch	ARC	N/A
	78	Maintain communications about shelter availability and shortfall of space among the ARC Disaster Relief Operation, and other shelter-related organizations	Begin to open additional shelters	Care & Shelter Branch	JFO	N/A
	79	Coordinate the mobilization of State shelter support staff on their deployment to assignment location with the accepting jurisdiction	Begin to open additional shelters	Care & Shelter Branch	CDPH, Cal Volunteers	N/A
	80	Establish housing and feeding systems for State staff supporting shelter operations in the region	Begin to open additional shelters	JFO	Cal EMA	N/A
	81	Monitor and support FEMA operations that push mass care supplies to staging areas outside affected area even before request	Support people who choose not to use shelters by providing information and bulk supplies to the extent possible	JFO	Cal EMA	Activities are managed by Unified Command at the JFO
	82	Coordinate logistics of State staging areas in the affected area	Support people who choose not to use shelters by providing information and bulk supplies to the extent possible	JFO	Cal EMA	Care & Shelter mostly in a data-collection role in this task
	83	Establish suitable PODs to receive pushed commodities	Support people who choose not to use shelters by providing information and bulk supplies to the extent possible	JFO	Cal EMA	FEMA staging areas and possible PODs are pre-identified
	84	Arrange for systems and staff to be present and ready to distribute the caches of supplies	Support people who choose not to use shelters by providing information and bulk supplies to the extent possible	JFO	Cal EMA	Care & Shelter mostly in a data-collection role in this task
	85	Receive and distribute "pushed" Federal supplies of food, etc.	Operate mass feeding sites	California National Guard	Care & Shelter Branch	N/A
	86	Support allocation of supplies to suitable State PODs; Coordinate delivery of mass care supplies between Federal/State staging areas to local PODs	Operate mass feeding sites	SOC	Care & Shelter Branch	N/A
	87	Utilize care and shelter situation reports and projection of shelter openings to develop and implement alternate sheltering options	Begin to open additional shelters	ARC, JFO, Operational Areas and local governments	Care & Shelter Branch	N/A
	88	Coordinate allocation of stored and received caches of food, supplies, equipment, etc., with ARC, CDSS, other organizations	Begin to open additional shelters	Cal EMA Logistics Section	ARC, VOAD	Care & Shelter mostly in a data-collection role in this task
	89	Identify regional shelter locations that require transportation access	Provide information to the Construction/Engineering Branch about routes that must be opened to support shelter operations	Care & Shelter Branch	Transportation Branch	Care & Shelter mostly in a data-collection role in this task
	90	Develop a list of priority transportation routes to provide access for large concentrations of people who seek shelter in their community	Provide information to the Construction/Engineering Branch about routes that must be opened to support shelter operations	Cal EMA, Transportation Branch	ARC, Care & Shelter Branch	N/A
91	Activate shelter resident registration and tracking systems at shelters and pickup points	Begin to open additional shelters	Operational Areas and local governments	ARC, shelter organizations, Transportation Branch	Use regional information to support assistance programs; ensure confidentiality	
92	Track receiving and processing of those people seeking shelter at emergency shelters and pickup points	Begin to open additional shelters	Operational Areas and local governments	ARC	N/A	

Table 5-1. Response timeline for mass care and sheltering operations.

Time Frame	Line	Operations	Objective	Coordinating Entity	Supporting Entity	Details/Comments
E+72h to E+14d (cont.)	93	Coordinate shelter population tracking information among the REOC and SOC, ARC, and others to report and track progress in opening shelters and managing their capacity, supplies, resupply, etc.	Begin to open additional shelters	Care & Shelter Branch	ARC, JFO, other State agencies in shelters	N/A
	94	Report all progress and problems related to shelter operations to relevant agencies using appropriate communications systems	Begin to open additional shelters	Care & Shelter Branch	N/A	N/A
	95	Assess locations where shelter shortfalls, spontaneous shelters, and other needs exist;	Begin to identify locations for mass feeding sites	Operational Areas and local governments	Care & Shelter Branch, ARC, VOAD	N/A
	96	Identify sites near pickup points, shelters, and PODs to stage supplies for distribution	Begin to identify locations for mass feeding sites	Operational Areas and local governments, Cal EMA Logistics Section	DGS	N/A
	97	Monitor information collected on numbers and types of companion animals present at pickup points to refine earlier estimates of total demand for animal shelters	Initiate animal shelters	CDFA	Care & Shelter Branch, ARC	Further amend those estimates with collected data on service animals that are allowed to be in shelters
	98	Support shelters for companion animals co-located with shelters (not pickup points)	Initiate animal shelters	CDFA	Care & Shelter Branch, ARC, Operational Areas	Implement CARES based on identified issues in Operational Area situation reports
	99	Support county-activated veterinarian programs to continue moving equipment, supplies, cages, medicines, etc., into position near the human shelters	Initiate animal shelters	CDFA	County Animal Control Agencies	Implementation of CARES
	100	Support county-activated plans and systems for registration, tracking, providing security, and managing sites for pet care	Initiate animal shelters	CDFA	ARC	N/A
	101	Monitor active animal shelters throughout the region that are sheltering companion animals	Initiate animal shelters	CDFA	County Animal Control Agencies	N/A
	102	Support development of public information regarding animal shelter locations and the rights and responsibilities of the owners that use them	Initiate animal shelters	CDFA	SOC JIC	N/A
	103	Continue to obtain information on locations, sizes, and needs of shelter populations throughout the region	Monitor the capability of currently open shelters to serve their residents	Operational Areas	ARC, Care & Shelter Branch	Situation awareness compiled through the REOC/SOC.
	104	Monitor implementation of shelter resident registrations and tracking systems	Monitor the capability of currently open shelters to serve their residents	Operational Areas and local governments	ARC	Protect confidentiality.
	105	Evaluate regional shelter locations and space shortfalls on a regular basis	Monitor the capability of currently open shelters to serve their residents	Operational Areas and local governments	Care & Shelter Branch, ARC	Track and evaluate fallback options for those who would have opted to stay at a shelter but for whom no space was available
	106	Verify that Federally and State-supplied commodities and equipment to support care and shelter activities are being distributed efficiently and as planned	Monitor the capability of currently open shelters to serve their residents	Care & Shelter Branch	FEMA, CDFA, U.S. Department of Energy, Cal EMA	N/A
	107	Verify that Federally and State-supplied goods required to meet the full range of access and functional needs are being distributed efficiently and as planned	Monitor the capability of currently open shelters to serve their residents	Care & Shelter Branch	FEMA, Cal EMA	N/A
	108	Verify adequate shelter staffing levels and enhance where needed	Monitor the capability of currently open shelters to serve their residents	Operational Areas and local governments	ARC	N/A
	109	Identify needs for specialized staff and their skills to meet needs for security, site management, animal support, and access and functional needs	Monitor the capability of currently open shelters to serve their residents	Operational Areas and local governments	Cal EMA, CDPH, Departments of Public Health (and/or Safety)	These entities must coordinate with local CBOs/VOADs to do this. The REOC/SOC Care and Shelter Branch may support resource requests based on this information
	110	Monitor the environmental and public health conditions of shelters and their residents	Monitor the capability of currently open shelters to serve their residents	Operational Areas and local governments, CDPH, and Medical Health Mutual Aid	Care & Shelter Branch, ARC, Cal EMA	N/A

Table 5-1. Response timeline for mass care and sheltering operations.

Time Frame	Line	Operations	Objective	Coordinating Entity	Supporting Entity	Details/Comments
E+72h to E+14d (cont.)	111	Monitor kitchen sanitation and food safety in fixed and mobile feeding operations throughout the affected region.	Monitor the capability of currently open shelters to serve their residents	Operational Areas and local governments, CDPH	ARC, VOAD	N/A
	112	Continue to deliver daily situation reports to the REOC, SOC, JFO), ARC programs, and other sheltering organizations on all conditions and progress in addressing problems	Monitor the capability of currently open shelters to serve their residents	Cal EMA	Care & Shelter Branch, ARC	N/A
	113	Evaluate collected data on shelter locations and the size of shelter space shortfalls	Estimate need to implement alternative sheltering strategies (e.g., soft-sided sheltering)	Operational Areas and local governments	Care & Shelter Branch, ARC	N/A
	114	Investigate regional locations, numbers, and quality of spontaneous shelters, self-provided shelters, and unofficial shelters provided by FBOs or CBOs	Estimate need to implement alternative sheltering strategies (e.g., soft-sided sheltering)	Operational Area and local governments	Care & Shelter Branch, ARC, CDPH, EMSA	N/A
	115	Monitor the ability of existing alternative shelter to meet access and functional needs	Estimate need to implement alternative sheltering strategies (e.g., soft-sided sheltering)	Operational Areas and local governments	Care & Shelter Branch, ARC	N/A
	116	Implement alternative sheltering strategies, to the extent possible	Estimate need to implement alternative sheltering strategies (e.g., soft-sided sheltering)	Operational Areas and local governments	ARC, VOAD, ESF 6	Care and Shelter Branch lead convenes a MACS to address issues
	117	Obtain lists of State-owned sites identified as being suitable (flat, free of debris, public lands, near roads, dry, etc.)	Estimate need to implement alternative sheltering strategies (e.g., soft-sided sheltering)	Cal EMA	ARC, DGS	N/A
	118	Evaluate State-owned sites for availability and suitability (i.e., accessibility, proximity, size, etc.) in current situation	Estimate need to implement alternative sheltering strategies (e.g., soft-sided sheltering)	Operational Areas and local governments, Cal EMA	ARC, DGS	N/A
	119	Match potential locations with existing alternative shelter options (tent cities, warehouses, mega-shelters, etc.) for maximum suitability	Estimate need to implement alternative sheltering strategies (e.g., soft-sided sheltering)	Operational Areas and local governments, EF-6	N/A	N/A
	120	Assess transportation/evacuation options to prioritize sites	Estimate need to implement alternative sheltering strategies (e.g., soft-sided sheltering)	Operational Areas	Transportation Branch	N/A
	121	Estimate the ability to meet shelter space shortfall in each county/Operational Area through combinations of alternative sheltering methods	Estimate need to implement alternative sheltering strategies (e.g., soft-sided sheltering)	Operational Areas and local governments	Care & Shelter Branch, ARC	N/A
	122	Evaluate the need to activate one or more MAC groups and select agencies/organizations to participate	Establish a MAC group for shelter operations, as needed	JFO	Agencies participating in Care and Shelter Task Force	Based on issues raised in situation reports and implementation of tasks above
	123	Establish the MAC group(s) as necessary	Establish a MAC group for shelter operations, as needed	JFO	Task Force agencies	The Task Force may identify the need for a Shelter Assessment Team to help prioritize resource requirements and resolve critical delivery issues
	124	Convene initial meeting of MAC group(s) to identify problem, set targets and desired outcomes, and make plans to address the relevant issues	Establish a MAC group for shelter operations, as needed	JFO	Task Force agencies	N/A
	125	Mobilize trained personnel to evaluate mental and physical health of residents	Evaluate the access and functional needs of shelter residents	CDMH	Care & Shelter Branch (FAST), ARC, EMSA	FAST, the Medical Health Mutual Aid system, and other State resources should be used for these steps
	126	Mobilize FASTs to assess need for supervision, assistance in maintaining independence, etc., for shelter residents	Evaluate the access and functional needs of shelter residents	Care & Shelter Branch	CDPH	N/A
	127	Coordinate with Transportation Branch to assess the access and functional needs of the people using the evacuation systems	Evaluate the access and functional needs of shelter residents	Operational Areas and local governments, Cal EMA	Transportation Branch	N/A
	128	Refine initial estimates of magnitude of each access and functional need category (CMIST) into more accurate counts	Evaluate the access and functional needs of shelter residents	Operational Areas and local governments	CDPH, ARC	May not be possible this soon in the most heavily-impacted areas, but should occur as soon as possible

Table 5-1. Response timeline for mass care and sheltering operations.

Time Frame	Line	Operations	Objective	Coordinating Entity	Supporting Entity	Details/Comments
E+72h to E+14d (cont.)	129	Use ARC intake forms and the Medical Health Mutual Aid System to speed the assistance of people with acute medical needs	Identify shelter residents with critical medical conditions who cannot be served in general population shelters and develop alternate strategies to address those conditions (e.g., evacuation)	Operational Areas and local governments, CDPH	Care & Shelter Branch	Base actions on analysis of access and functional needs; explore use of CAN or federal case management system under development; coordinate with 211 system
	130	Correlate shelter registration and other tracking database(s) with medical assessments	Identify shelter residents with critical medical conditions who cannot be served in general population shelters and develop alternate strategies to address those conditions (e.g., evacuation)	Operational Areas and local governments, CDPH	Care & Shelter Branch	Protect confidentiality of shelter residents as information is shared among agencies
	131	Compile county and region-wide totals of different degrees and types of medical needs	Identify shelter residents with critical medical conditions who cannot be served in general population shelters and develop alternate strategies to address those conditions (e.g., evacuation)	EMSA	CDPH	Use results to ensure that medical needs that can't be met in general shelters are served.
	132	Evaluate options for care of shelter residents with medical needs beyond what can be supported in general population shelters	Identify shelter residents with critical medical conditions who cannot be served in general population shelters and develop alternate strategies to address those conditions (e.g., evacuation)	EMSA	Care & Shelter Branch	Options include (1) evacuation to a medical facility in the affected region, if space is available; (2) evacuation out of the affected area; or (3) as a last resort, bringing in necessary medical staff, supplies, and equipment
	133	Select options for medical care	Identify shelter residents with critical medical conditions who cannot be served in general population shelters and develop alternate strategies to address those conditions (e.g., evacuation)	County Health Officers	CDPH, EMSA	Prioritize residents according to urgency of medical need
	134	Coordinate transportation of people with critical medical needs from general shelters	Identify shelter residents with critical medical conditions who cannot be served in general population shelters and develop alternate strategies to address those conditions (e.g., evacuation)	EMSA	Transportation	N/A
	135	Coordinate with the U.S. Postal Service to re-establish mail delivery to shelter residents in less heavily affected areas	Establish communications systems among mass care sites and EOCs	Operational Areas and local governments	Care & Shelter Branch, ESF 6	N/A
	136	Provide fixed feeding and some level of bulk distribution of life-sustaining supplies	Support people who choose not to use shelters by providing information and bulk supplies to the extent possible	Operational Areas and local governments	Care & Shelter Branch, ARC, VOAD	N/A
	137	Identify sites for mass feeding	Operate mass feeding sites	Operational Areas and local governments	ARC, VOAD	Locations based on available space adjacent to identified need; other non-sheltering services may be co-located
	138	Request staff to operate mass feeding sites	Operate mass feeding sites	Operational Areas and local governments	ARC, VOAD	Based on location, includes FBOs or CBOs
	139	Begin establishing regular meal times and separate distribution of food packages for those who are self-sheltering	Operate mass feeding sites	Operational Areas and local governments	ARC, VOAD	N/A
	140	Re-supply as early and often as possible, based on the amount of access for getting outside supplies into the region, through the PODs, and out to the mass feeding sites	Operate mass feeding sites	Operational Areas and local governments	ARC, VOAD	N/A
	141	Evaluate suitability and acceptability (to the affected residents) of evacuation options instead of support for self-sheltering or spontaneous shelters	Support people who choose not to use shelters by providing information and bulk supplies to the extent possible	MACS	Care & Shelter Branch, ARC, VOAD, CBOs	N/A
	142	Evacuate those who choose to be evacuated instead of going to a shelter or self-sheltering	Support people who choose not to use shelters by providing information and bulk supplies to the extent possible	Transportation Branch	Operational Areas and local governments	N/A
	143	Itemize the amounts and types of supplies and equipment (beyond the obvious food and water) that are needed in various locations in the region	Support people who choose not to use shelters by providing information and bulk supplies to the extent possible	Operational Areas and local governments, Cal EMA	ARC	N/A
144	Request those supplies through SEMS and other systems for requesting resources	Support people who choose not to use shelters by providing information and bulk supplies to the extent possible	Operational Areas and local governments, Cal EMA	ARC	N/A	
145	Make regular distributions of food and other supplies to support people	Support people who choose not to use shelters by providing information and bulk supplies to the extent possible	ARC	Care & Shelter Branch, VOAD, DGS	N/A	

Table 5-1. Response timeline for mass care and sheltering operations.

Time Frame	Line	Operations	Objective	Coordinating Entity	Supporting Entity	Details/Comments
E+72h to E+14d (cont.)	146	Make staffing plans for rotating staff working in non-shelter support	Support people who choose not to use shelters by providing information and bulk supplies to the extent possible	Logistics Section	ARC	
	147	Establish system for resupplying the PODs as soon as possible because the initially available caches and the first wave of pushed supplies are quickly depleted	Support people who choose not to use shelters by providing information and bulk supplies to the extent possible	DGS	Care & Shelter Branch, ARC, VOAD, JFO	N/A
	148	Activate the ARC and other NGO family reunification systems to the extent possible with available technology	Initiate governmental and nongovernmental systems for tracking displaced residents and reunifying households	ARC, other NGOs	Care & Shelter Branch, VOAD	N/A
	149	Activate the FEMA Federal government telephone assistance program, which creates additional information	Initiate governmental and nongovernmental systems for tracking displaced residents and reunifying households	FEMA	Care & Shelter Branch, JFO JIC	Publicize assistance programs; direct shelter and non-shelter residents to the program
	150	Begin accepting tele-registration for federal assistance via phone and internet to determine eligibility and initiate provision of federal assistance to individuals	Initiate registration for individual housing assistance	FEMA	SBA	N/A
	151	Establish LACs, which are staffed and supported by local, State, and Federal agency staff as well as NGO staff	Establish LACs/Disaster Recovery Centers	Operational Areas and local governments	Cal EMA and other State agencies, CBOs, VOAD, JFO (Operations)	N/A
	152	Identify the State departments and regionally based NGOs to help families identify, locate, and connect to local, State, and Federal programs; identify rental housing; and access financial assistance	Initiate registration for individual housing assistance	Operational Areas and local governments, SCHTF	FEMA, VOAD	Ensure assistance available for people with access and functional needs
	153	Regularly combine all data sources to provide a central clearinghouse of who sought what service when and where; this is useful in later response phases	Initiate governmental and nongovernmental systems for tracking displaced residents and reunifying households	Cal EMA-Recovery	FEMA, ARC	N/A
	154	Support Federal and State reunification efforts and notification activities with whatever individual and/or combined databases are available	Initiate governmental and nongovernmental systems for tracking displaced residents and reunifying households	Operational Areas and local governments	Cal EMA-Recovery, FEMA, ARC	N/A
	155	Include information about the tracking and reunification systems in the public information updates and announcements	Initiate governmental and nongovernmental systems for tracking displaced residents and reunifying households	JFO JIC	FEMA, ESF #6	N/A
	156	Begin preparing public information statements and advisories as soon as Public Information Branch at the SOC aggregates daily reports (or those delivered at other frequencies)	Prepare and disseminate information to local residents about shelter activation, locations, and services	JFO JIC	Care & Shelter, ARC, FEMA, ESF #6	N/A
	157	Prepare and disseminate public information on shelter activation status, space availability, and locations and hours of non-shelter services (e.g., mass feeding, PODs)	Prepare and disseminate information to local residents about shelter activation, locations, and services	JFO JIC	Care & Shelter, ARC, FEMA, ESF #6	Integrate 211 resources to assist
	158	Prepare and disseminate public information on mass care and sheltering	Prepare and disseminate information to local residents about shelter activation, locations, and services	JFO JIC	Transportation, ARC, Operational Areas and local governments	Integrate 211 resources to assist
	159	Notify public of the planned frequency of new announcements about mass care and shelter so that people know when to expect further information	Prepare and disseminate information to local residents about shelter activation, locations, and services	JFO JIC	Transportation, ARC, Operational Areas and local governments	N/A
160	Provide regular updates about mass care and shelter to tourists and visitors	Prepare and disseminate information to tourist populations about sheltering and evacuation services	JFO JIC	Transportation, ARC, Operational Areas and local governments	N/A	
161	Target and emphasize information dissemination efforts in certain geographic areas to produce maximum reach at minimum effort or cost	Prepare and disseminate information to tourist populations about sheltering and evacuation services	JFO JIC	Transportation, ARC, Operational Areas and local governments	N/A	
162	Begin damage assessments of places and facilities that might be used for interim housing as soon as initial damage assessments are done for shelter facility suitability and priority roadways	Collect data from damage assessments and building inspections of housing	DGS	FEMA Individual Assistance, USACE, ESF #6, Operational Areas and local governments	N/A	

Table 5-1. Response timeline for mass care and sheltering operations.

Time Frame	Line	Operations	Objective	Coordinating Entity	Supporting Entity	Details/Comments
E+72h to E+14d (cont.)	163	Begin more formal inspections of shelter facilities, because the initial damage assessments and evaluations for immediate and most urgent shelter set-up are likely to have been incomplete	Collect data from damage assessments and building inspections of housing	DGS	USACE, Operational Areas and local governments	N/A
	164	Create local and centralized databases of results of damage assessments and formal inspections of shelters and interim housing options	Collect data from damage assessments and building inspections of housing	DGS	Operational Areas and local governments	N/A
	165	Share compiled data with ARC, the EOCs, JFO, SOC, the LACs, the DRC, and any Task Force established with mass care and sheltering as part of their duties	Collect data from damage assessments and building inspections of housing	Cal EMA	Care & Shelter Branch, ARC, Operational Areas and local governments, ESF #6	The Task Force, LAC, and DRC audiences for this information are initiated as described in other Objectives in this table
	166	Use the private-sector associations such as the California Resiliency Alliance, CUEA and others to meet the mass care and shelter needs of the incident; do this in parallel with activating government programs, agencies, , etc.	Integrate appropriate care and shelter private-sector resources	Care & Shelter Branch	CRA	Use other private-sector liaisons at Operational Area level
	167	Activate any appropriate MOAs, MOUs, or available vendor contracts	Integrate appropriate care and shelter private-sector resources	Care & Shelter Branch, FEMA	DGS, CRA	N/A
	168	Establish liaisons or POCs between major private-sector suppliers or goods or services and relevant agencies	Integrate appropriate care and shelter private-sector resources	Care & Shelter Branch	CRA, Operational Areas and local governments	N/A
	169	Create or activate systems for communications to flow smoothly among these POCs so that goods and services can begin to flow efficiently	Integrate appropriate care and shelter private-sector resources	CRA	Care & Shelter Branch, Operational Areas and local governments	N/A
	170	Arrange a system for moving private-sector goods, services, and staff (preferably with their own housing and support plans) into the affected region	Integrate appropriate care and shelter private-sector resources	DGS	CRA, Care & Shelter Branch	N/A
	171	Identify potential locations of LACs and the specific local government agencies and NGOs to be represented in the LAC	Establish LACs/DRCs	Operational Areas and local governments	Cal EMA, CBOs, VOAD	Include reps for organizations serving populations with access and functional needs
	172	Co-locate or coordinate State assistance program services with FEMA DRCs	Establish LACs/DRCs	Cal EMA	FEMA	N/A
	173	Connect families to local, State, Federal, and nonprofit services and programs	Establish LACs/DRCs	Operational Areas	N/A	N/A
	174	Staff with ARC personnel or personnel from other shelter-operating agencies, as appropriate	Mobilize staff and supplies for shelter and pickup points	ARC	Care & Shelter Branch, CDPH, NGOs	N/A
	175	Request additional transportation staff for evacuation operations through SEMS and the rest of the Mutual Aid system	Mobilize staff and supplies for shelter and pickup points	Cal EMA	Transportation Branch	N/A
	176	Request additional staff for mass care -support operations at pickup points, as needed, from ARC national headquarters or other national organizations	Mobilize staff and supplies for shelter and pickup points	Care & Shelter Branch	ARC, Cal EMA, CaliforniaVolunteers	N/A
	177	Maintain current shelter census data and provide to Cal EMA Planning Section for Action Plans	Coordinate with the Transportation Branch to identify shelter capacities for evacuee needs	Care & Shelter Branch, JFO	ARC	N/A
	178	Provide Transportation Branch with locations of pickup points and regular shelters	Coordinate with the Transportation Branch to locate and establish sites for transferring and receiving evacuees that provide (1) pickup points for initial collection of evacuees; (2) shelters to receive evacuees; and (3) shelters for those without travel or other housing alternatives	Care and Shelter Branch	ARC	The Transportation Branch establishes pickup and drop-off points and key routes for clearance to allow self-transportation and assisted evacuation
	179	Request priority transportation routes and plans from Transportation Branch to plan mass care support	Coordinate with the Transportation Branch to locate and establish sites for transferring and receiving evacuees that provide (1) pickup points for initial collection of evacuees; (2) shelters to receive evacuees; and (3) shelters for those without travel or other housing alternatives	Care & Shelter Branch	ARC, VOAD	N/A

Table 5-1. Response timeline for mass care and sheltering operations.

Time Frame	Line	Operations	Objective	Coordinating Entity	Supporting Entity	Details/Comments
E+72h to E+14d (cont.)	180	Update the EOCs, REOC, SOC, and other entities as often as needed to maintain a current region-wide knowledge base and situational awareness of these locations and processes	Coordinate with the Transportation Branch to locate and establish sites for transferring and receiving evacuees that provide (1) pickup points for initial collection of evacuees; (2) shelters to receive evacuees; and (3) shelters for those without travel or other housing alternatives	Care & Shelter Branch	Transportation Branch	N/A
	181	Provide necessary resources for transporting jail/prison populations or providing additional support for sheltering in place	Coordinate the movement of affected jail populations to shelters that are separate from the general population	Local Government Law Enforcement	CDCR	Regional and State level support available through the Law Enforcement Mutual Aid System
	182	Participate in Law Mutual Aid system and make surplus capacity available as needed for transporting prisoners	Coordinate the movement of affected jail populations to shelters that are separate from the general population	Local Government Law Enforcement	CDCR	Agreements (MOUs and MOAs) are in place with states that surround California, so there is additional capacity at these facilities
	183	Activate inter-county agreements and arrange space at facilities receiving relocated prisoners	Coordinate the movement of affected jail populations to shelters that are separate from the general population	CDCR	Local Government Law Enforcement	N/A
	184	Allocate the head count of prisoners to move into each of the host/receiving facilities	Coordinate the movement of affected jail populations to shelters that are separate from the general population	CDCR	Local Government Law Enforcement	As needed, the Transportation Branch at the REOC and SOC can provide assistance in the actual moving process
	185	If temporary sheltering of inmates is necessary until space at other formal correctional facilities is made available, the steps in subsequent rows should be taken:	Coordinate the movement of affected jail populations to shelters that are separate from the general population	CDCR	Transportation Branch, Local Government Law Enforcement	N/A
	186	Work with the Care and Shelter Branch at the REOC or SOC to identify locations suitable for sheltering prisoners (e.g., sites that are well lit, have space for added security, and are isolated)	Coordinate the movement of affected jail populations to shelters that are separate from the general population	CDCR	Care & Shelter Branch, ARC, Local Government Law Enforcement	N/A
	187	Arrange/establish temporary shelter facilities and the staff—especially security and site management—to run them	Coordinate the movement of affected jail populations to shelters that are separate from the general population	CDCR	Local Government Law Enforcement	N/A
	188	Transport prisoners to the shelters	Coordinate the movement of affected jail populations to shelters that are separate from the general population	Local Government Law Enforcement	Transportation Branch, CDCR	N/A
	189	Employ inmate tracking systems to provide verification of continued supervision and control	Coordinate the movement of affected jail populations to shelters that are separate from the general population	CDCR	Local Government Law Enforcement	N/A
	190	Share electronic, written, and/or verbal reports between the EOCs, REOC, and SOC with whatever technologies are available and serviceable at that time	Continue to provide daily situation reports	Cal EMA	Care & Shelter Branch	N/A
E+14d to E+60d	191	Project sheltering needs (based on NSS data, shelter inflow/outflow monitoring, and other available data) and open/close/relocate shelters as needed	Maintain ongoing situational awareness of shelter activities	Care & Shelter Branch	ARC	Goal is to provide accessible shelters and services to all who need them. The initial shelter shortfall hampers this effort until inspections and delayed damage assessments are completed. Then more space should become available for a wider range of access and functional needs to be met in shelters.
	192	Maintain local and regional databases of all shelters (inflow/outflow) and cross-reference them with shelter registrations, Federal individual Assistance help lines, etc.	Maintain ongoing situational awareness of shelter activities	Operational Areas and local governments	Care & Shelter Branch, ARC, Cal EMA	N/A
	193	Monitor inflows of Federally and State-provided supplies and equipment related to mass care and sheltering operations	Maintain ongoing situational awareness of shelter activities	Care & Shelter Branch	DGS	N/A
	194	Continue to use the private-sector associations such as the California Resiliency Alliance, CUEA and others to meet the mass care and shelter needs of the incident	Continue to integrate appropriate private-sector resources	Care & Shelter Branch	CRA	N/A
	195	Enhance the integration of private-sector resources into animal care and sheltering response by providing lists of needy animals and animal shelters and their locations to relevant private-sector companies	Continue to integrate appropriate private-sector resources	CDFA	CRA	N/A

Table 5-1. Response timeline for mass care and sheltering operations.

Time Frame	Line	Operations	Objective	Coordinating Entity	Supporting Entity	Details/Comments
E+14d to E+60d (cont.)	196	Continue to coordinate with Federal and State agencies to plan for, receive, and distribute supplies for mass care and sheltering operations	Monitor and coordinate the capabilities of agencies, vendors, and other organizations to support shelters and displaced residents	Care & Shelter Branch	DGS	N/A
	197	Continue to establish or activate vendor contracts related to mass care and sheltering, as needed	Continue to integrate appropriate private-sector resources	Care & Shelter Branch	DGS	N/A
	198	Monitor and report on changes in self-sheltering, spontaneous shelters, use of alternative shelter options, and the remnant shortfalls	Maintain ongoing situational awareness of shelter activities	Care & Shelter Branch	ARC, Operational Areas and local governments	N/A
	199	Monitor condition of individuals with access and functional needs at shelters	Maintain ongoing situational awareness of shelter activities	Care & Shelter Branch	ARC, local VOADs/local FAST	N/A
	200	Begin providing additional services, support systems, and assistance for those who need them at as many shelters as possible	Fully integrate resources for access and functional needs, pets and service animals, and resupply of shelters and distribution sites that support people outside shelters	Care & Shelter Branch	CDPH	Evacuation or transport to a more well-equipped shelter or directly into interim housing, as it becomes available, is offered as an option for people with access and functional needs. Family reunification programs are also available.
	201	Bring in additional staff with the specialized skills and abilities to meet those needs, where necessary	Fully integrate resources for access and functional needs, pets and service animals, and resupply of shelters and distribution sites that support people outside shelters	Care & Shelter Branch	CDPH, Northern California VOAD	N/A
	202	Bring in the necessary equipment to improve the meeting of access and functional needs in general shelters	Fully integrate resources for access and functional needs, pets and service animals, and resupply of shelters and distribution sites that support people outside shelters	Care & Shelter Branch	FEMA	N/A
	203	Monitor animal shelters, residual demand for them, and conditions at them	Maintain ongoing situational awareness of shelter activities	CDFA	N/A	N/A
	204	Monitor operations and status of mass feeding, PODs, and other non-shelter sites	Maintain ongoing situational awareness of shelter activities	Care & Shelter Branch	FEMA	N/A
	205	Track countywide and region-wide transportation of individuals out of the affected region	Maintain ongoing situational awareness of shelter activities	Care & Shelter Branch	ARC	N/A
	206	Monitor flows out of other shelter options and into the interim housing facilities as interim housing is established	Maintain ongoing situational awareness of shelter activities	Care & Shelter Branch	Members of the Housing Task Force	N/A
	207	Monitor shelter inspections and the progress of damage assessments of possible interim housing sites or facilities	Maintain ongoing situational awareness of shelter activities	DGS	Care & Shelter Branch	N/A
	208	Request Transportation Branch and Debris Removal Branch records of route clearing, maintenance, and use to guide additional shelter openings, closings, combining, or resupply	Maintain ongoing situational awareness of shelter activities	Care & Shelter Branch	Transportation Branch, Debris Removal Branch	N/A
209	Integrate all collected information into regular reports to the JFO, Task Force, and other groups or organizations	Maintain ongoing situational awareness of shelter activities	Care & Shelter Branch	JFO Planning Section	N/A	
210	Continue to consolidate status updates from shelters, feeding sites, PODs, etc., with available human and material resources from all providers (government, NGOs, private vendors, etc.) to develop a complete operating picture	Monitor and coordinate the capabilities of agencies, vendors, and other organizations to support shelters and displaced residents	Care & Shelter Branch	ARC, FEMA, Operational Areas and local governments	N/A	
211	Report on overall status of these organizations and activities to the JFO Planning Section	Monitor and coordinate the capabilities of agencies, vendors, and other organizations to support shelters and displaced residents	Care & Shelter Branch	N/A	N/A	
212	Highlight gaps, shortfalls, or failures of any portion of the plans or overall system operations	Monitor and coordinate the capabilities of agencies, vendors, and other organizations to support shelters and displaced residents	Care & Shelter Branch	N/A	N/A	
213	Update all public information announcements regularly with appropriate and useful changes	Maintain ongoing situational awareness of shelter activities	JFO JIC	Care & Shelter Branch	N/A	

Table 5-1. Response timeline for mass care and sheltering operations.

Time Frame	Line	Operations	Objective	Coordinating Entity	Supporting Entity	Details/Comments
E+14d to E+60d (cont.)	214	Activate a Task Force and collaborate with VOAD as needed to assess general and additional assistance or support needs	Maintain ongoing situational awareness of shelter activities	Care & Shelter Branch	Participating Task Force agencies	N/A
	215	Continue coordinating with FEMA, State agencies, NGOs, CBOs, and FBOs, and other entities to improve and manage the resupply of shelters and the services provided therein	Monitor and coordinate the capabilities of agencies, vendors, and other organizations to support shelters and displaced residents	Care & Shelter Branch	N/A	This requires use of all information collected under the monitoring tasks described above, as well as coordination with Debris Clearance and Evacuation Branches to improve and increase the available transportation network, road access, and other vital infrastructure.
	216	Create a list of shelters ready to be closed and the steps that would need to be taken to close them	Identify opportunities to close shelters and return residents to homes or available housing	Operational Areas, ARC	Care & Shelter Branch	Care & Shelter compiles summaries through the SOC. ARC creates a list of shelters ready to close and steps required.
	217	Conclude all damage assessments and safety inspections and create local and centralized databases of results	Evaluate safety assessments and building inspections of homes	Local governments, DGS	SCHTF, FEMA	N/A
	218	Distribute compiled data to ARC, the EOCs, the JFO, the LACs, the DRC, any Task Force groups established with mass care and sheltering as part of their duties, and the SLHTF	Evaluate safety assessments and building inspections of homes	Care & Shelter Branch	Planning Section	The Task Force, LAC, and DRC audiences for this information are initiated as described in other Objectives in this table
	219	Use those results to identify lists of homes, apartments, etc., that can be returned to their normal use	Evaluate safety assessments and building inspections of homes	Local governments, SCHTF	N/A	N/A
	220	Inform the owners and residents of those homes that they may be re-entered, as well as occupied, if desired, though electricity and water services are not necessarily available	Evaluate safety assessments and building inspections of homes	Operational Areas and local governments	N/A	N/A
	221	Use inspection results to provide county-specific and region-wide inventory of possible interim housing sites	Evaluate safety assessments and building inspections of homes	DGS	Care & Shelter Branch, Operational Areas and local governments	N/A
	222	Communicate those results to EOCs, JFO, task forces, and the SLHTF to that they can all begin using it in their planning	Evaluate safety assessments and building inspections of homes	Care & Shelter Branch	N/A	N/A
	223	Assign staff with the appropriate communications skills to conduct outreach to individuals, groups, or communities that have not availed themselves of either available shelter or transportation out of the region	Educate and support occupants of non-traditional shelters to encourage them to return to their habitable homes or move to interim housing	Operational Areas and local governments, JFO	Member agencies of the SCHTF, Care & Shelter Branch	Be clear about the limited ability of the county, region, and State government to continue providing support services and encourage them to seek transport out of the region or more centralized care within it. Address any concerns about legalities, especially immigration and naturalization status, making it clear that those topics are extremely low priorities for responding to catastrophic events.
	224	Prepare and distribute materials explaining the available resources, the locations where and schedules at which they are distributed, any registration or informational requirements, and any relevant plans for increasing, decreasing, or relocating these support services	Educate and support occupants of non-traditional shelters to encourage them to return to their habitable homes or move to interim housing	Cal EMA Recovery	FEMA, Care & Shelter Branch, counties, member agencies of the SCHTF	Be clear about the limited ability of the county, region, and State government to continue providing support services and encourage them to seek transport out of the region or more centralized care within it. Address any concerns about legalities, especially immigration and naturalization status, making it clear that those topics are extremely low priorities for responding to catastrophic events.
	225	Establish LACs for communications and support services (not limited to supply distribution) near spontaneous-shelter or self-shelter settlements	Educate and support occupants of non-traditional shelters to encourage them to return to their habitable homes or move to interim housing	Cal EMA Recovery	Counties, member agencies of the SCHTF	Include information about these assistance centers in all public information and other announcements
226	Coordinate with Transportation Branch to ensure access to these LACs	Educate and support occupants of non-traditional shelters to encourage them to return to their habitable homes or move to interim housing	Cal EMA Recovery	N/A	N/A	

Table 5-1. Response timeline for mass care and sheltering operations.

Time Frame	Line	Operations	Objective	Coordinating Entity	Supporting Entity	Details/Comments
E+14d to E+60d (cont.)	227	Continue coordinating with FEMA, state agencies, NGOs, CBOs, and FBOs, and other entities to improve and manage the resupply of PODs, mass feeding sites, medical facilities, and other non-shelter-based support services; this reduces gaps in service provision and reduces duplication of services	Educate and support occupants of non-traditional shelters to encourage them to return to their habitable homes or move to interim housing	Care & Shelter Branch	Operational Areas and local governments	This task requires use of all information collected under the monitoring tasks described above and coordination with the Debris Clearance and Transportation Branches to improve and increase the available transportation network, road access, and other vital infrastructure
	228	Compile lists of spontaneous shelters and areas with high densities of self-sheltering, and other non-shelter-seeking populations	Educate and support occupants of non-traditional shelters to encourage them to return to their habitable homes or move to interim housing	Operational Areas and local governments	N/A	N/A
	229	Use lists to evaluate the unmet needs for basic support services and to plan for future efforts to educate those individuals about support services	Educate and support occupants of non-traditional shelters to encourage them to return to their habitable homes or move to interim housing	Operational Areas and local governments	VOAD	N/A
	230	Provide assistance to willing individuals as they seek transport out of the affected area either into a more suitable shelter or directly into interim housing, as it becomes available	Educate and support occupants of non-traditional shelters to encourage them to return to their habitable homes or move to interim housing	Operational Areas and Local Governments	Care & Shelter Branch ARC, VOAD	N/A
	231	Match shelter residents with longer term housing opportunities	Transition families from short-term solutions (e.g., hotels) to longer term solutions	Operational Areas and Local Governments	Care & Shelter Branch, SCHTF	Use the databases on shelter residents, inspected homes marked as safe, and identified and implemented interim housing locations
	232	Provide transportation to temporary housing units as needed	Transition families from short-term solutions (e.g., hotels) to longer term solutions	Operational Areas	Cal EMA	N/A
	233	Monitor the transport and transition of individuals and coordinate with support service agencies or NGOs	Transition families from short-term solutions (e.g., hotels) to longer term solutions	Operational Areas and Local Governments	VOAD, ARC	N/A
	234	Provide advance notification of shelter closure or relocation plans, in combination with interim housing information, so shelter residents can begin to plan their transitions	Transition families from short-term solutions (e.g., hotels) to longer term solutions	JFO JIC	Care & Shelter Branch	N/A
	235	Coordinate additional support services to individuals with access and functional needs during their transition to interim housing	Begin identifying support services necessary for transition (e.g., personal assistance service, durable medical equipment, and assistive technology)	Operational Areas and Local Governments	FEMA, HHS or HUD, Cal EMA–OAFN	N/A
	236	Use the aggregated shelter registrations/tracking systems, results of needs assessments of shelter residents, FAST analyses, and other information sources	Begin identifying support services necessary for transition (e.g., personal assistance service, durable medical equipment, and assistive technology)	Care & Shelter Branch	N/A	N/A
	237	Make location-specific lists of the types of support services, skills, equipment, etc., that is needed to meet these needs	Begin identifying support services necessary for transition (e.g., personal assistance service, durable medical equipment, and assistive technology)	Operational Areas and Local Governments	Operational Areas and local governments	N/A
	238	Ensure that complete referral and application information is provided is provided to all transitioning people	Begin identifying support services necessary for transition (e.g., personal assistance service, durable medical equipment, and assistive technology)	Operational Areas and Local Governments	N/A	N/A
	239	Include Federal, State, and NGO-provided assistance	Begin identifying support services necessary for transition (e.g., personal assistance service, durable medical equipment, and assistive technology)	JFO	FEMA, VOAD	N/A
E+60d to E+1 year	240	Consolidate shrinking shelter populations into fewer shelters, closing the then-empty ones	Close shelters and end bulk distribution operations	Local governments	ARC	N/A
	241	Provide transportation and other assistance or support services as in earlier response phases	Close shelters and end bulk distribution operations	Transportation Branch, Cal EMA	Care & Shelter Branch, ARC, VOAD	N/A
	242	Provide assistance and coordination across city, county, State, and Federal government agencies as well as the ARC and other shelter-providing or shelter-supporting organizations in making decisions about which shelters to close when	Close shelters and end bulk distribution operations	Care & Shelter Branch	ARC, counties, FEMA	N/A

Table 5-1. Response timeline for mass care and sheltering operations.

Time Frame	Line	Operations	Objective	Coordinating Entity	Supporting Entity	Details/Comments
E+60d to E+1 year (cont.)	243	Provide public information updates and notification of all upcoming and imminent closures or relocations to all affected communities	Close shelters and end bulk distribution operations	JFO JIC	Care & Shelter Branch	N/A
	244	Conduct these same steps for cessation of non-shelter service provisions, including mass feeding, LACs, and other support services	Close shelters and end bulk distribution operations	Care & Shelter Branch	ARC, Operational Areas and local governments, VOAD, FEMA	N/A
	245	Ensure that no gaps in service exist across the many levels of government and NGOs; minimize duplication of effort	Close shelters and end bulk distribution operations	Care & Shelter Branch	ARC, VOAD, Operational Areas and local governments	N/A
	246	Report planned and completed closures immediately to EOCs, REOC and SOC, ARC national shelter system database, NIMS, SEMS, and all other programs involved in mass care and sheltering	Close shelters and end bulk distribution operations	Care & Shelter Branch	ARC, Operational Areas and local governments	N/A
	247	Coordinate with the Transportation Branch to provide transportation to restored, repaired, or newly created permanent housing	Facilitate the return of displaced families to local communities	Operational Areas	Transportation Branch, ARC	N/A
	248	Update all relevant databases and information systems with returned individuals so that these systems can be properly closed out	Facilitate the return of displaced families to local communities	Operational Areas	ARC, local governments, Care & Shelter Branch	N/A

Source: URS analysis (2009)

ARC = American Red Cross

Cal EMA = California Emergency Management Agency

CAN = Coordinated Action Network

Care & Shelter Branch = REOC, SOC, or JFO, as relevant to task

CARES = California Animal Response in Emergency System

CBO = Community-based organization

CDCR = California Department of Corrections and Rehabilitation

CDFA = California Department of Food and Agriculture

CDPH = California Department of Public Health

CDSS = California Department of Social Services

CGS = California Geological Survey

CMIST = Communication, Medical Care, (Maintaining) Independence, Supervision, Transportation

CRA = California Resiliency Alliance

CUEA = California Utilities Emergency Association

DDS = (California) Department of Developmental Services

DGS = (California) Department of General Services

DRC = Disaster Recovery Center

E = Event

EMSA = Emergency Medical Services Authority

EOC = Emergency Operations Center

ESC = Emergency Services Coordinator

ESF = Emergency Support Function

FAST = Functional Assessment Service Team

FBO = Faith-based organization

FEMA = Federal Emergency Management Agency

HHS = Health and Human Services

HUD = Housing and Urban Development

JFO = Joint Field Office

JIC = Joint Information Center

LAC = Local Assistance Center

MAC = Multi-Agency Coordination

MACS = Multi-Agency Coordination System

MOA = memorandum of agreement

MOU = memorandum of understanding

N/A = Not applicable

NGO = Nongovernmental organization

NSS = National Shelter System

OAFN = Office of Access and Functional Needs (Cal EMA)

OSHPD = Office of Statewide Health Planning and Development

POC = Point of Contact

POD = Point of distribution

REOC = Regional Emergency Operations Center

RIMS = Response Information Management System

RRCC = Regional Response Coordination Center (Federal)

SAP = California Safety Assessment Program

SBA = Small Business Administration

SEMS = Standardized Emergency Management System

SLHTF = State-Led Housing Task Force

SOC = State Operations Center

VEST = Volunteer Emergency Services Team

VOAD = Voluntary Organizations Active in Disaster

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6 Plan Maintenance

This section describes the process for maintaining this Plan. The discussion identifies who receives and reviews the Plan, how updates are integrated into the Plan, how the Plan is tested, what type of training is developed to learn the Plan, and how after-action review is conducted after the Plan has been implemented, whether as part of an exercise or in response to a real emergency.

6.1 Plan Distribution

Once completed and approved, the Plan is distributed to the Mass Care and Sheltering Steering Committee and UASI Management Team. Electronic versions of the Final Plan are also distributed to each of the 12 counties and core cities in the RCPGP area and to the office of the ARC state lead.

6.2 Plan Updates

Cal EMA Region II is responsible for the maintenance, revision, and distribution of the Plan. In coordination with the Mutual Aid Regional Advisory Committee and with the CDSS, Cal EMA Region II annually assesses the need for revisions to the RECP and subsidiary plans based on the following considerations:

- Changes to State or Federal regulations, requirements, or organization.
- The need for additional subsidiary plans to develop regional response capabilities or eliminate gaps in capabilities, as suggested by Mutual Aid Regional Advisory Committee members and coordinated with the Bay Area UASI Management Team.
- Implementation of tools or procedures that alter or improve on Plan components.
- Cal EMA Region II maintains a record of amendments and revisions, as well as executable versions of all documents, and is responsible for distributing the Plan to all applicable agencies.

6.3 Plan Testing, Training, and Exercises

Exercising the Plan and evaluating its effectiveness involves using training and exercises and evaluation of actual disasters to determine whether goals, objectives, decision, actions, and timing outlined in the Plan led to a successful response.

Exercises are the best method of evaluating the effectiveness of a plan and are also a valuable tool in training emergency responders and government officials. Exercises allow emergency responders and government officials to become familiar with the procedures, facilities, and systems that they actually use or manage in emergency situations. Cal EMA is responsible for planning and conducting emergency exercises for the region.

Exercises are conducted on a regular basis to maintain readiness. Exercises should include as many Operational Areas, other regions, and State and Federal agencies as is practical.

6.4 After-Action Review

After every exercise or disaster, an After-Action Report (AAR)/Improvement Plan (IP) should be completed. The AAR/IP has two components: an AAR, which captures observations and recommendations based on incident objectives as associated with the capabilities and tasks; and an IP, which identifies specific corrective actions, assigns them to responsible parties, and establishes targets for their completion. Cal EMA is the lead agency for the development of the AAR/IP and convenes participants to discuss action items and solicit recommendations for improvement.

Appendix A: Glossary

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Appendix A: Glossary

A.1 Acronyms and Abbreviations

AAR/IP	After-Action Report/Improvement Plan
ARC	American Red Cross
ARCBA	American Red Cross Bay Area
CAN	(Bay Area) Coordinated Assistance Network
Cal EMA.....	California Emergency Management Agency
CARD.....	Collaborating Agencies Responding to Disaster (San Francisco)
CARES.....	California Animal Response in Emergency System (managed by CDFA, presents the concept of operations to coordinate animal care response operations)
CBO	community-based organization (local non-governmental agency that typically provides daily social services to people in need)
CDCR.....	California Department of Corrections and Rehabilitation
CDFA	California Department of Food and Agriculture (responsible for animal care)
CDPH.....	California Department of Public Health (together with EMSA, oversees medical health response operations)
CDSS	California Department of Social Services (a department of HHS, leads the care and shelter branch of the REOC and SOC)
CGS	California Geological Survey
CMIST.....	Communication, Medical, (Maintaining) Independence, Supervision, Transportation (five categories of access and functional needs)
CONPLAN.....	San Francisco Bay Area Earthquake Readiness Response: Concept of Operations Plan (FEMA)
CRA	California Resiliency Alliance
CUEA.....	California Utilities Emergency Association
DDS	California Department of Developmental Services
DGS	California Department of General Services (maintains State facilities, and contracts with providers of resources)
DOC.....	Department Operations Center (located within a government department, the DOC coordinates information and the deployment of department resources)
DRC	Disaster Recovery Center (established by FEMA in the affected area; provides a single location for people to access various Federal assistance programs)

DRO	Disaster Relief Operation (a national-level American Red Cross program intended to provide a clear line of internal communication between the American Red Cross National Headquarters and local chapters)
E	Event (occurrence of the scenario disaster)
EF-6	California Emergency Function for Care and Shelter
EMAC	Emergency Management Assistance Compact (agreement between jurisdictions to support one another with emergency management expertise)
EMSA.....	Emergency Medical Services Authority (coordinates medical care in shelters and the availability of medical facilities)
ESC	Emergency Services Coordinator
EOC	Emergency Operations Center (site where response functions are managed)
ESA.....	Emergency Services Act
ESF	Emergency Support Function (function-specific annexes to the National Response Framework that describe the responsibility of the respective lead and support agencies)
FAST.....	Functional Assessment Service Team (CDSS-managed teams of local experts to assess and improve services to people with access and functional needs)
FBO	faith-based organization (congregations, religious associations, both locally and nationally based)
FEMA.....	Federal Emergency Management Agency
GIS.....	Geographic Information System
HAZUS.....	Hazards U.S., modeling software used to project damage from a given event
HHS	U.S. Department of Health and Human Services
HHSA.....	California Health and Human Services Agency (according to the SEP, the lead agency for mass care and shelter)
HUD	U.S. Department of Housing and Urban Development (Federal agency provides affordable housing, administers the Disaster Housing Assistance Program)
JFO	Joint Field Office (FEMA operations center to coordinate Federal response and recovery activities in the affected area)
JIC	Joint Information Center (managed by Cal EMA, the coordination center for local, regional, and State-level public information in disaster response and recovery)

LAC	Local Assistance Center (established by the State in an affected area, provides a single location for people to access various State and non-governmental assistance programs)
M	moment magnitude (a measure of energy released by an earthquake)
MACS.....	Multi-Agency Coordination System (describes groups that may be convened by the EOC to resolve specific issues in response operations; members consist of agencies with resources relevant to the issue)
MM	Modified Mercalli (a measure of earthquake intensity)
NGO	nongovernmental organization (a national or locally based nonprofit organization providing response or recovery resources for the region)
NIBS.....	National Institute of Building Sciences
NIMS	National Incident Management System (describes the organization and coordination processes of the levels of Federal government during management of disaster operations)
NSS.....	National Shelter System (FEMA- and ARC-managed database of disaster shelters)
OAFN	Office of Access and Functional Needs (Cal EMA)
OSHPD	Office of Statewide Health Planning and Development (State department that inspects hospital facilities)
Plan.....	Regional Catastrophic Earthquake Mass Care and Sheltering Plan
POC	Point of Contact
POD	point of distribution
RCPGP	Regional Catastrophic Preparedness Grant Program (annual funding program that supports catastrophic planning in the San Francisco Bay Area)
RECP	San Francisco Bay Area Regional Emergency Coordination Plan (describes the coordination between levels of government in response to a regional event)
REOC.....	Regional Emergency Operations Center (operations center used by the State to coordinate response from within the affected region)
RCG	Regional Coordination Group (multidisciplinary group convened in response to provide guidance on resource allocation and coordination of response activities)
RIMS	Response Information Management System (internet-based communication system to track situation information, resource requests, and mission tasking)

SAP.....	California Safety Assessment Program (provides teams of engineers to support counties and local government in the inspection of building damage)
SBA.....	Small Business Administration (provides Federal financial assistance to homeowners, renters, and businesses)
SEMS.....	Standardized Emergency Management System (describes the organization and coordination processes of the levels of California government during the management of disasters)
SEP.....	State Emergency Plan (describes the organization and activities of the State and its agencies in response to an emergency)
SLHTF	State-Led Housing Task Force
SOC	State Operations Center
UASI	Urban Area Security Initiative (federally funded program to develop plans and mitigation measures to prepare for regional disasters)
UCG.....	Unified Coordination Group
URS	URS Corporation
USACE	U.S. Army Corps of Engineers (inspection, construction, and installation of housing options)
VEST	Volunteer Emergency Services Team
VOAD.....	Voluntary Organizations Active in Disaster (coalition of nationally based nongovernmental organizations that have disaster response as a mission)

A.2 Key Terms

Access and functional needs. Access and functional needs populations are populations whose members may have additional needs before, during, and after the scenario event in specific functional areas. Access and functional needs populations include, but are not limited to, those who have needs associated with:

- **Communication.** Individuals who have limitations that interfere with the receipt of and response to information will need that information provided in ways they can understand and use. They may not be able to hear verbal announcements, see directional signs, or understand how to get assistance due to hearing, vision, speech, cognitive, or intellectual limitations, and/or limited English proficiency.
- **Medical.** Individuals who are not self-sufficient or who do not have adequate support from caregivers, family, or friends may need assistance with: managing unstable, terminal, or contagious conditions that require

observation and ongoing treatment; managing intravenous therapy, tube feeding, or vital signs; receiving dialysis, oxygen, or suction administration; managing wounds; or operating power-dependent equipment to sustain life. These individuals require the support of trained medical professionals.

- **(Maintaining) Independence.** Individuals that require support to be independent in daily activities may lose this support during an emergency or a disaster. Such support may include consumable medical supplies (diapers, formula, bandages, and other supplies), durable medical equipment (wheelchairs, walkers, or scooters), service animals, or attendants or caregivers. Supplying needed support to these individuals will enable them to maintain their pre-disaster level of independence.
- **Supervision.** Individuals may lose the support of caregivers, family, or friends or may be unable to cope in a new environment (particularly if they have dementia, Alzheimer's, or psychiatric conditions, such as schizophrenia or intense anxiety). If young children are separated from their caregivers, they may be unable to identify themselves, and when in danger, they may lack the cognitive ability to assess the situation and react appropriately.
- **Transportation.** Individuals who cannot drive or who do not have a vehicle may require transportation support for successful evacuation. This support may include accessible vehicles (such as lift-equipped vehicles or those suitable for transporting individuals who use oxygen) or information about how and where to access mass transportation during an evacuation.

Bulk distribution. Refers to the distribution of emergency goods (e.g., food, water, sanitation supplies, first-aid supplies) to individuals who shelter outside of government-supported shelters. These may include people who remain close to their damaged homes, as well as those who are in spontaneous shelters and may not be able to reach a general shelter.

Community-Based Organization (CBO). Nonprofit organization that operates within a single local community. CBO constitute a subset of the wider group of NGOs. They are often run by volunteers and are often self-funding. Some are formally incorporated with a written charters and boards of directors, while others are much smaller and are more informal.

Emotional support animal. See service animal / support animal.

Evacuation point. A location in a safe place where people are directed to gather after an event, in order to be transported to care and sheltering facilities or to a subsequent transportation hub.

Faith-Based organization (FBO). A form of NGO that is to a significant degree religious in nature, as opposed to being a commercial, governmental, or private, secular organization. The term most commonly refers to organizations associated with a major religion, such as Catholic Charities. FBOs have played major roles in delivering a variety of services to the public, such as caring for the

infirm and elderly, delivering humanitarian aid, or responding to disasters. These may operate and be managed at local, national, or international levels.

HAZUS. Hazards U.S, a loss-estimation software program developed by the National Institute of Building Sciences (NIBS) for FEMA.

Interim housing. The National Disaster Housing Strategy defines interim housing as housing assistance between sheltering and the return of disaster victims to permanent housing. Generally, this period is from E to E+1 year (and up to 18 months after the event). In this Plan, it also includes the early steps in the transition to long-term recovery.

Mass care and sheltering. As used in this Plan, refers to the provision of temporary shelter for people displaced from their residences and to the support that is needed for the transition of the residents into interim housing.

National Shelter System. A national database of shelters managed by FEMA and ARC. All shelters listed for the 12 counties of the San Francisco Bay Area region have statements of understanding with ARC to make the sites available as shelters if they are needed after an event. All sites were inspected by ARC to ensure that they meet ARC standards for shelters. The database has information about each shelter, including the number of people it can support, and details about utilities, bathroom facilities, and other features related to shelter operations.

Nongovernmental organization (NGO). A legally constituted organization that operates independently from any government, though funding often comes wholly or partly from governments. In those cases, NGOs maintain their nongovernmental status by excluding government representatives from membership in the organization. In many places, NGOs are called "civil society organizations" or referred to by other names. Locally based NGOs include community-based organizations (CBOs) and faith-based organizations (FBOs).

Pickup point. A location in a safe place where people are directed to gather after an event, in order to be transported to care and sheltering facilities or to a subsequent transportation hub.

Primary shelter. Given the limited capability to support all shelters listed in the NSS soon after an event, local governments and ARC designate a small group of shelters that they will initially support until more resources and personnel become available. Priority shelters are facilities that are expected to withstand major damage. They are located near expected population needs, and sufficient supplies and staff are available to support them.

Service animal/support animal. The ADA defines a service animal as any guide dog, signal dog, or other animal individually trained to provide assistance to an individual with a disability. If they meet this definition, animals are considered service animals under the ADA regardless of whether they have been licensed or certified by a local or State government. In addition, State law defines emotional support animals as animals that provide assistance to a person with a psychiatric/emotional disability. Although not always as specifically trained as

service animals, emotional support animals are still considered an essential aid to a person with a disability that allows them to function in their daily life; therefore, they are also exempt from restrictions regarding facility and transportation access.

Shelter capacity. In the National Shelter System (NSS) database, which is prepared by the American Red Cross and the Federal Emergency Management Agency, “shelter capacity” refers to shelter space that allows 40 square feet per person. The availability of equipment and staff to support shelters is not included in the NSS calculation of capacity.

Spontaneous shelter. In the Plan, refers to sites where affected residents stay who choose not to sleep at formal shelters. This may include people who stay close to their damaged residences in vehicles, in tents, or at other temporary shelters. Spontaneous shelters may be open within hours after the event by groups of neighbors or CBOs. The shelters are not pre-designated or initially known by local government.

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Appendix B: Maps

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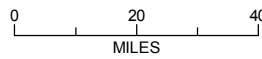
Table of Contents

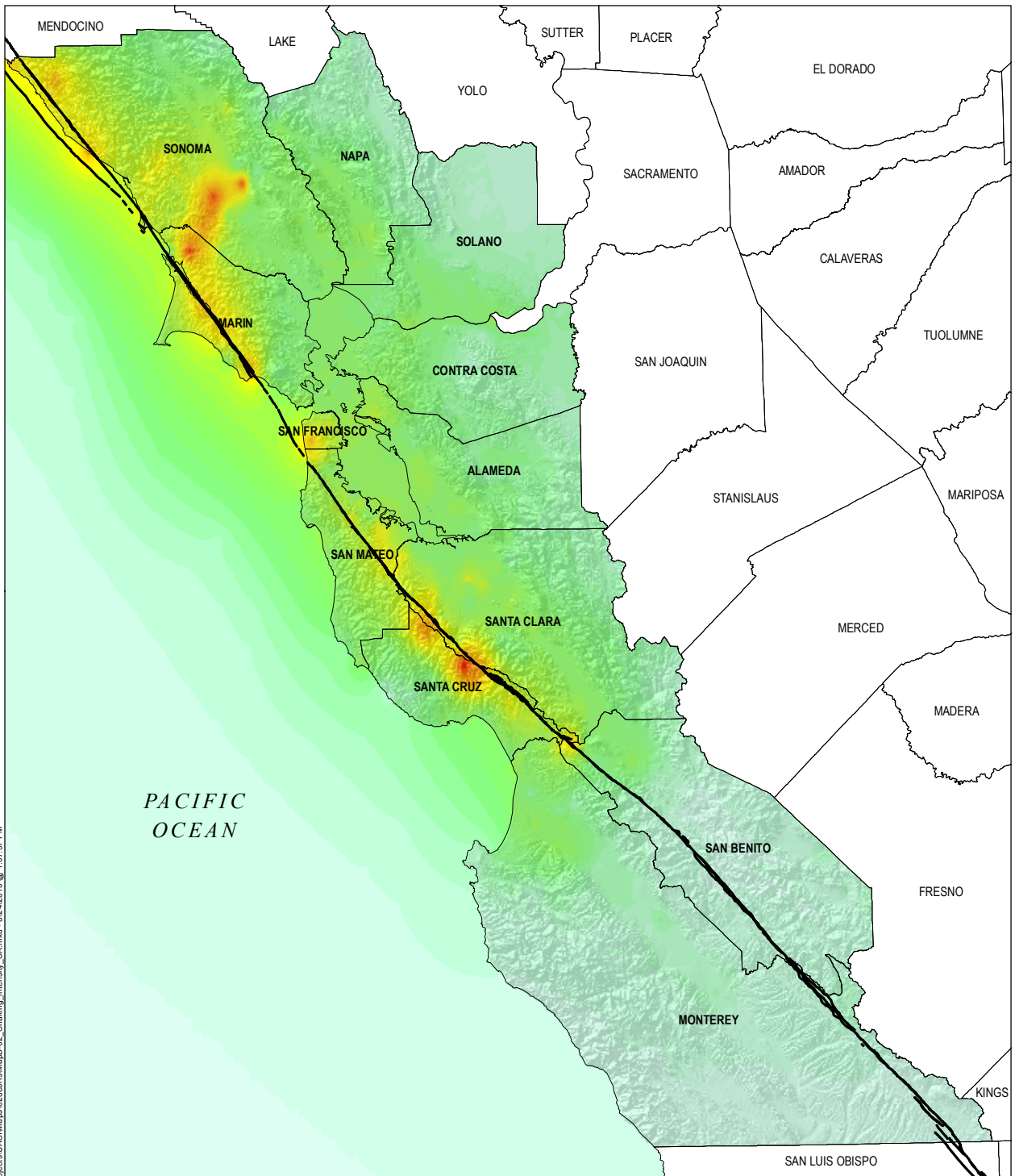
- Map B-1** Twelve-county San Francisco Bay Area region
- Map B-2** Shaking intensity
- Map B-3** Liquefaction susceptibility
- Map B-4** Completely and extensively damaged buildings
- Map B-5** Number of people seeking shelter by census tract
- Map B-6** Jails and correctional facilities in the 12-county Bay Area region
- Map B-7** Shelter locations in the 12-county Bay Area region

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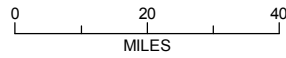


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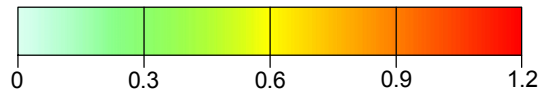


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— San Andreas fault zone

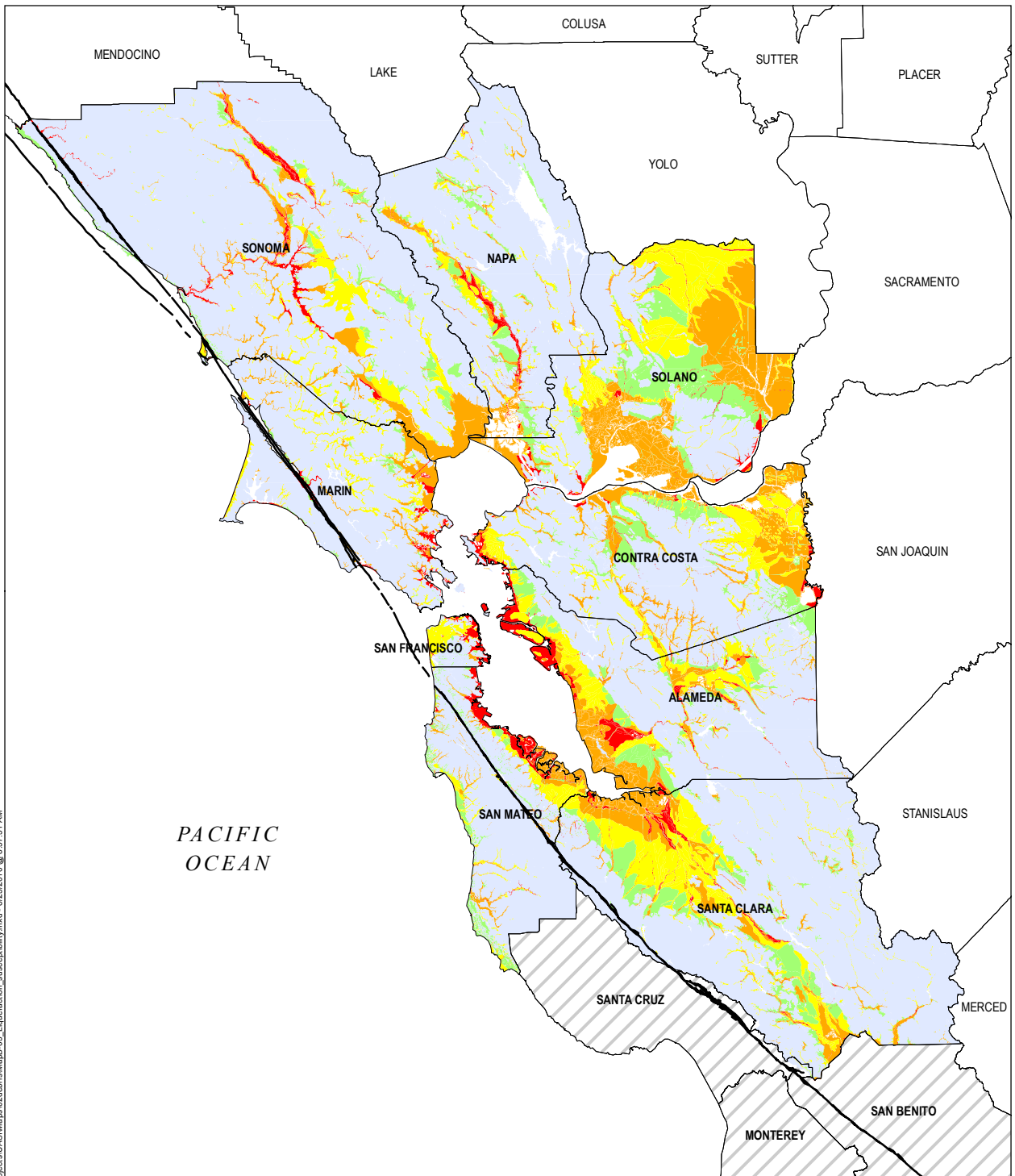
PEAK GROUND ACCELERATION (g*)



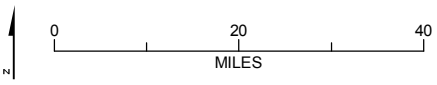
*g = 980 centimeters/second/second (units of gravitational acceleration)
 Topographic data source: USGS NED
 Fault data source: USGS, 2006

Bay Area UASI Program
 Regional Catastrophic Preparedness Grant Program

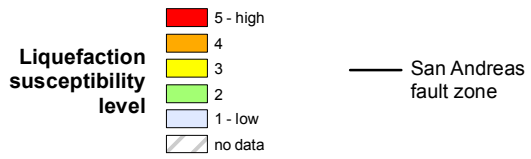
Map B-2. Shaking intensity
 Peak ground acceleration; Scenario: **M 7.9** San Andreas fault earthquake
 1906 Modified Mercalli Intensity



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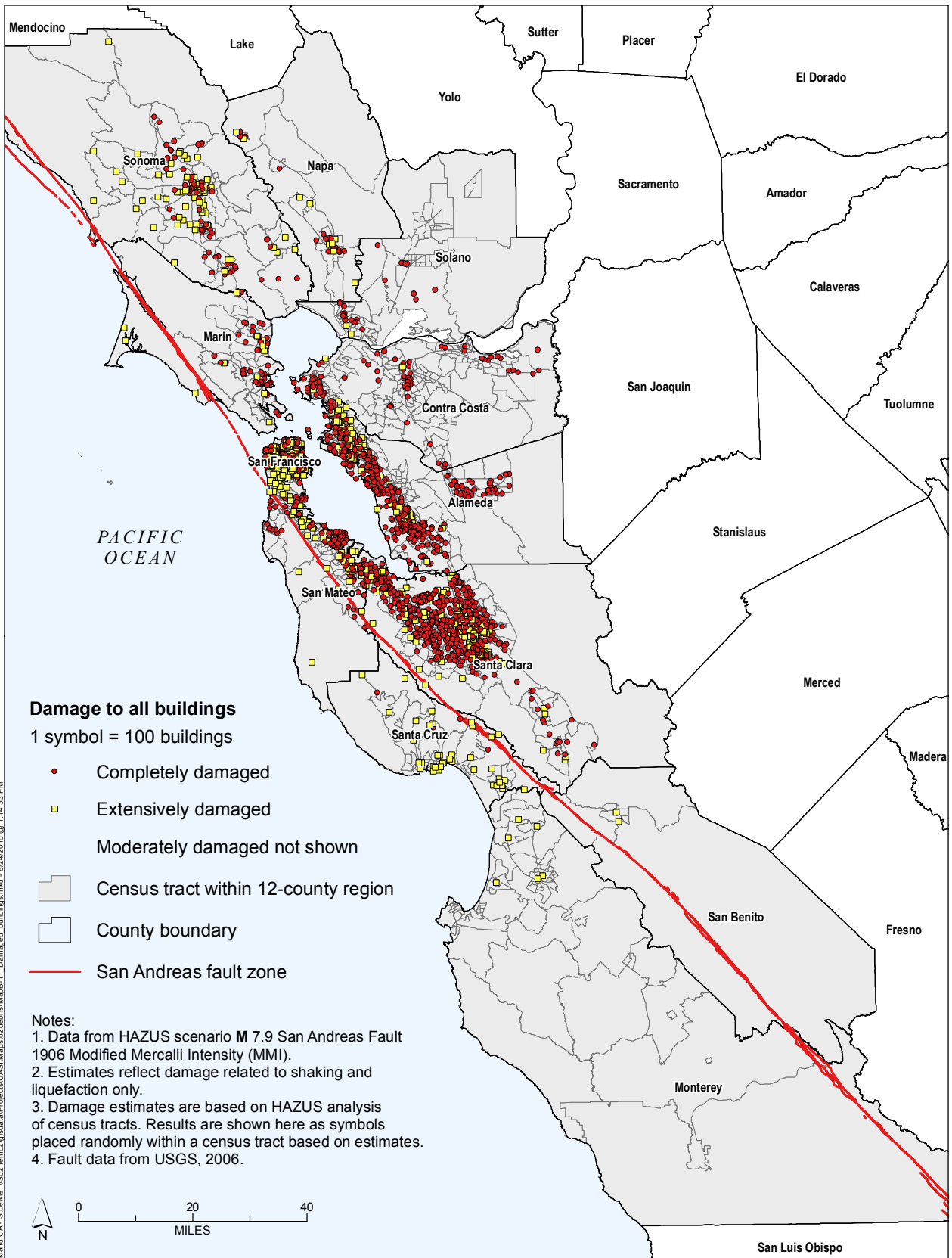


Liquefaction data source: URS, Knudsen et al. (in progress)
 Fault data source: USGS, 2006

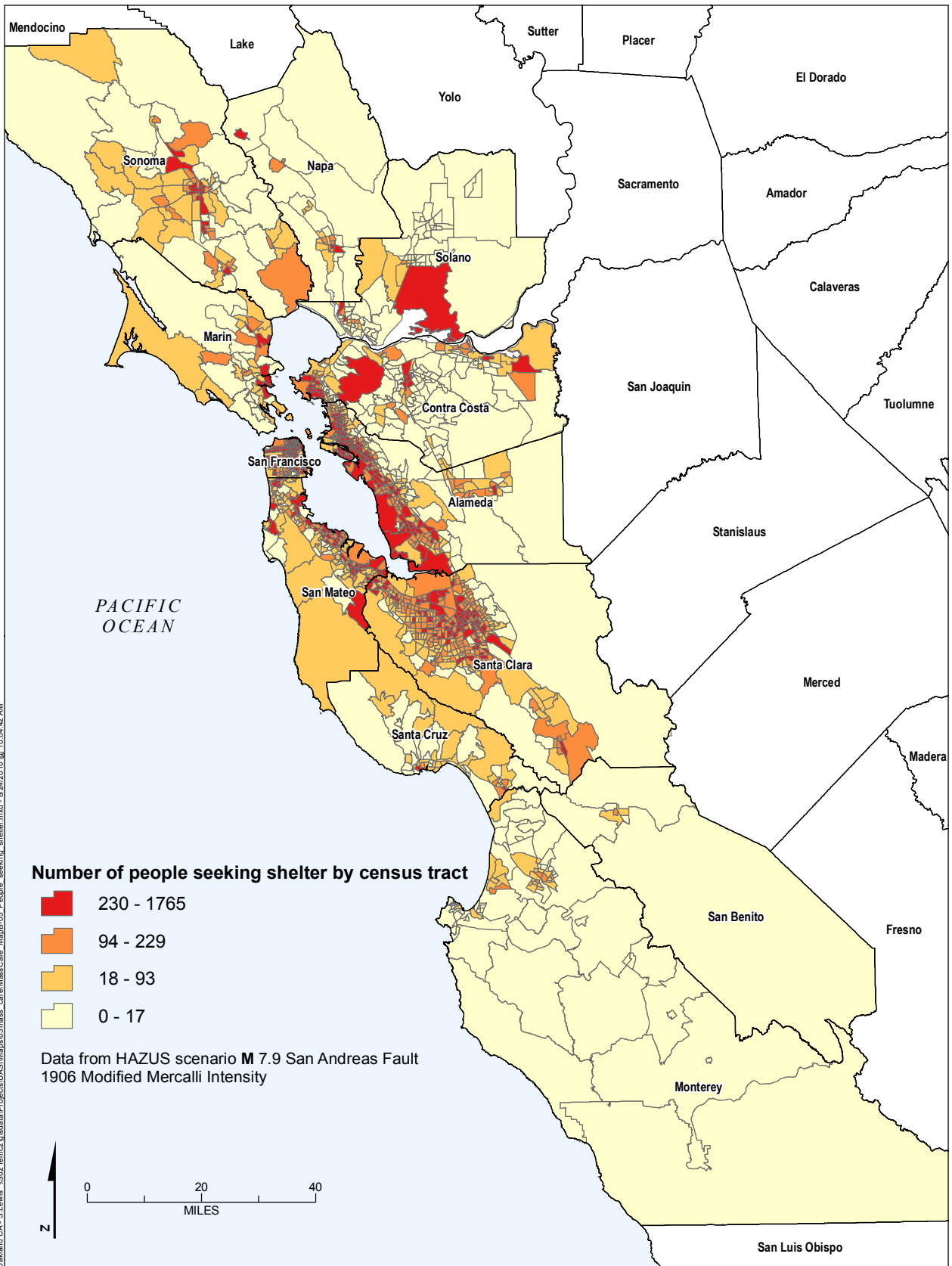


Bay Area UASI Program
 Regional Catastrophic Preparedness Grant Program

Map B-3
 Liquefaction susceptibility



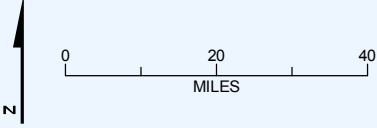
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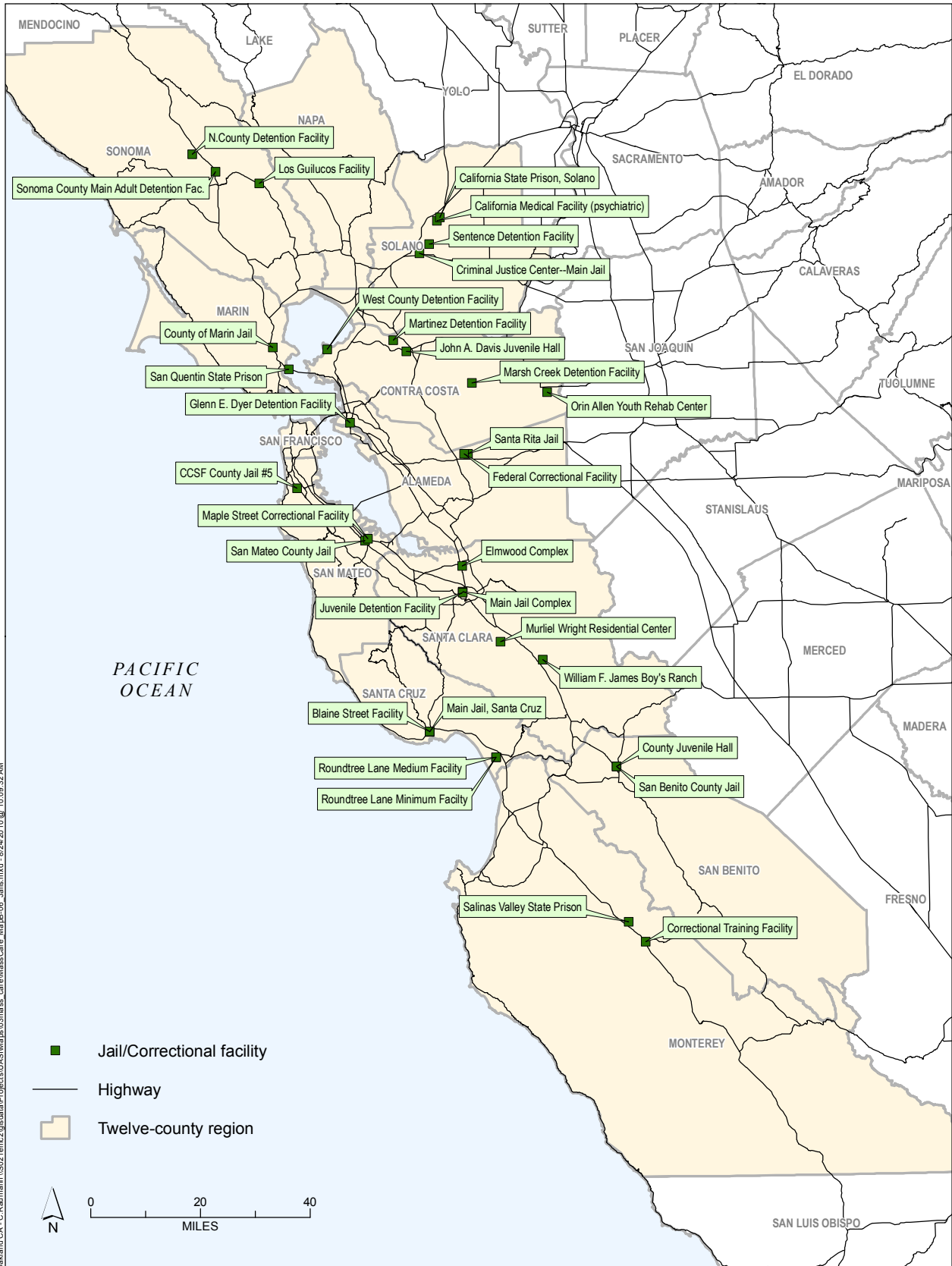
Number of people seeking shelter by census tract

- 230 - 1765
- 94 - 229
- 18 - 93
- 0 - 17

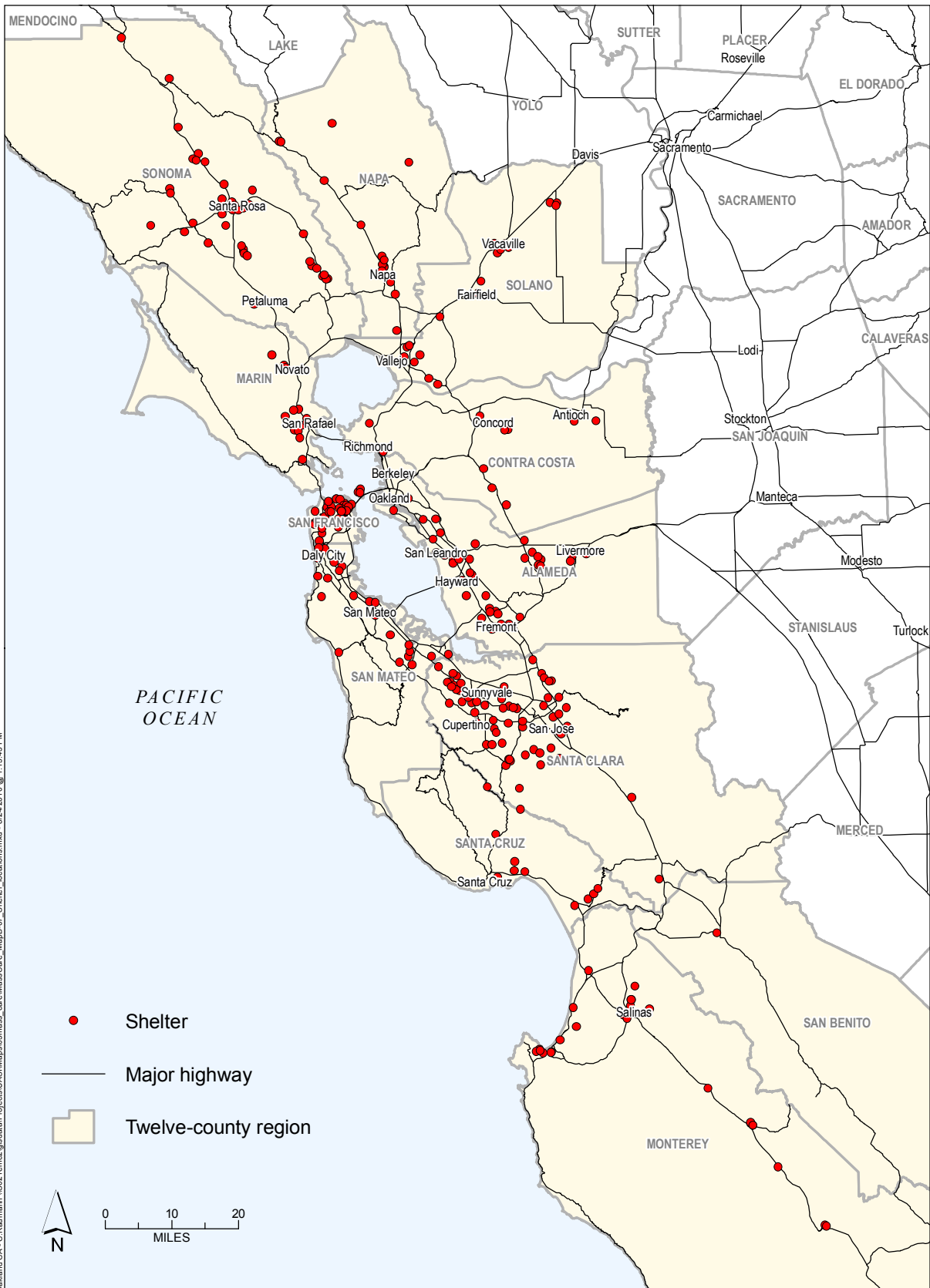
Data from HAZUS scenario **M 7.9** San Andreas Fault
1906 Modified Mercalli Intensity



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Appendix C:
Summary of State and Federal Plans

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Appendix C: Summary of State and Federal Plans

The following State and Federal authorities, regulations, requirements, and guidelines apply to the preparation of this document, the Regional Catastrophic Earthquake Mass Care and Sheltering Plan (Plan),¹ and to the mass care and sheltering operations that are conducted in the response to a catastrophic earthquake.

C.1 Standardized Emergency Management System

The Standardized Emergency Management System (SEMS) is used to manage multi-agency and multi-jurisdictional responses to emergencies in California. SEMS consists of five hierarchical levels: field, local, Operational Area, regional, and State. The SEMS incorporates the principles of the Incident Command System (ICS), the Master Mutual Aid Agreement, existing discipline-specific mutual aid agreements, the Operational Area concept, and multi-agency or interagency coordination and communication. Under the SEMS, response activities are managed at the lowest possible organizational level.

C.2 National Incident Management System

The National Incident Management System (NIMS) provides a comprehensive approach to emergency management for all hazards. NIMS integrates existing best practices into a consistent nationwide approach to domestic emergency management that is applicable to all jurisdictional levels (public and private) and across functional disciplines. NIMS is based on a balance of flexibility and standardization. NIMS is flexible, and allows government and private entities at all levels to work together to manage domestic emergencies, regardless of their cause, size, location, or complexity. NIMS also provides a set of standardized organizational structures.

The ICS is a standardized on-scene emergency management concept designed to provide an integrated organizational structure for single or multiple emergencies, and to enable emergency response across jurisdictional boundaries. ICS is the combination of facilities, equipment, personnel, procedures, and communications operating within a common organizational structure, designed to aid in the management of resources during emergencies. It is based on proven management tools that contribute to the strength and efficiency of the overall system.

¹ For simplicity, the abbreviation of the title of this document is "Plan."

C.3 San Francisco Bay Area Regional Emergency Coordination Plan

The San Francisco Bay Area Regional Emergency Coordination Plan (RECP), which was prepared for the California Emergency Management Agency, Coastal Region, comprises a Base Plan and nine subsidiary plans that address specific disciplines and operational activities such as care and shelter, hazardous waste, fire and rescue, and transportation. The RECP provides a framework for collaboration among responsible entities and coordination during emergencies in the Bay Area. The RECP also defines procedures for regional coordination, collaboration, and resource sharing among emergency response agencies in the Bay Area.

The RECP provides critical linkages to ensure that existing Bay Area emergency response systems work together effectively during the response to an event. In addition, the RECP complies with the requirements of NIMS, and is consistent with the National Preparedness Goal.

C.4 Emergency Management Assistance Compact

The Emergency Management Assistance Compact (EMAC) is a congressionally ratified organization that provides form and structure to interstate mutual aid. It was established in 1996 and is administered by the National Emergency Management Association.

Through EMAC, a disaster-affected State can request and receive assistance from other member states quickly and efficiently, resolving two key issues up front: liability and reimbursement.

EMAC provides another way for states to receive interstate aid in a disaster. Even when Federal assistance is merited, EMAC assistance may be more readily available or less expensive. EMAC assistance may supplement Federal assistance when the latter is available, or it may replace Federal assistance when the latter is unavailable. Most important, EMAC allows for a quick response to disasters using the unique resources and expertise possessed by member states. Since EMAC was approved by Congress in 1996 as Public Law 104-321, 50 states, Puerto Rico, the U.S. Virgin Islands, Guam, and the District of Columbia have ratified the Compact.

C.5 National Response Framework

The National Response Framework is a guide to national all-hazards incident response. The framework, which is coordinated by the U.S. Department of Homeland Security, is built on flexible, scalable, and adaptable coordinating structures to align key roles and responsibilities across the nation. It is intended to capture specific authorities and best practices for managing incidents ranging from the serious but strictly local, to large-scale terrorist attacks and catastrophic natural disasters. It features an approach that:

- Integrates a wide range of emergency management disciplines
- Describes the roles and responsibilities of Federal agencies in emergency response and the organization of those agencies into Emergency Support Functions (ESFs)
- Provides the structure and mechanisms for national-level policy and operational direction
- Provides the framework for Federal interaction with state, local, and tribal governments, the private sector, and nongovernmental organizations

The National Response Framework also describes the Federal response to a catastrophic incident. The Federal Government defines a catastrophic incident as “any natural or manmade incident, including terrorism, which results in levels of mass casualties, damage, or disruption severely affecting the population, infrastructure, environment, economy, national morale, and/or government functions.”

The National Response Framework states that the Federal Government may take protective measures to mobilize and deploy assets in anticipation of a request from a state before, and during, catastrophic events, especially for those that occur without notice. Federal protocols for responding to such incidents are further outlined in the Catastrophic Incident Annex to the National Response Framework and the Catastrophic Incident Supplement, which establishes a coordinated strategy for accelerating the delivery of the applications of Federal, and federally accessible, resources and capabilities. The Catastrophic Incident Supplement establishes an execution schedule and implementation strategy for delivery of key resources for a range of natural and human-caused catastrophic incidents.

C.6 California Catastrophic Incident Base Plan: Concept of Operations

The California Catastrophic Incident Base Plan: Concept of Operations established the Concept of Operations (CONOP) for the joint Federal and State response to and recovery from a catastrophic incident in the State of California. It was prepared through a collaborative effort between the Federal Emergency Management Agency (FEMA) and the State of California. The CONOP defines the Federal/State operations and organizations that support the affected local governments and other entities in the incident area.

Although it is applicable to a wide range of incidents, the CONOP does not provide details specific to a particular location or event type. Therefore, other plans have been developed as incident-, hazard-, and function-specific annexes, some of which have been developed for particular locations.

C.7 San Francisco Bay Area Earthquake Readiness Response: Concept of Operations Plan

The San Francisco Bay Area Earthquake Readiness Response: Concept of Operations Plan (CONPLAN) describes the joint State and Federal response to a

catastrophic earthquake in the Bay Area. The CONPLAN was prepared in accordance with the U.S. Department of Homeland Security (DHS) National Planning and Execution System through a collaborative effort by FEMA and the California Emergency Management Agency. The CONPLAN is a component of the CONOP for the joint State and Federal response to a catastrophic incident in California.

C.8 Bay Area Urban Area Security Initiative Guide for Shelter Operations after a Disaster

The Bay Area Urban Area Security Initiative Guide for Shelter Operations after a Disaster, prepared by the Bay Area Urban Area Security Initiative Program, contains detailed guidance for opening, running, and closing a shelter after a disaster.

C.9 California Department of Social Services Mass Care and Shelter Plan

The California Department of Social Services (CDSS) Mass Care and Shelter Plan describes the organization and standard operating procedures for meeting mass care and shelter needs in California. The CDSS Plan identifies the public and private organizations responsible for providing mass care, shelter, registration and inquiry services, and medical and public health services. In conjunction with the State Emergency Plan, the CDSS Mass Care and Shelter Plan describes the CDSS planned response to extraordinary emergency situations associated with natural disasters, technological incidents, events of national significance and national security emergencies. The CDSS Mass Care and Shelter Plan does not address normal day-to-day emergencies or the well-established and routine procedures used in coping with such emergencies. Instead, the operational focus is on potential large-scale disasters which can generate unique situations requiring unusual emergency responses.

C.10 People with Disabilities and Elderly Shelter Annex to the CDSS Mass Care and Shelter Plan

The People with Disabilities and the Elderly (now referred to as “people with access and functional needs”) Shelter Annex to the CDSS Mass Care and Shelter Plan provides a structure and procedures for activating and running CDSS’s Disaster Operation Center when sheltering people with access and functional needs. The catastrophic scope and impact of recent events like Hurricane Katrina have pointed out the complexity of providing mass care and shelter for these segments of the population. This annex provides guidance to accomplish those tasks.

C.11 Robert T. Stafford Disaster Relief and Emergency Assistance Act

The Robert T. Stafford Disaster Relief and Emergency Assistance Act of 1988 gives the President broad powers to supplement the efforts and available resources

needed to support disaster response activities; coordinates the supply, distribution, and delivery of resources so that they arrive where and when most needed and maintain accountability for the resources used.

C.12 FEMA Comprehensive Preparedness Guide 301: Special Needs Planning

Comprehensive Preparedness Guide (CPG) 301 is a tool for state, territorial, tribal, and local emergency managers to use in the development of emergency operations plans that are inclusive of the entire population of a jurisdiction of any size. It provides recommendations for planning for special needs populations. CPG-301 was developed jointly by FEMA and the U.S. Department of Homeland Security's Office for Civil Rights and Civil Liberties, benefiting from extensive stakeholder involvement.

C.13 Chapter 7 of the ADA Best Practices Tool Kit for State and Local Governments

The ADA [Americans with Disabilities Act] Best Practices Tool Kit for State and Local Governments is a technical assistance document intended to guide government officials in identifying and addressing problems that prevent people with disabilities from gaining equal access to State and local government programs, services, and activities. It contains instructions on conducting accessibility surveys and removing architectural barriers to access. Chapter 7, Emergency Management under Title II of the ADA, focuses on applying this guidance to emergency management and disaster situations. This chapter includes an ADA Checklist for Emergency Shelters that is highly relevant to this Plan.

C.14 FEMA Public Assistance Program

Authorized by the Stafford Act, the Public Assistance Program provides funding to local, State, and tribal governments to assist them with extraordinary costs of disaster response and recovery.

C.15 FEMA Individual Assistance Program

Authorized by the Stafford Act, the Individual Assistance Program provides funding to individuals and households affected by a disaster, including financial assistance for rent and/or to repair a damaged dwelling, and direct assistance in the form of a temporary housing unit.

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Appendix D:
HAZUS Earthquake Analysis

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Appendix D: HAZUS Earthquake Analysis

This appendix describes the Hazards U.S. (HAZUS) analysis that URS Corporation (URS) used to prepare the earthquake scenarios for the Regional Catastrophic Preparedness Grant Program (RCPGP) on behalf of the Bay Area Urban Area Security Initiative Program. The appendix describes the modifications that URS made to adapt existing HAZUS analyses prepared by the Earthquake Engineering Research Institute, supported by the U.S. Geological Survey and others, for the RCPGP. It also describes the limitations associated with the resulting data.

URS prepared the HAZUS analysis with assistance of Hope Seligson of MMI Engineering, Eduardo Escalona of the Federal Emergency Management Agency (FEMA) Region IV, and Douglas Bausch and Jesse Rozelle of FEMA Region VIII.

D.1 Default HAZUS Analysis

The default HAZUS analysis is a Level 1 analysis that uses earthquake ground motions calculated within HAZUS using a simplified model of the seismic source along with the “default” inventory available with the HAZUS software. A Level 2 analysis may incorporate additions or modifications to the HAZUS inventory, as well as imported maps that display refined and area-specific estimates of ground shaking, liquefaction, and/or landslide potential. A Level 3 analysis is the highest level of analysis and constitutes a significant incorporation of updated and region-specific inventory data, seismic hazard maps, revisions of fragility and damage functions, and other refinements. The inputs to the HAZUS analysis in this study are described in the following sections, along with other modifications to bring it to a Level 2 HAZUS analysis.

D.2 ShakeMap for the San Andreas Fault M 7.9 Earthquake Scenario

The RCPGP is based on the prediction of a recurrence of the San Francisco Earthquake of 1906. This earthquake occurred along the northern San Andreas Fault. The map for this scenario event was developed by Boatwright and Bundock (2005), who reevaluated and relocated over 600 observations of damage and shaking reports compiled by Lawson (1908). The ShakeMap methodology was used to map shaking intensities.

URS performed a loss estimation study using the software Hazards U.S. (HAZUS) MR3, developed by FEMA. The HAZUS analysis was performed using a liquefaction susceptibility map developed by the California Geological Survey and the Boatwright and Bundock (2005) ShakeMap as input. The characteristics of the ShakeMap scenario for the San Andreas Fault (1906 rupture from Mendocino to San Juan Bautista) are as follows:

- Moment magnitude: 7.9
- Depth: 6 miles (10 kilometers)

- Latitude: 37.75 degrees
- Longitude: -122.44 degrees
- Rupture length: 296 miles (476.37 kilometers)

A Level 2 HAZUS analysis was performed for 12 counties in the San Francisco Bay Area. **Appendix B, Map B-1**, shows the study region.

D.3 Liquefaction Map

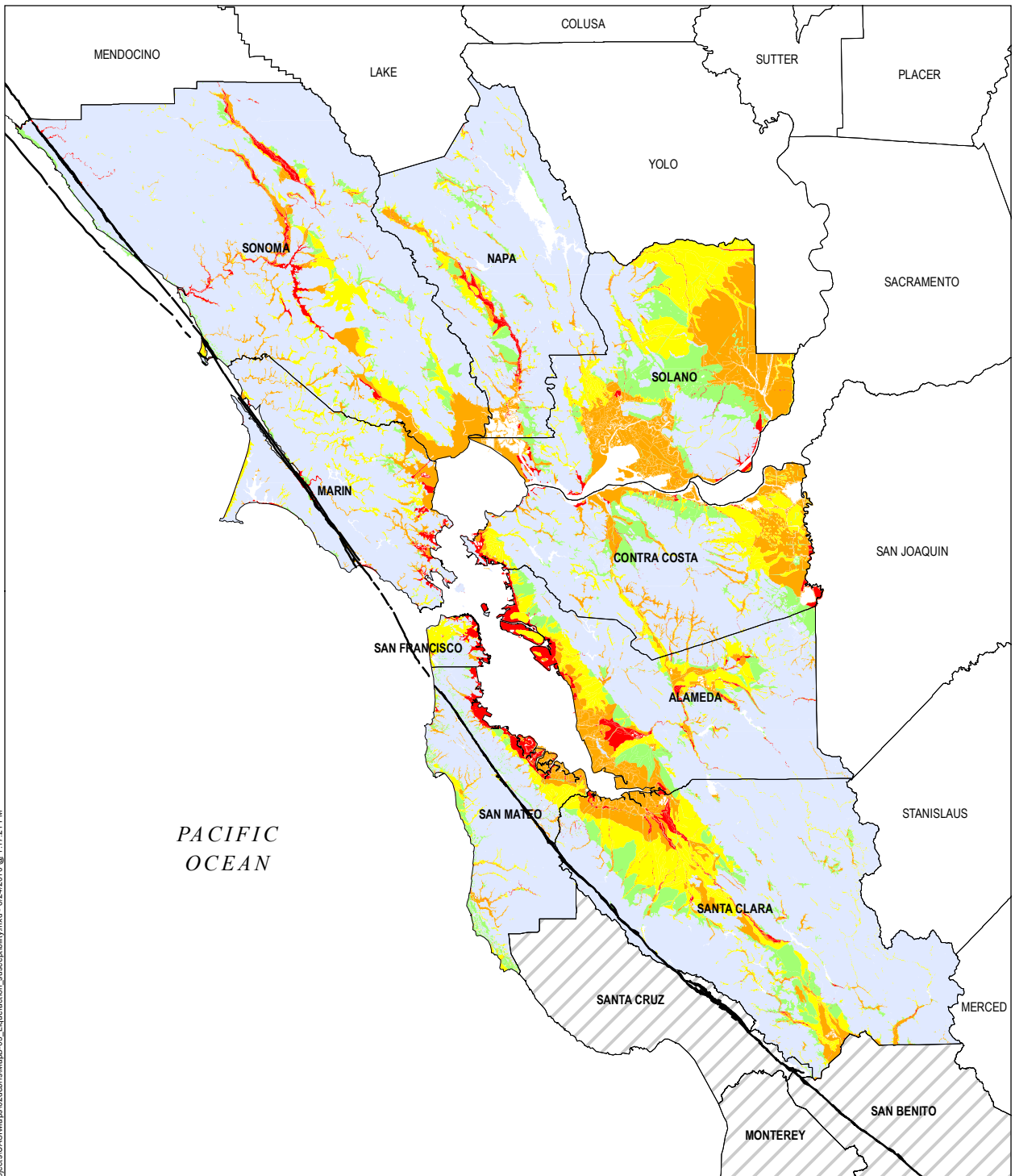
A liquefaction susceptibility map of the Bay Area was developed by Witter et al. (2006) and refined by Knudsen et al. (in progress) (**Map D-1**). The liquefaction susceptibility map was derived from recently produced Quaternary geologic maps. The geologic map units were compared against observations of liquefaction from historical earthquakes. A classification of liquefaction susceptibility units was developed from these two datasets. **Map D-1** illustrates the liquefaction susceptibility zones used in HAZUS. HAZUS predicts liquefaction-related damage to highways and railroads. HAZUS software calculates road damage based on the liquefaction susceptibility because roads are highly susceptible to ground deformation. In recent earthquakes, liquefaction damage to roadways has generally been repaired within days. Consequently, few organizations responsible for maintaining roadways have chosen to mitigate against future liquefaction damage. This is not true of bridges; it can take months or years to repair bridges. Consequently, there has been significant investment in recent decades to mitigate against damage to bridges.

D.4 URS Modifications to the HAZUS Analysis

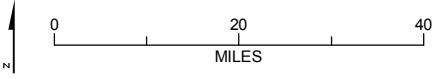
To achieve the objectives of the RCPGP, it was necessary for URS to modify the default HAZUS analysis, both to incorporate updated data and to extract the specific data required for planning. This section describes these modifications to bring the HAZUS analysis to a Level 2 analysis.

D.4.1 Modifications to Kircher Data

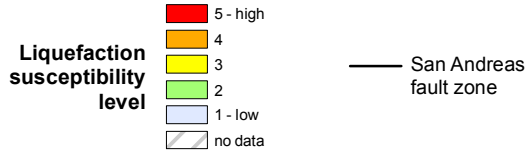
The building inventory information used to create a study region appropriate for the 12 Bay Area counties was derived from a HAZUS study performed by Kircher et al. (2006) (herein referred to as “Kircher”), who evaluated the losses in a repeat of the 1906 earthquake. Kircher’s study region replaced the single default occupancy mapping scheme in HAZUS with 22 custom mapping schemes that relate building occupancy to model building type (Kircher et al., 2006). The building mapping scheme reflects the changes in occupancy as a function of age distribution and hence seismic design level across the region. No changes were made to the databases of square footage, counts, or exposure value. Building height and seismic design level are also included in the mapping scheme. A good example of the changes caused by using Kircher’s occupancy scheme for San Francisco is that more multistory wood-frame buildings with pre-code design are included in the census tracts near the Marina District section of San Francisco.



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Liquefaction data source: URS, Knudsen et al. (in progress)
 Fault data source: USGS, 2006



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Map D-1
 Liquefaction susceptibility

The Kircher study region also differs from the default HAZUS inventory in that it has categories for retrofitted wood frame, concrete, and unreinforced masonry buildings. These were new building categories added under the special-code designation. URS applied Kircher's fragility and capacity curves, part of HAZUS damage functions, to the special category designated for each additional retrofitted building type (Kircher et al., 2006). **Table D-1** is a summary of the revised building-type mapping schemes.

Table D-1. Remapped retrofitted building types and corresponding design levels.

Structure Model Building Type	Kircher Study Region			Translated to Special Code	
	Design Level	Description	Building Height	Translated	Design Level
C1LR	MC	Concrete moment frame (retrofitted)	Low-rise	C1L	L
C1MR	MC		Mid-rise	C1SM	L
C1HR	MC		High-rise	C1SH	L
C3LR	MC	Concrete frame with unreinforced masonry infill walls (retrofitted)	Low-rise	C3SL	L
C3MR	MC		Mid-rise	C3SM	L
C3HR	MC		High-rise	C3SH	L
UMLR (URMLR)	LC	Unreinforced masonry bearing walls (retrofitted)	Low-rise	URML	L
UMLR (URMLR)	MC		Low-rise	URML	M
UMMR (URMMR)	LC	Unreinforced masonry bearing walls (retrofitted)	Mid-rise	URMM	L
UMMR (URMMR)	MC		Mid-rise	URMM	M
W1R	MC	Wood, light frame (≤ 5,000 square feet)	N/A	W1	L
W2R	None	Wood, commercial and industrial (> 5,000 square feet)	N/A	W2	L

Source: HAZUS
 L = Special Low
 LC = Low Code
 M = Special Moderate
 MC = Moderate Code
 N/A = Not applicable

The Kircher study region incorporated changes to fragility curves in the default HAZUS inventory that was available when the inventory was created in 2005. The default HAZUS inventory in MR1 was modified by Kircher, and those changes to the fragility curves were transferred to later versions of HAZUS MR3. When a ShakeMap is used in HAZUS MR3, the new user-defined fragility curves are used. Thus, URS was able to update the fragility curves for all building structure types by utilizing the existing user-defined fragility curves, utilizing Kircher's curves for default building types, and inputting modified fragility curves under the special-code distinction for Kircher's retrofitted building types (Kircher et al., 2006).

Kircher made two additional damage function changes that were incorporated into the URS study. Collapse probabilities are used to estimate the number of buildings that have the potential to collapse in an earthquake. Kircher modified the collapse probabilities by adjusting wood frame collapse probabilities slightly downward and increasing the unreinforced masonry structure rates by a factor of 2. The other change Kircher made was to the damage-state weighting factors. These weighting factors are used to estimate the number of units that are uninhabitable due to structural damage (Kircher et al., 2006). **Table D-2** shows the differences between the default HAZUS data and the factors used in the URS study.

Table D-2. Damage-state weighting factors.

Weight Factor	Description	Default Value	URS Value
wSFC	Single-Family Dwelling: Complete Damage	1.0	1.0
wSFE	Single-Family Dwelling: Extensive Damage	0.0	0.5
wSFM	Single-Family Dwelling: Moderate Damage	0.0	0.0
wMFC	Multi-Family Dwelling: Complete Damage	1.0	1.0
wMFE	Multi-Family Dwelling: Extensive Damage	0.9	1.0
wMFM	Multi-Family Dwelling: Moderate Damage	0.0	0.1

Source: Kircher et al. (2006)

Kircher also made changes to demographic data for the “time-of-day” populations to better reflect local trends in the commuting populations. For example, the commuting population was increased in counties such as Contra Costa that have many residents who work in San Francisco. During the day, those populations would be in San Francisco and at night in Contra Costa County. These changes are reflected in the injury and fatality estimates for different times of the day (although results are reported only for 1400 hours).

D.4.2 Modifications to Essential Facilities

In HAZUS, essential facilities include hospitals, schools, police stations, fire stations, and Emergency Operations Centers (NIBS, 2003). All of the essential facilities inventories were updated in 2007 from default HAZUS inventory using Homeland Security Infrastructure Program (HSIP) data (HSIP, 2007). The HSIP data is a national inventory used by FEMA for disaster planning. The national inventory was updated in HAZUS by FEMA Region IV using information in the HSIP (2007) data and augmented the inventory with replacement cost estimates provided by:

- The Veterans Affairs Office of Facilities Management for hospital replacement costs
- Construction Report, published by School Planning & Management for schools, using square footage as a proxy for replacement cost
- College Planning and Management statistics for colleges and universities

Though all five essential facility types defined by HAZUS were updated using the HSIP data, not all of these results were used in the URS analysis. URS did not use fire stations or police stations in planning results. The Emergency Operations Centers in the HSIP are not an improvement on the default HAZUS inventory and are not used in the URS analysis. Hospitals and schools are used in the URS analysis, and the development of these two datasets is described below.

School damage and functionality was examined because schools often serve as locations of temporary shelters. URS examined the NSS list, which is a database of primarily ARC-designated shelters. URS compared the shelter list with the school inventory in HAZUS and identified vulnerable schools that are likely to be used as shelters. URS also used a California Division of the State Architect inventory of vulnerable schools to identify schools that response planners may not want to use as shelters. The goal is to identify schools for shelters that are most likely to perform well during an earthquake and recommend 6 to 12 safe schools to be used as key shelters.

D.4.3 General Description of HAZUS Results Reported for RCPGP Assumptions Report

The HAZUS results are only as good as the input data used. The changes to the default data set that have been made in the HAZUS runs were explained at the beginning of this appendix. Even with perfect data, which can never be obtained, loss estimation methodologies cannot precisely estimate earthquake loss. Predictive methods are approximate and have large uncertainty (NIBS, 2003). In HAZUS parlance, the calculation performed in this study was a Level 2 study. The largest source of uncertainty in earthquake loss estimation is the ground-shaking parameters, and also of importance are the structural fragilities, both of which directly impact structural damage.

The following discusses some of the more significant limitations in this study.

D.4.3.1 Population

The HAZUS results do not take into account inflation or population growth, and represent values and demographics from the year 2000. These factors were applied at the county level for the casualties and shelter data. The increase in population in the counties in the Bay Area region from 2000 to 2009 is provided in **Table D-3**.

D.4.3.2 Shelter and Displaced Households Data

The displaced household results from HAZUS are derived from populations potentially displaced by building damage. Building damage results are only for strong ground shaking and liquefaction. The short-term shelter needs are derived from estimates of vulnerable populations based upon ethnicity, income level, age, and whether the population rents or owns their homes. Population data is derived from the 2000 census. The HAZUS results do not take into consideration displaced

population due to post-earthquake fire or landslides. URS adjusted the HAZUS results by a population increase for each county (as in **Table D-3**).

Table D-3. Population increase in the Bay Area region from 2000 to 2009.

County	Percent Increase
Alameda	7.81%
Contra Costa	11.76%
Marin	4.58%
Monterey	7.50%
Napa	10.7%
San Benito	8.98%
San Francisco	8.86%
San Mateo	5.47%
Santa Clara	10.40%
Santa Cruz	5.10%
Solano	8.05%
Sonoma	6.11%
Average	7.94%

Source: California Department of Finance

D.4.3.3 Data for Households without Potable Water

Estimates of the number of households without potable water depend on how long it will take to repair breaks to water pipeline systems. This estimate is calculated from strong ground shaking and liquefaction hazards. The pipeline distribution is estimated as a street length proxy and has a default material assumption of 80 percent brittle and 20 percent ductile. Estimates of repair time to fix pipes and breaks depend on the diameter of the pipes and material the pipe is composed of. Repair estimates are only for pipelines within the 12-county study area. Reservoir capacity and pipelines transporting potable water from distant sources (e.g., Hetch Hetchy) are not considered in this study. It is expected that additional information from individual water agencies will augment the HAZUS results. URS adjusted the HAZUS results by a population increase for each county (as in **Table D-3**).

D.4.3.4 Data for Households without Electricity

Estimates for numbers of households without electricity are based on estimates of damaged substations. Damage is estimated based on strong ground shaking (primarily, peak ground acceleration [PGA]) and liquefaction hazards. Substations are not well represented in the default HAZUS inventory, which is used in this analysis, and should be taken as approximate. Components of the utility system

such as circuit breakers outside the 12-county area that feed into the area are not considered.

The methodology used to estimate the number of people without electrical power is driven by the ground motions. If the PGA exceeds 0.44 acceleration due to gravity (g), then the substations affected by census tract are used to estimate the number of people that will be without power. In the case of the San Andreas earthquake scenario, the PGA does not exceed 0.44 g for any census tracts in Contra Costa, Monterey, Napa, San Benito, and Solano counties. Consequently, HAZUS results indicate that there are no households in these counties without power. However, it is likely that Contra Costa, Napa, and Solano counties will have electrical power losses based on their proximity to the earthquake and on ground motion distributions. Because Alameda and Marin counties both have 4 percent power losses on average at E+24 hours, URS has applied the same power loss estimate to Contra Costa, Napa, and Solano counties. For Monterey and San Benito counties, it is likely that there will be some power loss, but it cannot be quantified using these analyses.

Other hazards to electric utilities that are not considered in this HAZUS analysis include post-earthquake fires, landslide-related damage, and flooding. URS adjusted the HAZUS results by a population increase for each county (as in **Table D-3**).

D.4.3.5 School Functionality

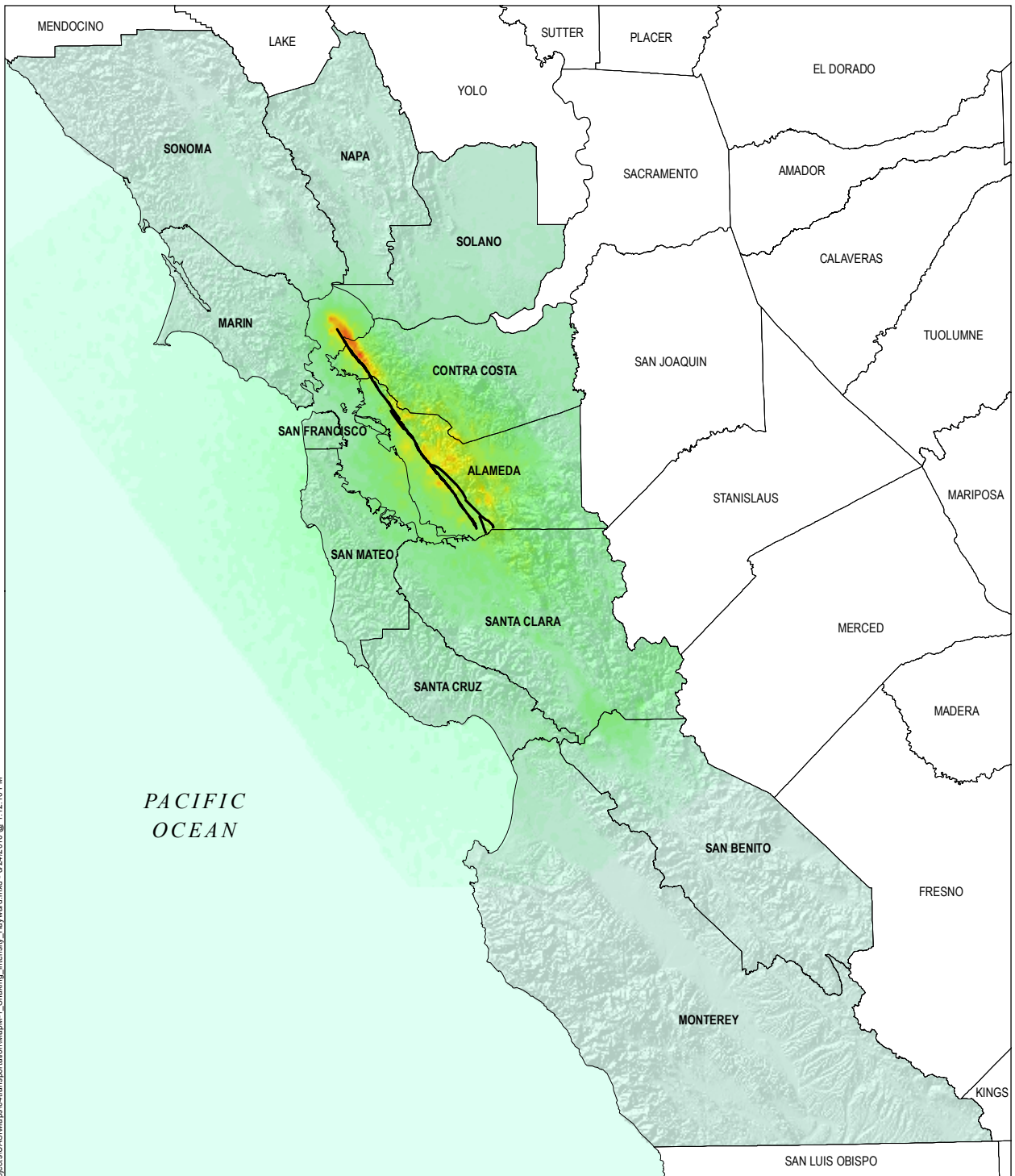
The schools inventory used in the HAZUS analysis are derived from the HSIP Gold 2007 datum (HSIP, 2007). The school inventory is based on national estimates of children in each school, and the building square footage is based on the school population. The school building type inventory has not been validated on a county or city level. School damage calculations, which depend upon building type, are dependent on the level of strong ground shaking and liquefaction at each school location. These HAZUS runs do not calculate losses due to post-earthquake fire or loss of power or water at the school.

D.5 Limitations

The largest sources of uncertainty are the input ground-shaking parameters and possibly structural fragilities. The limitations in the HAZUS results are from the following:

- Runs do not include effects from fire following earthquake, landslides, and flooding.
- HAZUS does not address damage to infrastructure networks, such as water systems, that extend beyond the study region.
- The resolution is good to census tract level only.
- ShakeMap for the San Andreas Fault scenario is based on only 600 data points, and therefore ground motions are interpolated between points. Data points from the 1906 earthquake are based on information that is more than 100 years old and subject to interpretation (Lawson, 1908).

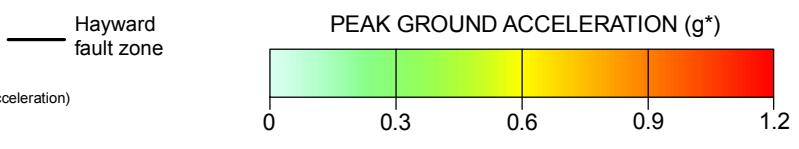
- ShakeMap for the Hayward Fault earthquake scenario (**Map D-2**) is based on ground-motion simulations and not actual earthquake observations. The resolution is about 1/60 of a degree, or 0.0166667 deg (Aagaard et al., 2009).
- ShakeMaps used in this study represent two possible scenario events. Other combinations of faulting, direction of rupture, magnitude, and hypocenter location will produce a different set of ground motions.



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0 20 40
 MILES

*g = 980 centimeters/second/second (units of gravitational acceleration)
 Topographic data source: USGS NED
 Fault data source: USGS, 2006



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Map D-2. Shaking intensity for the Hayward fault earthquake scenario
 Peak ground acceleration
M 7.05 Hayward fault earthquake; hypocenter San Pablo Bay

D.6 References

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**Appendix E:
Estimating Shelter Demand for
People with Access and Functional Needs**

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Appendix E: Estimating Shelter Demand for People with Access and Functional Needs

E.1 Introduction and Purpose

The assumptions for the scenario event are listed in **Section 2** of this document, the Regional Catastrophic Earthquake Mass Care and Sheltering Plan (Plan).¹ **Section 2.3** contains an estimate of the total demand for sheltering in each of the 12 counties in the Bay Area region. **Section 2.3** also contains county-specific estimates of the number of people with disabilities, conditions, or situations that are expected to have one or more access or functional needs.

The Federal Department of Health Services and the State of California define five types of access and functional needs: **C**ommunication, **M**edical, (Maintaining) **I**ndependence, **S**upervision, and **T**ransportation. The types are often referred to as CMIST categories. The intent of estimating the number of people with these needs is to help mass care planners provide full-service shelters that meet these needs for all individuals who arrive at a shelter.

This appendix first describes the methods that were used to develop the estimates and then explains the limitations of the results. It also explains how the results could be expanded by local governments, organizations, or others more familiar with the local populace. Finally, it outlines one possible method for applying the results of the needs estimates to shelter planning and pre-event preparations. Some of this discussion is already in the main body of the Plan but is repeated here for clarity.

E.2 Number of Residents Seeking Shelter

The Hazards U.S. (HAZUS) model used in the development of the plan generated the number of people who are expected to seek shelter after the scenario earthquake presented in **Table E-1**.

Important details regarding the data and calculations are as follows:

- The year 2000 county populations are from U.S. census data and were used by HAZUS as inputs to model runs.
- The number of displaced households is a direct HAZUS result.
- The number of displaced people assumes a flat rate of 2.7 people per household across all counties and demographic groups.
- The number seeking shelter was generated directly by HAZUS.
- The county-specific percent of population that is displaced was calculated by dividing the population of that county by the HAZUS-generated number of displaced people.

¹ For simplicity, the abbreviation of the title of this document is "Plan."

Table E-1. Estimated displacement and shelter demand, based on 2000 data.

County	2000 Population	Number of Displaced Households	Number of Displaced People	Number Seeking Shelter	Percent Population Displaced	Percent Displaced Seeking Shelter
Alameda	1,443,741	88,486	238,912	62,414	16.5%	26.1%
Contra Costa	948,816	15,630	42,201	11,431	4.4%	27.1%
Marin	247,289	7,634	20,612	4,716	8.3%	22.9%
Monterey	401,762	2,160	5,832	2,139	1.5%	36.7%
Napa	124,279	3,128	8,446	2,135	6.8%	25.3%
San Benito	53,234	294	794	260	1.5%	32.8%
San Francisco	776,733	107,266	289,618	59,240	37.3%	20.5%
San Mateo	707,161	39,535	106,745	24,665	15.1%	23.1%
Santa Clara	1,682,585	88,094	237,854	58,585	14.1%	24.6%
Santa Cruz	255,602	3,438	9,283	2,713	3.6%	29.2%
Solano	394,542	3,168	8,554	2,398	2.2%	28.0%
Sonoma	458,614	13,697	36,982	8,858	8.1%	24.0%
Total	7,494,358	372,529	1,005,831	239,556	N/A	N/A

Source: HAZUS analysis conducted by URS (2009)
 N/A = Not applicable

- The percentage of displaced people who will seek shelter was calculated by dividing the HAZUS-generated number seeking shelter by the number of displaced people (derived from HAZUS results, but not directly generated by it).
- The data in **Table E-1** are for the year 2000. In the main body of the Regional Catastrophic Earthquake Mass Care and Sheltering Plan, the data are updated to 2009. The California Department of Finance (CDOF) regularly updates basic U.S. Census Bureau data in some detail. From CDOF data of 2009 populations in each county and U.S. census data on 2000 populations in each county, the rates of increase over that 9-year interval were calculated. The rates of increase, used throughout the Plan, are presented in **Table E-2**.
 The data in **Table E-1** were inflated using the rates of increase to calculate 2009 estimates. The results are presented in **Table E-3**. The percentages for displacement and shelter-seeking are the same for 2000 and 2009 and are shown in **Table E-1** but are not repeated in **Table E-3**.

Estimating the total number of people seeking shelter in each county and in the region was the first step in generating results for the scenario assumption.

Table E-2. County-specific rates of population increase.

County	Population Increase from 2000 to 2009
Alameda	7.81%
Contra Costa	11.76%
Marin	4.58%
Monterey	7.50%
Napa	10.70%
San Benito	8.98%
San Francisco	8.86%
San Mateo	5.47%
Santa Clara	10.40%
Santa Cruz	5.10%
Solano	8.05%
Sonoma	6.11%

Source: 2000 U.S. Census, updated to 2009 figures using California Department of Finance data

Table E-3. Projected displacement and shelter needs, updated to 2009.

County	2009 Population	Number of Displaced Households	Number of Displaced People	Number Seeking Shelter
Alameda	1,556,497	95,397	57,571	67,289
Contra Costa	1,060,397	17,468	47,164	12,775
Marin	58,615	7,984	21,556	4,932
Monterey	431,894	2,322	6,269	2,299
Napa	137,577	3,463	9,349	2,363
San Benito	58,014	320	865	283
San Francisco	845,552	116,770	315,278	64,489
San Mateo	745,843	41,698	112,583	26,014
Santa Clara	1,857,574	97,256	262,591	64,678
Santa Cruz	268,638	3,613	9,756	2,851
Solano	426,303	3,423	9,242	2,591
Sonoma	486,635	14,534	39,241	9,399
Total	8,133,538	404,247	1,091,467	259,964

Source: HAZUS analysis conducted by URS in 2009.

E.3 Number of Homeless People and Visitors Seeking Shelter

The next step was to estimate the number of homeless people and visitors in the 12-county region. The homeless estimates are from the biannual counts required under the McKinney–Vento Homeless Assistance Act of 1986 for all State and municipal governments that receive Federal funds. The 12 counties in the study region all conduct point-in-time counts, although the most recent counts were not always available when the estimates were generated. Therefore, the year of the counties' counts varied between 2006 and 2009.

From anecdotal evidence of previous disasters in the United States, the assumption was made that 80 percent of all homeless people would seek shelter. Each county's homeless count was therefore multiplied by 0.8 to generate the estimates.

A somewhat more complicated estimation method was required for visitors. "Visitors" was defined as including tourists and business travelers but not commuters from outside the region. This definition limited the category to those staying at hotels, at motels, at the home of a friend, or at other forms of short-term lodging. Someone living in the 12-county region and commuting throughout it, or someone spending a night in one part of the region who lives in another part, is already included in the residential population and is thus not counted again.

Survey data from several different chambers of commerce and visitors' bureaus were collected from San Francisco and the Monterey Bay area. Total visitation, average number of nights per stay, and points of origin were used to estimate the number of unique visitors and allocate them to some other part of the Bay Area region or to outside the region. The ratios of the visitor populations to the base populations of those counties were assumed to be similar to those in the surrounding counties. The populations of those counties were then used to estimate a number of visitors on any given night. This is a conservative approach that probably overestimates the number of visitors in some locations.

Those estimates were then multiplied by 20 percent, under the assumption that 20 percent of all visitors would seek services at one of the in-region shelters. The other 80 percent of visitors are assumed to leave the area on their own, stay in an undamaged hotel or motel, or stay with friends or family whose homes are similarly undamaged.

The estimates for each county's shelter-seeking homeless and visitor populations were added to the county resident shelter-seeking numbers. These are the planning estimates for in-region shelter demand that are used throughout this Mass Care and Sheltering Plan.

Within those larger numbers, however, there are many population groups that will have one or more of the five access and functional needs. The next section develops estimates of the total populations within each county that are likely to express one or more of the CMIST access and functional needs.

E.4 Access and Functional Needs Populations Seeking Shelter

As noted, HAZUS and U.S. census data generated the primary results above. The next step was to assess the demand for shelter from various population groups that are believed to be the most likely to express one or more access and functional needs (the CMIST categories described above). Using the same descriptions found in the U.S. census, the groups were:

- General Population, <5 years
- General Population, 5–17 years
- General Population, >65 years
- Non-English Speakers (all ages)
- Sensory Disability (all ages)
- Physical/Mental/Self-Care Disability, 5–15 years
- Physical/Mental/Self-Care Disability, 16–64 years
- Physical/Mental/Self-Care Disability, >65 years
- Employment Disability, 16–64 years
- Go-Outside-Home Disability, 16–64 years
- Go-Outside-Home Disability, >65 years
- Within-County Commuters
- Net Into-County Commuters
- Population Below Poverty Level

For informational purposes and completeness of calculation, the size of the following demographic group was also included in the analysis, although this group is not expected to demand CMIST services at shelters at greater rates than the general population:

- General Population, 18–65 years
- Net Into County Commuters

To generate estimates of the number of people in these groups, the general population estimates and rates of displacement and shelter-seeking (shown in Table E-1) were integrated with other data from the U.S. Census Bureau, the CDOF, county-collected information on homelessness and commuting, and so on. At present, there are few credible and available estimates of the population-group-specific rates of those seeking shelter. Some are available, but in order to use this approach, there needs to be consistent sources of these rates across the groups.

Data were collected from the U.S. Census Bureau on county-specific numbers of people in various age groups, with varying English-language abilities, and with disabilities including physical, sensory, mental, self-care, and others. Those numbers were then inflated to 2009 estimates according to the county-specific growth rates described above.

Next, the HAZUS-generated rates of displacement in each county and of people seeking shelter within each county were used to generate the numbers of people in

each of these access and functional needs groups that are expected to seek shelter after the event. Those results are presented in **Table E-4**. The limitations of the results of the preliminary analysis are discussed below.

- **No variation in shelter-seeking rates among population groups.** The rates of displacement and shelter-seeking are assumed to be no different for any of the access and functional needs population groups than they are for the general population as a whole. This is a potential limitation because people with these needs might seek shelter in greater numbers than the general population. For example, many physically or mentally disabled people cannot self-evacuate, and their families or assistance providers may not be available after the scenario event. The elderly, the impoverished, and immigrant communities (regardless of legal status) may have fewer resources, means, or access to private transportation or lodging. Tourists and business travelers are less likely to have friends or family in the region that can provide shelter. Similar issues can be imagined for almost all of the population groups.
- **No spatial heterogeneity in shelter-seeking rates.** The access and functional needs population groups were estimated using the county-specific displacement rates and shelter-seeking rates developed from HAZUS results. But these estimates, even if accurate at the county scale, would miss the spatial distribution of these groups within each county. Since certain access and functional needs populations are likely to be clustered in particular areas, the spatial scale of this analysis would not capture that. While the details of planning for mass care and sheltering are accurate and sufficient at the regional level, at the local level they would benefit from a spatial scale with more resolution in the locations of these populations.
- **People fit into more than one population group.** The population groups are neither mutually exclusive nor collectively exhaustive. One person is likely to fit into more than one category. For example, many elderly people also have a physical or medical disability. A non-English speaker may also be elderly or infirm. And many other combinations exist with no credible way to parse them out without double-counting. This further compounds the difficulty in planning for the needs of people that will present at shelter sites.
- **Indirect correlation between access and functional needs population groups and CMIST needs.** A limitation arises from the lack of a clear relationship between a particular Census-recognized disability and the demand for assistance in meeting any particular access and functional need. This is because there is not a direct connection between any particular group and the types of CMIST needs they will require. For example, some are relatively clear: people with sensory disabilities will need assistance with communication. Yet even this understanding does not tell planners whether those needs will be for sign language, Braille signage, or translation/assistance services. And more error is introduced because needs for assistance with communication may arise not from people with a sensory disability but from speakers of foreign languages or people with learning disabilities).

Table E-4. Number of people with access and functional needs expected to seek shelter after the scenario event, by county and for Oakland and San Jose.

Access/Functional Need Population Group	Age in years	COUNTY												CITY ³		
		Alameda	Contra Costa	Marin	Monterey	Napa	San Benito	San Francisco	San Mateo	Santa Clara	Santa Cruz	Solano	Sonoma	Regional Total	Oakland	San Jose
Sensory disability	All	1,800	400	100	100	100	<100	2,100	600	1,500	100	100	300	7,200	900	900
Physical/mental/ self-care disability	5 to 15	500	100	<100	<100	<100	<100	300	200	400	20	<100	100	1,700	200	300
	16 to 64	4,600	800	300	200	200	<100	4,700	1,200	3,100	200	200	700	16,100	2,700	2,200
	>65	3,500	700	200	100	200	<100	4,900	1,200	2,700	100	100	500	14,200	1,900	1,600
Employment disability	16 to 64	5,500	900	300	200	200	<100	5,700	1,900	5,000	200	200	700	20,800	2,900	3,700
Go-outside-home disability ¹	16 to 64	3,300	500	200	100	100	<100	3,500	1,100	3,000	100	100	300	12,300	1,900	2,400
	>65	1,500	300	100	<100	100	<100	2,100	600	1,200	100	100	200	6,200	800	700
Inter-county commuters ²	—	8,900	1,000	800	<100	300	<100	20,900	5,000	7,300	100	100	200	44,600	N/A	N/A
Households without vehicle	—	2,100	200	100	100	100	<100	7,300	500	1,000	100	100	200	11,600	1,700	600

Source: URS analysis of U.S. census data, California Health Interview Survey, and data from California Department of Finance and local chambers of commerce (2009); results rounded to nearest hundred.
— = Not applicable

N/A = Not available

¹ Person who needs support when outside the home.

² Commuters within a county jurisdiction on a typical day but who reside in a different county and thus have an additional need for transportation.

³ Estimates for Oakland and San Jose are included in the regional totals for Alameda County and Santa Clara County, respectively.

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- **Lack of local expertise and specialized data sources.** The data sources used to develop the regional scale of the population group estimates are appropriate for a region-wide plan. However, there are likely to be locally developed data sets and experts that can provide information that is newer, more spatially specific, or more complete, or that makes a more direct connection between individuals and the types of CMIST they would have. Any of these would be an improvement on the regional-scale estimates developed in Section 2 of the main text.

Augmenting the regional estimates with local data is highly advised. Several sources for this local adaptation are listed below.

- All of the U.S. census data presented at the county level are also available at the city, zip code, or census tract level. The smaller spatial scale of this information allows planning for the specific CMIST needs (discussed below) that a community is likely to demonstrate after the scenario event.
- American Community Surveys are conducted as samples every 3 years (as opposed to decadal U.S. census counts) and are useful for cross-referencing age, gender, and race/ethnic background with medical needs, disabilities, or other conditions.
- Community Health Information Surveys have data on rates of specific diseases or medical conditions (e.g., asthma, heart diseases) by county. Particularly high rates of any of these in a given community would be important to consider.
- The California Department of Finance and the U.S. Census Bureau both have household income and employment status that might be used to evaluate the degree of self-sufficiency of a particular community within an affected city or county. Much anecdotal evidence from past events indicates that greater resources (wealth, income) enable people to self-evacuate and transition to interim housing at greater rates than people with fewer resources.
- Insurance companies and the California Insurance Commission have information on the rates of homeowner's and renter's insurance in different localities, which may be indicative of different levels of self-sufficiency after the event.
- Medical insurers and providers (e.g., Kaiser Permanente, which insures disproportionately large percentages of individuals in many different communities) have spatially specific data on the medical conditions in certain areas, and the types of equipment, medicines, and supplies that are needed in those areas.
- Association of Bay Area Governments developed its own estimations of housing losses (Shaken Awake, 1996; The Problem: Loma Prieta and Northridge Were a Wake-Up Call, 2003)

In short, the initial estimates of access and functional needs population group sizes are a workable starting point for shelter planning related to the needs of these individuals. However, because of these limitations in the data and the assumptions

required to develop the estimates, additional analytical steps are needed to complete the planning. These steps are discussed in the next section.

E.5 Planning for CMIST Needs

This section outlines one possible method of fully planning for meeting the CMIST needs of people requiring care and shelter after the scenario event. This is not the only way to develop these estimates. Nor has any research been conducted to accurately estimate the values presented. This is a conceptual model, and the numbers used are for illustrative purposes only.

This method relies on two key points. First, some CMIST needs will be demanded by the general population, and not only by those appearing in one of the access and functional needs population groups developed earlier. Second, not all members of the access and functional needs population groups will have CMIST needs.

Table E-5 presents “sample” assumptions about the demand presented in each of these CMIST types for each of the general population age groups (in gray) and the access and functional needs population groups. Under columns for each of the five CMIST types, categorical qualitative estimates are made about the portion of each row’s regional total that can be expected to need assistance. The qualitative expectations and associated percentages are as follows:

- None: 0 percent
- Very few: 5 percent
- Few: 10 percent
- Some: 30 percent
- Many: 50 percent
- Most: 70 percent
- Almost all: 90 percent

The assumed percentages are multiplied by the regional total of that subgroup. This yields the number of individuals expected to need assistance in that particular CMIST category. These are shown in **Table E-5**.

The assumed need in the columns should not be summed because many individuals fall into more than one of the subgroups and would thus be double-counted. The exceptions to this are the gray cells, which represent the estimated number of shelter-seekers from the general population by age bracket, from the U.S. Census. Because the regional totals of these groups are mutually exclusive and collectively exhaustive, they can reasonably be summed, as can the numbers for these rows under each of the five CMIST needs. These totals are provided at the bottom of the table.

Conversely, it would be rational to sum the numbers in each row because individuals often require care in more than one of the CMIST categories. This additional demand is important to plan for. These totals are provided in the far right column. These in-row sums across the CMIST categories can exceed the total number of individuals in that row because a single person frequently has more than one of the five need types. What is being counted across the row is not the number of people but the number of special needs.

Table E-5. Approach to estimating regional CMIST demand.

Population Group	Regional Total	Communication		Medical		Independence		Supervision		Transportation		CMIST Totals
		How Many?	Number	How Many?	Number	How Many?	Number	How Many?	Number	How Many?	Number	
General population, <5 yrs	15,904	Many	7,952	Few	1,590	Most	11,133	Almost all	14,314	Few	1,590	36,580
General population, 5–17 yrs	1,373	Few	4,137	Few	4,137	Many	20,686	Very few	2,069	Many	20,686	51,716
General population, 18–64 yrs	173,142	Few	17,314	Few	17,314	Few	17,314	None	0	Few	17,314	69,257
General population, 65 > yrs	29,546	Many	14,773	Many	14,773	Many	14,773	Some	8,864	Some	8,864	62,046
Non-English speakers (all)	48,403	Almost all	43,562	Few	4,840	Most	33,882	Few	4,840	Some	14,521	101,646
Sensory disability (all)	7,103	Almost all	6,392	Few	710	Most	4,972	Few	710	Almost all	6,392	19,177
Physical/mental/self-care disability, 5–15 yrs	1,672	Some	502	Most	1,171	Most	1,171	Most	1,171	Almost all	1,505	5,519
Physical/mental/self-care disability, 16–64 yrs	16,064	Few	1,606	Many	8,032	Many	8,032	Many	8,032	Most	11,245	36,948
Physical/mental/self-care disability, 65> yrs	14,253	Few	1,425	Almost all	12,828	Almost all	12,828	Almost all	12,828	Almost all	12,828	52,736
Employment disability, 16–64 yrs	20,741	Few	2,074	Few	2,074	Some	6,222	Few	2,074	Some	6,222	18,667
Go-outside-home disability, 16–64 yrs	12,399	Few	1,240	Some	3,720	Almost all	11,159	Few	1,240	Almost all	11,159	28,519
Go-outside-home disability, >65 yrs	6,090	Few	609	Many	3,045	Almost all	5,481	Few	609	Almost all	5,481	15,226
Within-county commuters	95,667	Few	9,567	Some	28,700	Few	9,567	Few	9,567	Most	66,967	124,367
Net commuters Into county	12,617	Few	1,262	Some	3,785	Few	1,262	Few	1,262	Many	6,309	13,879
Poverty	23,844	Few	2,384	Some	7,153	Few	2,384	Few	2,384	Many	11,922	26,229
Households without vehicle	11,636	Few	1,164	Some	3,491	Few	1,164	Few	1,164	Almost all	10,473	17,454
Tourists and business travelers	9,361	Few	936	Some	2,808	Few	936	Few	936	Almost all	8,425	14,041
General population, Total	259,964	N/A	44,176	N/A	37,815	N/A	63,906	N/A	25,246	N/A	48,455	N/A

Source: URS analysis of U.S. census data, California Health Interview Survey, California Department of Finance, and local chambers of commerce (2009).

CMIST = Communication, medical, independence, supervision, transportation

N/A = Not applicable

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Note again that these estimates are provided for illustration only. In all likelihood, the percentages of each population group in the table vary from county to county and perhaps more widely geographically within each county. There is anecdotal evidence to suggest that certain cities and census tracts have clusters of certain socioeconomic or cultural groups.

Perhaps even more important are the details of what types of needs each CMIST category is expected to have. Some examples are listed in the list below, though many more are possible.

- One city with a high concentration of communications needs may need Spanish speakers for translation, whereas another may need Tagalog or Cantonese translators.
- Not all medical needs are the same: some people may need trained personnel for frequent assistance, while other people may simply need a daily dose of a medication that would not be available without planning.
- The types of supervision will vary by the expected age, culture, and other demographic makeup of the populace: shelters in areas with many children will need child care expertise; areas with significant pre-event gang activity will benefit from more law enforcement or correctional expertise.
- Other types of supervision needed may become relevant at shelters with people who were registered sex offenders before the event or in communities where jails or other correctional facilities are damaged.
- The skills, staff, and other resources involved in assisting people to maintain independence will vary from simply getting people in and out of bed or on and off toilets to more intense occupational therapy skills, like assisting with dressing, bathing, eating, and so on.
- Many transportation needs are likely to be one-time only, specifically to return commuters to their communities or residences and reunite them with their families; other people will need more frequent help getting to and from dining areas or in moving from one shelter to another.
- Even within those members of a certain population group who have a similar condition or disability, the specific needs may vary. An individual with a non-medically urgent physical disability related to transportation may need only crutches or a wheelchair; others may need a motorized wheelchair; still others may need a gurney and assistants to push it.

Many types of mass care and sheltering services will need to provide overlapping assistance to satisfy multiple CMIST needs. The need for a wheelchair, for example, is both a transportation need and a medical need, in many cases. In its absence, a person who would not otherwise need help maintaining independence could develop that need as well.

This is one example of a possible pitfall in mass care and sheltering at this scale: the failure to satisfy one CMIST need may “push” people into other need categories or

lead to increased severity of disabilities and health issues, adding complexity and difficulty to the sheltering effort.

These specifics are important to consider at the local level. The intent of a regional plan is begin to estimate what the total needs are likely to be, sketch a rough outline of where they are likely to occur, and provide context and guidance to local planners as they develop analogous plans for meeting these needs.

**Appendix F:
State Agencies with Supporting Roles
in Mass Care and Sheltering**

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Appendix F: State Agencies with Supporting Roles in Mass Care and Sheltering

Table F-1. Roles of State departments, agencies, and other entities in care and sheltering and other aspects of the response related to mass care and sheltering.

State Agency	Department	Response Aspect	Role
Business, Transportation, and Housing Agency	N/A	Long-term recovery	Co-lead for recovery operations with the State and Consumer Services Agency. May assign primary and support roles to the departments in the agency that have the authorities, capabilities, and resources necessary to meet emergency needs.
	California Highway Patrol	Care and sheltering	Provides communications and transportation/evacuation (as needed) to Cal EMA. Can provide limited mass care facilities. Assists county law enforcement in movement of prisoners from damaged jails.
	Department of Housing and Community Development	Care and sheltering	Provides lists of the State-owned, Office of Migrant Services facilities available for emergency short-term housing and local housing and CBOs that can provide additional housing facilities and outreach. Can provide policy and program guidance on housing issues and housing financing options, and act as liaison to local housing authorities and community-based housing organizations. Provides lists of departmental facilities available for emergency short- and long-term housing and CBOs that can provide outreach.
	California Department of Real Estate	Care and sheltering	Works with HCD on temporary housing issues.
	California Department of Transportation	Care and sheltering	Classifies State property for possible temporary emergency housing sites.
N/A	Department of Corrections and Rehabilitation	Care and sheltering	Provides medical personnel, technicians, supplies, equipment, pharmaceuticals, and facilities (where appropriate) for care. Provides water, food products, food service equipment, and livestock supplies and feed. Assists local and county law enforcement in sheltering and transporting prisoners, as needed.
N/A	Department of Education	Care and sheltering	Promotes the use of school property for public agencies during disasters. Coordinates food through USDA donations.
N/A	Department of Finance	Long-term recovery	Allocates funds through Cal EMA for local agencies to repair, restore, or replace public real property that is damaged or destroyed. Develops criteria for State agency recovery of non-federally reimbursed costs of emergency activities and develops streamlined approval processes. Ensures that non-Federal reimbursement process is expedited during an emergency. Has oversight for State financial transactions. Institutes State economic stabilization programs and consults with local, State, and Federal officials about time-phased resumption of economic stabilization controls by the Federal Government.

Table F-1. Roles of State departments, agencies, and other entities in care and sheltering and other aspects of the response related to mass care and sheltering.

State Agency	Department	Response Aspect	Role
N/A	Department of Food and Agriculture	Care and sheltering	Coordinates with private-sector organizations dedicated to providing food, water, shelter, and care to livestock and animals. Provides information for human mass care shelters that are currently fairgrounds. Provides food supply lists and emergency food assistance programs; oversees the CARES Program, and provides food, water, shelter, and care to animals/livestock. Coordinates food resupply during an emergency.
		Long-term recovery	Evaluates and reports agricultural-sector damage and resultant economic losses to the Governor's Office and Cal EMA.
N/A	Department of Insurance	Long-term recovery	Coordinates with Cal EMA and insurance companies for the deployment of insurance disaster assessment teams. Ensures that sufficient personnel are effectively trained to complete the department's emergency activities regarding insurance coverage, the insurance claims process, and the Federal Disaster Relief and Emergency Assistance Program. Maintains trained staff in the analysis of specified insurance policies and other emergency activities. Provides assistance and guidance to local governmental agencies and the public to facilitate both retrofit activities and the acquisition of earthquake retrofit grants and loans to low- and moderate-income households. Provides personnel for a variety of insurance issues, assistance in filing claims, and contact information to the public affected by emergencies and disasters. Provides post-event statistical insurance information compiled by the statistical analysis bureau. Provides technical expertise on insurance programs.
N/A	Department of Justice	Care and sheltering	Has mass care facilities. Provides food and shelter to victims at departmental facilities. More generally, may provide personnel for a variety of insurance issues, assistance in filing claims, and contact information to the public affected by emergencies and disasters. Provides post-event statistical insurance information compiled by the statistical analysis bureau.
N/A	Department of Veterans Affairs	Care and sheltering	Has mass care facilities. Provides food and shelter to victims at departmental facilities.
California Health and Human Services Agency	N/A	Care and sheltering	Serves as the lead agency for coordinating emergency activities related to care and sheltering, and to public health and medical services. The agency may assign primary and support roles to those departments within the agency that have the authorities, capabilities, and resources necessary to meet emergency needs.
	Department of Aging	Care and sheltering	Provides personnel to support senior issues and functionally impaired adults.
	Department of Alcohol and Drug Programs	Care and sheltering	Coordinates with local programs to provide alcohol and drug services in care and sheltering facilities. Provides personnel to participate in shelter assessment teams.
		Long-term recovery	Assists CDSS to identify and locate new out-of-home placement facilities for people displaced by the event who are undergoing substance abuse treatment.

Table F-1. Roles of State departments, agencies, and other entities in care and sheltering and other aspects of the response related to mass care and sheltering.

State Agency	Department	Response Aspect	Role
California Health and Human Services Agency	Department of Community Services and Development	Care and sheltering	Provides information lists related to CBOs that can provide outreach and safety-net services.
		Long-term recovery	Administers and expedites the release of program funds to accommodate emergency conditions in low-income communities through the department's mandated programs, when possible.
	Department of Developmental Services	Care and sheltering	Provides facilities for sheltering, food preparation, and medical equipment/supplies for individuals residing in State-operated facilities, to the extent possible. Coordinates with regional centers to identify and respond to the needs of the developmental services community. Provides consultation and assistance in accessing shelter space for individuals with developmental disabilities.
	Department of Health Care Services	Care and sheltering	Provides information on bed availability of skilled nursing facilities in respective areas.
	Department of Mental Health	Care and sheltering	Coordinates with providers of care and sheltering to address mental health issues and the provision of crisis counseling services for disaster victims and shelter workers. May contribute members to shelter evaluation team to determine adequacy of services.
	Department of Public Health	Care and sheltering	Ensures the safety of food, drugs, medical devices, and other consumer products in the disaster area. Regulates bottled drinking water plants and distributors and drinking water haulers to ensure the safety of bottled or hauled water used as emergency supplies of drinking water. Provides support to local health departments for infectious disease surveillance and outbreak response, and for food safety and sanitation standards in shelters. Analyzes affected areas for safe return of displaced populations.
	Department of Public Health (cont.)	Long-term recovery	Supports the restoration of health-care facilities, drinking water systems, and safe food supplies.
	Department of Rehabilitation	Care and sheltering	May contribute personnel for evaluation teams to assess shelter sites for ability to incorporate populations with access and functional needs. May provide staff and available lists of additional personnel for sign language and translation services in other languages. Provides crucial materials in alternate format (Braille) and large print for people who are blind or visually impaired. May coordinate with other departments to provide information and referral services to persons with disabilities.
		Long-term recovery	Assists CDSS and ARC shelters in identifying resources for relocation of people with disabilities.

Table F-1. Roles of State departments, agencies, and other entities in care and sheltering and other aspects of the response related to mass care and sheltering.

State Agency	Department	Response Aspect	Role
California Health and Human Services Agency (cont.)	California Department of Social Services	Care and sheltering	Identifies State agency resources that may be available for support in care and sheltering. Serves as the lead agency in coordinating resources needed to support mass care and sheltering response and supports agencies in transitioning individuals from mass care to separate family living. Assists in the coordination of the reception of evacuees at sheltering locations, including assisting with evacuee identification and inquiries, and coordinates language translation services.
		Long-term recovery	Manages the Mass Individual Food Program as part of long-range economic recovery operations. Assists with individual grant recovery assistance programs and administers the State Supplemental Grant Program for disasters declared by the President, when authorized by Cal EMA.
Emergency Medical Services Authority		Care and sheltering	Provides information on the medical requirements of shelters and the availability of medical facilities. Develops and maintains disaster medical response plans, policies, and procedures. Develops civilian disaster medical response teams, response management teams, disaster medical communications systems, and a statewide medical mutual aid system, and manages California's medical response to a disaster.
		Evacuation	Organizes the evacuation of injured individuals to medical facilities outside the affected area.
Managed Risk Medical Insurance Board		Long-term recovery	Provides information on Managed Risk Medical Insurance Board programs to support recovery efforts. Works with the Department of Health Care Services to maintain coverage to eligible clients.
Office of Statewide Health Planning and Development		Long-term recovery	Provides onsite consultation and approval of work required to ensure the safety of occupants and the return of health facilities to service. Provides expedited construction processes for damaged health-care facilities in the recovery phase of the emergency.
Office of Statewide Health Planning and Development		Public health and medical	Inspects hospitals, skilled nursing facilities, and intermediate care facilities for structural, critical nonstructural, and fire and life safety. Reports PDAs and operational status of healthcare facilities to Cal EMA following an event. Provides onsite consultation and approval of work required to ensure the safety of occupants and the return of health facilities to service. Enforces building codes and State laws deemed essential for the safety of hospitals and their occupants. Coordinates with CDPH Licensing and Certification to determine facility capacity to continue or resume care.

Table F-1. Roles of State departments, agencies, and other entities in care and sheltering and other aspects of the response related to mass care and sheltering.

State Agency	Department	Response Aspect	Role
Labor and Workforce Development Agency	N/A	General	Consists of nine departments and boards. During an emergency, the agency can call on its personnel and resources to address issues related to industrial and labor services.
	Agricultural Labor Relations Board	Care and sheltering	Supplies bilingual staff (Spanish) with interviewing and investigative skills for translation services.
	Employment Development Department	Long-term recovery	Confers with Federal and State emergency resource officials to determine the need for laborers during recovery and names personnel that can be trained to serve as personal assistance coordinators, project officers, and/or specialists during disaster recovery managed by Cal EMA. Offers disaster unemployment assistance, enlists personnel, and determines personnel shortages. Provides unemployment assistance related to the event.
California National Guard	N/A	Care and sheltering	Can provide limited mass care facilities.
California Emergency Management Agency	N/A	General	Serves as the lead agency for coordinating emergency activities related to fire and rescue, management, search and rescue, law enforcement, and public information. The agency may assign primary and support roles to those branches within the agency that have the authorities, capabilities, and resources necessary to meet emergency needs.
		Care and sheltering	The Office of Access and Functional Needs maintains limited supplies of equipment, including some durable medical equipment, to improve care and sheltering for these populations.
	N/A	Communications	Manages the California Warning Center, the State portion of the National Warning System, and the California Warning System. Assists with the coordination of information systems throughout the State, including RIMS, GIS, personal computer support, satellite systems, landlines, and radio systems.
	N/A	Long-term recovery	Manages State disaster recovery programs, providing public and individual assistance to local governments, State agencies, and the public.
	N/A	Management	Coordinates the State emergency management organization in compliance with SEMS, the ESA, relevant regulations, and executive orders. Leads planning and intelligence gathering; plans the mobilization and demobilization of personnel, equipment, and facilities; and compiles records and data specific to an event from all portions of the SOC or the REOC.
Office of Planning and Research	N/A	Care and sheltering	Supports family services agencies and works with Cal EMA related to VOAD personnel to assist in response activities.
		Long-term recovery	Offers assistance with policy analysis that relates to urban development in response to emergencies and natural disasters, legislative analysis, and bilingual personnel.

Table F-1. Roles of State departments, agencies, and other entities in care and sheltering and other aspects of the response related to mass care and sheltering.

State Agency	Department	Response Aspect	Role	
Office of the Chief Information Officer	N/A	Care and sheltering	Serves as the point of contact for event coordination for short-term recovery efforts, detection, mitigation, and dissemination of information for statewide cyber-related events.	
		Long-term recovery	Participates in the long-term recovery planning efforts necessary to restore essential communications systems and operations—such as voicemail, e-mail, and Internet connectivity—that have been damaged by the event.	
Natural Resources Agency	N/A	General	Serves as the lead agency for coordinating emergency activities related to utilities. Has 25 departments, commissions, boards, and conservancies. The agency may assign primary and support roles to those departments within the agency that have the authority, capabilities, and resources necessary to meet emergency needs.	
		California Coastal Commission	Long-term recovery	Provides technical assistance and experience in developing and implementing mitigation measures to address geological, coastal hazard, and biological issues. Provides emergency permit issuance expertise.
		California Conservation Corps	Care and sheltering	Can provide personnel to assist with set-up and maintenance of care and sheltering facilities. Provides personnel for mass care facilities, CARES, and other animal-related emergency responses. Furnishes crews, personnel, and equipment to support emergency operations.
		State Lands Commission	Long-term recovery	Assists with the determination of the environmental impact of the event. Provides land surveyors, appraisers, engineers, scientists, and inspectors. Coordinates with local governments and State agencies to issue emergency permits for new construction, land modifications, and any dispositions or extractions of materials on sovereign lands. Provides licensed land surveyors, engineering expertise, and geological expertise; also provides for removal of watercraft and other obstructions from sovereign lands.
		Department of Forestry and Fire Protection	Care and sheltering	Provides assistance, including mobile feeding centers. Provides technical resources for safety, environmental, and damage assessments and building inspections, civil engineers, and light- and heavy-equipment repair personnel and facilities. With OSHPD, inspects hospitals and other licensed care facilities for structural integrity and fire and life safety.
		Department of Parks and Recreation (California State Parks)	Care and sheltering	Provides shelter, water, and sanitation facilities in State park campgrounds.
			Communications	Possesses communications capability. Provides emergency communications and logistical support.
		Construction and engineering	Has engineers and architects to assess structural damage and emergency stabilization, historical preservation technical staff who are experts in NEPA and CEQA to assess environmental damage, and trade and maintenance personnel to assist with repair of event-related damage.	

Table F-1. Roles of State departments, agencies, and other entities in care and sheltering and other aspects of the response related to mass care and sheltering.

State Agency	Department	Response Aspect	Role
CaliforniaVolunteers	N/A	General	Serves as the lead agency for coordinating emergency activities related to volunteer and donations management, including the activities of VOAD. The agency may assign primary and support roles to those State agencies and departments that have the authorities, capabilities, and resources necessary to meet emergency needs.
State and Consumer Services Agency	N/A	Long-term recovery	Serves as the lead agency for coordinating emergency activities related to communications, construction and engineering resources, and long-term recovery. SCSA and the Business, Transportation, and Housing Agency are co-leads for long-term recovery operations. SCSA may assign primary and support roles to those departments within the agency that have the authorities, capabilities, and resources necessary to meet emergency needs.
	California Department of Consumer Affairs	Care and sheltering	Provides staff to post-disaster assistance centers for care and sheltering and for long-term recovery.
	California Franchise Tax Board	Care and sheltering	Provides personnel and equipment to obtain tax relief for disaster losses.
		Long-term recovery	Ensures that informational materials related to economic and taxation recovery efforts are available. Provides personnel and equipment to obtain tax relief for disaster losses.
	California Department of General Services	Care and sheltering	Classifies State property for temporary emergency housing sites. Works with Cal EMA and creates facility plans, including mobilization centers and disaster support areas.
		Resources	Creates facility plans, including mobilization centers and disaster support areas. Develops and implements contingency contracts for procurement of services, materials, and supplies. Has fleet administration responsibilities, has experience in dispatch functions, and can coordinate travel and lodging. In support of Cal EMA, maintains lists of contractor equipment and develops emergency procurement procedures for services, materials, and supplies. Makes available emergency facilities to State agencies displaced by disaster, puts into action emergency procurement, and accelerates review of contracts. Provides resource tracking proficiency.
State Personnel Board	General	Accelerates the recruitment of personnel related to emergency and recovery programs, and assists agencies in filling critical positions throughout an emergency.	
Seismic Safety Commission	N/A	Care and sheltering	Under the Emergency Response Initiative of the State's California Earthquake Loss Reduction Plan, provides expertise in public information and seismic policy analysis.
State Board of Equalization	N/A	Long-term recovery	Advises and assists business and property owners in obtaining emergency tax relief for disaster losses.

Table F-1. Roles of State departments, agencies, and other entities in care and sheltering and other aspects of the response related to mass care and sheltering.

State Agency	Department	Response Aspect	Role
Board of Governors, Community Colleges	N/A	Care and sheltering	Organizes college and other educational facilities related to emergency medical services and emergency welfare services. Provides emergency teams, facilities planners, and information technology personnel throughout a response, foreign-language instructors to assist, and facility planners and IT personnel for the period of recovery.
		Public health and medical	Coordinates education/college facilities to support emergency medical services and emergency welfare services. Directs districts and colleges to utilize facilities, transportation options, miscellaneous supplies, and equipment during emergency, and supports emergency medical services and emergency welfare services.

Source: State Emergency Plan (2009)
 ARC = American Red Cross
 Cal EMA = California Emergency Management Agency
 CARES = California Animal Response in Emergency System
 CBO = Community-based organization
 CDPH = California Department of Public Health
 CDSS = California Department of Social Services
 CEQA = California Environmental Quality Act
 ESA = Emergency Services Act
 HCD = California Department of Housing and Community Development
 GIS = Geographic Information System

N/A = Not applicable
 NEPA = National Environmental Protection Act
 OSHPD = Office of Statewide Health Planning and Development
 PDA = Preliminary Damage Assessment
 REOC = Regional Emergency Operations Center
 RIMS = Response Information Management System
 SCSA = State and Consumer Services Agency
 SEMS = Standardized Emergency Management System
 SOC = State Operations Center
 USDA = U.S. Department of Agriculture
 VOAD = Voluntary Organizations Active in Disaster

**Appendix G:
Resources Provided by
VOAD Member Organizations**

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Appendix G: Resources Provided by VOAD Member OrganizationsG-1

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Appendix G: Resources Provided by VOAD Member Organizations

Table G-1 contains a list of the organizations that are members of the National Voluntary Organizations Active in Disaster (VOAD) and the services the organizations generally provide during emergencies and disasters. Membership in VOAD does not guarantee that services will be provided.

The list of services in the table is not comprehensive. The services provided by VOAD members depend on the type of disaster, the services provided by other coordinating nonprofits, and local resources.

Some of the national organizations have local chapters that are part of the Northern California VOAD, which meets regularly to plan event response and recovery operations for a regional event.

The National VOAD has the following functions:

- Facilitating and encouraging collaboration, communication, cooperation, and coordination and building relationships among members while groups plan and prepare for emergencies and disaster incidents.
- Assisting in communicating to the government and the public the services provided by its national member organizations.
- Facilitating information sharing during planning and preparedness and response and recovery after a disaster.
- Providing members with information pertaining to the severity of the disaster, identified needs, and actions of volunteers throughout the response, relief, and recovery process.

Table G-1. VOAD: Member organizations and services.

Member Organization	Services
Adventist Community Services (ACS)	<ul style="list-style-type: none"> • Distributes relief items such as drinking water, groceries, and clothing. • Provides warehousing and other donation-coordination services, such as Points of Distribution centers (PODs). • Operates volunteer centers where community members can volunteer during disaster response. • Provides victims with emotional and spiritual counseling.
American Baptist Men/USA	<ul style="list-style-type: none"> • Provides cleanup, repair, and initial rebuilding. Short-term volunteers work cooperatively with Church World Service. • Provides financial assistance to victims during both the relief and recovery stages. • Operates volunteer centers to serve as clearinghouses for relief teams.
American Radio Relay League (ARRL)—Amateur Radio Emergency Services (ARES)	<ul style="list-style-type: none"> • Operators set up and run organized communication networks locally for governmental and emergency officials, as well as noncommercial communication for private citizens affected by the disaster. They activate after disasters damage regular lines of communications due to power outages and destruction of telephone, cellular, and other infrastructure-dependent systems. • ARRL volunteers act as communications volunteers with local public safety organizations. In addition, in some disasters, radio frequencies are not coordinated among relief officials, and amateur radio operators step in to coordinate communication when radio towers and other elements in the communication infrastructure are damaged. • At the local level, hams may participate in local emergency organizations or organize local “traffic nets.”
American Red Cross	<ul style="list-style-type: none"> • Provides mass care operations such as shelter, fixed and mobile feeding services for disaster victims and emergency workers in the affected area, and the distribution of supplies and commodities. • Provides emergency and preventive health services to people affected by disaster. • Provides individual assistance at service delivery sites and through outreach, by referral to government and/or voluntary agencies through distribution or financial assistance. • Provides services leading to reunification of family members in the affected area. • Performs damage assessments. • Provides emergency and preventive mental health services.
Ananda Marga Universal Relief Team (AMURT)	<ul style="list-style-type: none"> • Provides food and clothing, shelters, counseling; it also renders emergency medical services, sanitation, and short-term case management.
Billy Graham Rapid Response Team	<ul style="list-style-type: none"> • Provides emotional and spiritual care. • National database of more than 3,200 crisis-trained chaplains and ministry volunteers.

Table G-1. VOAD: Member organizations and services.

Member Organization	Services
Brethren Disaster Ministries	<ul style="list-style-type: none"> • Engages a network of volunteers to repair or rebuild homes for disaster survivors who lack sufficient resources to hire paid labor, focusing on vulnerable communities. • Trained, skilled project leaders supervise volunteers. • Cooperates with the local disaster recovery organization to enhance the long-term recovery of the community. • Children’s Disaster Services (CDS) alleviates disaster-related anxiety in children through specially trained and certified volunteers. • Provides children a safe, secure, and comforting environment in shelters and assistance centers. • Offers specialized care for children experiencing grief and trauma. • Educates parents and caregivers on how to help children cope.
Catholic Charities, USA	<ul style="list-style-type: none"> • Provides assistance, including direct financial assistance, to communities in addressing the crisis and recovery needs of local families. • Performs initial damage assessments. • Provides ongoing and long-term recovery services for individuals and families, including temporary and permanent housing assistance for low-income families, counseling programs for children and the elderly, and special counseling for disaster relief workers. • Provides relief stage services including shelter and emergency food.
Christian Reformed World Relief Committee (CRWRC)	<ul style="list-style-type: none"> • Fully equipped and trained rapid response teams for cleanup, chain-saw work, and flood repair. • Trained volunteer managers assist local communities in the formation and operation of long-term recovery organizations. • Provides community-wide unmet needs assessments for long-term recovery organizations. • Provides construction estimating services using skilled volunteers. • Provides accounting services for long-term recovery and VOAD organizations using volunteer CPAs. • Provides skilled teams for long-term housing repair and construction. • Chaplaincy services. • Community development consultants after the recovery.
Churches of Scientology Disaster Response	<ul style="list-style-type: none"> • Emotional and spiritual care for survivors, responders, and caregivers. • POD volunteers and management. • Cleanup. • Direct services to individuals for unmet needs. • Volunteer coordination. • Onsite needs assessment and help. • Volunteer assistance to other organizations for shelter management and other needs.

Table G-1. VOAD: Member organizations and services.

Member Organization	Services
Church World Service	<ul style="list-style-type: none"> • Provides advocacy services for survivors. • Provides case management for low-income and marginalized groups. • Provides emotional and spiritual care as well as physical rebuilding programs. • Assists in long-term recovery of those in need. • Restores and builds community relationships.
City Team Ministries	<ul style="list-style-type: none"> • Supports first responders during rescue phase. • Provides food, water, and shelter during the relief phase. • Provides emotional and spiritual care and case management to assess the needs of victims. • Is committed to the effort of rebuilding homes and communities.
Convoy of Hope	<ul style="list-style-type: none"> • Facilitates relief efforts between churches and other organizations to help best serve the needs of survivors. With a fleet of trucks, 300,000 square-foot warehouse, and Mobile Command Center, and utilizing the first-response POD model,
Episcopal Relief and Development	<ul style="list-style-type: none"> • Sends immediate relief grants for such basics as food, water, medical assistance, and financial aid within the first 90 days following a disaster. • Provides ongoing recovery activities through rehabilitation grants, which offer the means to rebuild, replant ruined crops, and counsel those in trauma. • Delivers relief kits and other emergency supplies and food to emergency shelters and camps. • Works primarily through Church World Service in providing its disaster-related services. • Rebuilds individual homes damaged during disasters. • Helps residents to restore the social and economic fabric of their communities by providing economic and educational opportunities and improving access to legal services and home ownership. • Trains and equips local denominations to prepare for and respond to disasters that devastate their communities.

Table G-1. VOAD: Member organizations and services.

Member Organization	Services
Feeding America	<ul style="list-style-type: none"> • Collects, transports, warehouses, and distributes donated food and grocery products for other agencies involved in both feeding operations and distribution of relief supplies through its national network of food banks. • Processes food products collected in food drives by communities wishing to help another disaster-affected community. • Develops, certifies, and supports their food banks. • Positions frequently used emergency food products and personal care items in strategic locations and regularly cycles inventories to ensure usage by survivors immediately following a disaster. • Serves as a liaison between the food banks and the donors. • Educates the public about the problems and solutions of hunger. • Specializes in disaster training for its network, and continually improves standard operating procedures that enable member food banks to develop seamless, coordinated approaches to delivering disaster assistance.
Feed the Children	<ul style="list-style-type: none"> • Provides help to survivors of natural disasters occurring in the United States and around the world. • Provides food, water, blankets, cleaning supplies, or other relief supplies to individuals and families affected. • Through a subsidiary, picks up in-kind contributions from corporate warehouses and individual donors, delivering them to any of its six regional distribution centers for bulk distribution or directly to individual relief boxes for families.
Foundation of Hope—ACTS World Relief	<ul style="list-style-type: none"> • Establishes PODs to rapidly and efficiently distribute goods within six hours of their arrival by common carrier. • Cooks and distributes hot meals with self-contained mobile disaster kitchens of various sizes and capacities. • Staging area or base camp management at the request of State or local EOCs. • Mobile public address systems (mobile sound stages). • Debris removal and personal item recovery teams. • Registration and coordination of unaffiliated volunteers in the affected area. Using mobile volunteer registration centers, we are able to organize and form work teams to provide workforce resources to assist in recovery.
Habitat for Humanity International	<ul style="list-style-type: none"> • Conducts community housing assessments for long-term recovery. • Works with partner families to build or rehabilitate simple, decent, and affordable homes after a disaster. • Offers construction and development technical assistance to communities. • Facilitates community involvement and support during the long-term recovery process. • Introduces alternative construction technologies (e.g., modular, panelized housing) to communities to speed up the delivery of permanent housing solutions.

Table G-1. VOAD: Member organizations and services.

Member Organization	Services
HOPE Coalition America (Operation Hope)	<ul style="list-style-type: none"> • Supports disaster survivors by assisting with budgeting and developing financial recovery plans, such as disaster preparedness seminars. • Emergency budget counseling. • Emergency credit management. • Assistance with working with creditors. • Referrals to government and private agencies. • Assistance with obtaining copies of destroyed financial documents. • Insurance claim assistance.
Humane Society of the United States	<p>Provides assistance with animal rescue, handling, and transport in a timely and humane way:</p> <ul style="list-style-type: none"> • Assessment of animal-related needs. • Establishment and management of temporary emergency animal shelters. • Evacuation support. • Veterinary evaluation of animals. • Relocation and support of disaster-affected animal facilities. • Transition of support to local resources during the recovery phase. • Donations and volunteer management, including emergent volunteers. • Serves as resource for individuals, animal-related organizations, and others concerned about the urgent needs of animals before, during, and after disasters.
International Critical Incident Stress Foundation	<p>Emotional and spiritual care:</p> <ul style="list-style-type: none"> • Pre- and post-incident training. • Risk and crisis communication. • Crisis planning and intervention with communities and organizations. • Spiritual assessment and care.
International Relief & Development	<ul style="list-style-type: none"> • Distributes food and critical relief supplies. • Helps communities to develop effective social services through collaborative efforts to improve roads, renovate schools, rebuild utilities (water and sewage systems), and establish health facilities. • Collaborates with other organizations to provide shelter and necessary tools such as financial counseling to disaster victims. • Performs needs assessment and mapping.

Table G-1. VOAD: Member organizations and services.

Member Organization	Services
Latter-day Saint Charities	<ul style="list-style-type: none"> • Provides food and other emergency supplies and kits during response.
Lutheran Disaster Response	<ul style="list-style-type: none"> • Provides response efforts through a preselected group of Lutheran social service agencies with established standing in the affected communities. • Provides spiritual and emotional counseling for affected persons. • Helps in coordinating volunteer teams for cleaning up and rebuilding disaster-affected homes. • Provides case management services for long-term recovery. • Provides training and expertise on volunteer coordination, case management, long-term recovery, construction, and database management.
Mennonite Disaster Services	<ul style="list-style-type: none"> • Assists disaster victims by providing volunteer personnel to clean up and remove debris from damaged and destroyed homes and personal property. • Repairs or rebuilds underinsured primary residences for homeowners, with emphasis on assisting with the special needs of vulnerable populations such as the elderly and people with disabilities.
Mercy Medical Airlift (Angel Flight)	<ul style="list-style-type: none"> • Transport into disaster response areas of small, high-priority nonhazardous cargo (including blood) up to 300–400 pounds (boxed) when commercial ground or air is not available. • Aerial reconnaissance of disaster area. • Air transport of disaster response personnel and evacuees into/from/within disaster area when commercial ground or air is not available. • Relocation of special populations, including special “surge services” using commercial air ambulance services (by prearranged Memorandum of Understanding [MOU] only). • Coordination of available corporate jet aircraft for disaster response in cooperation with NBAA. • Management of large-scale airline-provided relocation movements in support of FEMA, the American Red Cross, etc.
National Association of Jewish Chaplains (NAJC)	<ul style="list-style-type: none"> • Provides spiritual crisis counseling, short-term pastoral care and long-term pastoral counseling through its board-certified chaplains and professionally trained chaplains. • Provides education and training in disaster spiritual care. • Helps organize volunteer disaster chaplains, through its association with American Red Cross Critical Response Team and other professional chaplaincy organizations, who wish to provide immediate disaster spiritual care services in the aftermath of disasters.

Table G-1. VOAD: Member organizations and services.

Member Organization	Services
National Baptist Convention USA	<ul style="list-style-type: none"> • To lessen the impact of disasters and potential catastrophic incidents by meeting the needs of communities through preparedness and mitigation. • Provides the following services: <ul style="list-style-type: none"> – Mass care. – Emergency assistance and casework. – Emotional and/or spiritual care. – Supporting services to state and local VOAD member agencies. – Recovery. – Donations management. – Volunteer management. – Outreach and/or information and referral.
National Emergency Response Team (NERT)	<ul style="list-style-type: none"> • Provides coordinated emergency services with local, State, and Federal government agencies and nonprofit agencies. • Transports food and other disaster goods through trailer units. • Provides communications services through trailers equipped with ham radios, scanners, etc. • Provides direct financial aid to victims. • Home repair services for special needs group (elderly).
National Organization for Victim Assistance (NOVA)	<ul style="list-style-type: none"> • Provides social and mental health services for individuals and families who experience major trauma after disaster, including psychological first aid, crisis intervention, crime victim resources, crisis management consultation.
Nazarene Disaster Response (NDR)	<ul style="list-style-type: none"> • Provides cleanup and rebuilding assistance, especially to the elderly, persons with disabilities, the widowed, and those least able to help themselves. • Works in the recovery phase by assisting with the emotional needs of disaster victims.

Table G-1. VOAD: Member organizations and services.

Member Organization	Services
Noah's Wish	<p>The mission of Noah's Wish is to save animals during disasters by providing:</p> <ul style="list-style-type: none"> • Rapid deployment of disaster response teams. • Operation of temporary animal shelters. • Rescue and evacuation assistance. • Veterinary care for disaster-related injuries or illness. • Short- and long-term foster care for animals. • Permanent placement for all unclaimed or surrendered animals. • Coordination and distribution of donated supplies and food.
Operation Blessing	<ul style="list-style-type: none"> • Transports food and emergency supplies to disaster survivors. • Assists in disaster medical relief. • Provides direct financial assistance to victims.
Points of Light Institute / Hands On Network	<ul style="list-style-type: none"> • Creates innovative, actionable models for citizen-centered problem solving, and direct, tangible tools and opportunities for people and organizations to apply their interests and passions to make a difference. • Helps people plug into volunteer opportunities in their local community, helping nonprofits manage volunteer resources and developing the leadership capacity of volunteers.
Presbyterian Disaster Assistance (PDA)	<ul style="list-style-type: none"> • Works primarily through Church World Service in providing volunteers to serve as disaster consultants. • Provides funding for local recovery projects that meet certain guidelines. • Provides trained volunteers, who participate in the Cooperative Disaster Child Care program. • Provides volunteer labor and material assistance at the local level. • Supports volunteer base camps for volunteer groups assisting with the rebuilding efforts.
REACT International	<ul style="list-style-type: none"> • Provides emergency communications facilities for other agencies through its national network of Citizens' Band radio operators and volunteer teams.

Table G-1. VOAD: Member organizations and services.

Member Organization	Services
The Salvation Army	<ul style="list-style-type: none"> • Provides emergency assistance including mass and mobile feeding, temporary shelter, counseling, missing person services, and medical assistance. • Provides warehousing services, including the distribution of donated goods such as food, clothing, and household items. • Provides referrals to government and private agencies for special services. • Provides individual and family counseling. • Recruits, trains, houses, and transports volunteers. • Coordinates economic reconstruction efforts. • Provides financial assistance to victims through case management, including housing needs and disaster-related medical and funeral expenses. • Emotional and spiritual care.
Samaritan's Purse	<ul style="list-style-type: none"> • Provides emotional and spiritual care. • Provides cleanup assistance. • Emergency home repairs.
Save the Children	<ul style="list-style-type: none"> • Provides disaster relief services for children in shelters, including food, clothing, diapers, and evacuation backpacks. • Provides supervision in designated areas within shelters.
Society of St. Vincent De Paul	<ul style="list-style-type: none"> • Provides social services to individuals and families, and collects and distributes donated goods. • Makes store merchandise available to disaster victims. Operates retail stores, homeless shelters, and feeding facilities that are similar to those run by The Salvation Army. • Provides warehousing facilities for storing and sorting donated merchandise during the emergency period.
Southern Baptist Disaster Relief/North American Mission Board	<ul style="list-style-type: none"> • Provides mobile feeding units staffed by volunteers, who prepare and distribute thousands of meals a day. • Provides disaster child care: mobile units transport equipment and supplies to a facility where trained workers provide safe and secure care for children. • Provides units and trained volunteers to assist with cleanup activities, temporary repairs, reconstruction, chaplains, and bilingual services. • Provides water purification, shower and laundry units, and trained volunteers for disaster responses.
Tzu Chi Foundation	<ul style="list-style-type: none"> • Provides emotional and spiritual care. • Provides medical and financial assistance.

Table G-1. VOAD: Member organizations and services.

Member Organization	Services
United Church of Christ	<ul style="list-style-type: none"> Organizes volunteers for cleanup and rebuilding efforts, as well as participating in response and long-term recovery efforts in communities affected by natural disasters.
United Jewish Communities (UJC)	<ul style="list-style-type: none"> Organizes direct assistance, such as financial and social services, to Jewish and general communities in the United States following disaster. Provides rebuilding services to neighborhoods and enters into long-term recovery partnerships with residents.
United Methodist Committee on Relief (UMCOR)	<ul style="list-style-type: none"> Raises and distributes funds equitably to the most vulnerable populations in affected communities. Provides case management services and related training for the long-term recovery of victims. Coordinates shipments of disaster relief supplies and kits, including cleanup supplies. Provides spiritual and emotional care to disaster victims, and long-term care of children affected by disaster. Offers training in support of volunteer activities in disaster recovery.
United Way of America	<ul style="list-style-type: none"> Provides experience, expertise, and resources to local United Ways facing local, regional, state, or national emergencies. Gives direct grants to support disaster recovery, such as home repairs, food vouchers, counseling. Acts as a resource and information guide for survivors, through its 211 call centers.
World Hope International (WHI)	<ul style="list-style-type: none"> Establishes distribution sites and housing facilities for volunteers. Cleans up, guts, or rebuilds homes. Distributes relief kits and tool resources available for disaster response.
World Vision	<ul style="list-style-type: none"> Trains and mobilizes community-based volunteers in major response and recovery activities. Provides consultant services to local unaffiliated churches and Christian charities involved in locally designed recovery projects. Collects, manages, and organizes community-based distribution for donated goods.

Source: Voluntary Organizations Active in Disaster

CPA = Certified Public Accountant

EOC = Emergency Operations Center

FEMA = Federal Emergency Management Agency

NBAA = National Business Aviation Association

POD = point of distribution

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Appendix H:
Mass Care and Sheltering Resources

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Appendix H: Mass Care and Sheltering Resources

The tables in this appendix are examples of the quantities of personnel and resources recommended to manage a mass care and sheltering operation.

Table H-1. Recommended number of staff to manage a shelter with 200, 500, and 1,000 residents.

Position	200 Residents	500 Residents	1,000 Residents
Shelter manager	1	1	1
Shift supervisors	3	3	3
Registrar	1	1	1
Registration workers	1	2	5
Dormitory management supervisor	1	1	1
Dormitory management workers	2	5	10
Food service workers	6	14	28
Information (help desk)	2	4	6
Administrative assistant	1	1	1
Information technology	1	1	1
Health services supervisor	1	1	1
Health services staff	1	2	5
Disaster mental health staff	2	4	8
Material support supervisor	1	1	1
Material support workers	1	2	4
Staff services workers	1	1	2
Security staff	1	2	4
Total	27	46	82

Source: Adapted from Shelter Operations Management Toolkit (ARC, 2007)

Table H-2. Recommended equipment needed to prepare 20,000 meals per day and per month.

Resource	Quantity Needed for 20,000 Meals	
	Per Day	Per Month
53-foot dry box (can be substituted by a 48-foot dry box)	1	2
53-foot reefer trailer with freezer and refrigeration capability (can be substituted by a 48-foot trailer)	2	2
2,000-gallon graywater container	1	1
2,000-gallon fresh-water container	1	1
Portable toilets	8	8
3,000-pound rubber-wheeled propane or electric forklift (5,000-pound rubber-wheeled forklift is acceptable)	1	1
Pallet jack (hand)	2	2
40-yard dumpster (10- to 40-yard range is acceptable)	1	1
Hand-washing station	4	4
Propane	250 gallons	7,500 gallons
30-kilowatt generator (diesel fuel)	1	1
Diesel fuel	100 gallons	3,000 gallons

Source: Regional Emergency Coordination Plan (2008)

Table H-3. Recommended quantities of shelter sites and equipment to support 3,000 and 10,000 people.

Resources	3,000 People	10,000 People	Comment
Shelter sites	6	20	Assumes an average shelter population of 500 persons per shelter
Meals per day at shelters and other service delivery sites	12,900	43,000	Assumes at least two hot meals per day for 500 persons per shelter multiplied by 2 to account for meals at other sites plus 8% to account for staff
Cots or sleeping mats	3,000	10,000	Assumes one cot or sleeping mat per person in shelter
Blankets	6,000	20,000	Assumes one blanket per person in shelter (may need to upgrade to two per person in cold weather)
Cambros (specialized storage containers for hot food)	108	359	Two cambros can generally serve 240 meals per day, assuming liners are used (entrée and one side; average of 5-ounce serving size)
Emergency response vehicles (ERVs) to carry food/beverages	26	86	Based on 500 meals per ERV per day (box trucks can also be used to transport food cambros, leaving ERVs to support mobile feeding)
Cargo trucks	6	20	For bulk distribution and shelter support; one cargo truck per 500 persons
Passenger vans	2	6	For staff transport; one van for every 1,500 persons sheltered
Meals ready to eat (MREs)	42,000	138,600	For the first 3 weeks
Bottled water	3,000	10,000	Standard gallon containers for bulk distribution
Comfort kits	9,000	30,000	One person in shelter sites per week (for 3 weeks)
Generators	12	20	Two 15- to 25- kilowatt generators for every shelter with 500 persons
Minimum staff per shelter site	264	880	See RECP for suggested shelter staff for individual shelters
Food preparation staff	13	43	Ten food prep staff persons for every 10,000 meals
Fixed feeding staff	26	86	Number of meals per day ÷ 1,000 meals per vehicle/day × two-person crew ¹
Mobile feeding staff	51	172	Number of meals per day ÷ 500 meals per day, per vehicle, each with a two-person crew

Source: Regional Emergency Coordination Plan, Appendix I (2008)

¹ Assumes one hot and two cold meals per day dropped off at one time. Requires refrigeration capability at shelter/feeding sites.

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